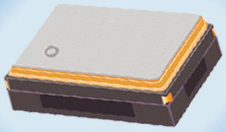
Ultra Miniature SMD XO & VCXO



ASG2

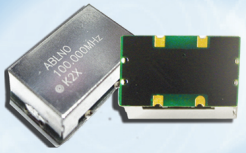
Precision SMD TCXO

AST3TQ

32.768kHz SMD Low Profile Crystal

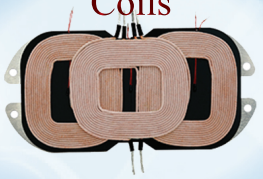
ABS07

Ultra Low Phase Noise XO / VCXO



ABLNO

Wireless Charging Coils

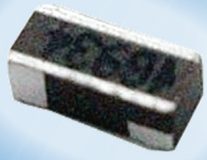


AWCCA-107T52

SMD TCXO/ VCTCXO

ASGTX

Chip Antennas



ACA-104-T

Inductors

ASPI-0630LR

Transformers

AITC-449

RJ45

ARJ11G

Crystals & Resonators

Real-Time Clocks

Oscillators

Filters

Precision Timing

RF & Microwave

Magnetics & Capacitors

Engineered Solutions

ABRACON

Product Catalog

Ultra Miniature Ceramic SMD Crystal

The Smallest package size in industry - 1.2x1.0x0.3mm

SMD Crystals

ABM13 1.2 x 1.0 x 0.3mm
• Ceramic Ultra Miniature Seam Sealed
• 36MHz to 80MHz

★ **ABM12** 1.6 x 1.2 x 0.45 mm
• Ceramic Ultra Miniature Seam Sealed
• 24MHz to 80MHz

★**ABM11** 2.0 x 1.6 x 0.59mm
• Ceramic Ultra Miniature Seam Sealed
• 16MHz to 50MHz

★ **ABM10** 2.5 x 2.0 x 0.50mm
• Ceramic Ultra Miniature Seam Sealed
• 16MHz to 55MHz

★ **ABM8** 3.2 x 2.5 x 0.8mm
• Ceramic Ultra Miniature Seam Sealed
• 10MHz to 125MHz

ABM8X 3.2 x 2.5 x 0.6mm
High Stability Seam Sealed • -40°C to +125°C; ±40 ppm *all inclusive* • 24MHz, 32MHz

★ **ABM8-166-114.285MHz-T2** 3.2 x 2.5 x 0.75mm
for use with SiLab Si5316
• -40°C to +85°C• 114.285MHz

★ **ABM8G** 3.2 x 2.5 x 1.0mm
• Ceramic Glass Sealed • 12MHz to 50MHz

★**ABM9** 4.0 x 2.5 x 0.8mm
• Ceramic Seam Sealed • 12MHz to 32MHz

★ **ABM3** 5.0 x 3.2 x 1.3mm
• Ceramic Glass Sealed • 8MHz to 80MHz
Smaller package alternative for ABM7 series.

★ **ABM3B** 5.0 x 3.2 x 1.1mm
• Ceramic Seam Sealed • 8MHz to 125MHz

ABM3X 5.0 x 3.2 x 0.9mm
High Stability Crystal • -40°C to +125°C; ±40 ppm *all inclusive* • 24MHz, 32MHz

★ **ABM3C** 5.0 x 3.2 x 1.3mm
• Ceramic Seam Sealed • 10MHz to 50MHz

★ **ABM7** 6.0 x 3.5 x 1.4mm
Ceramic Glass Sealed • 8MHz to 80MHz

★ **ABMM** 7.2 x 5.2 x 1.3mm
• Ceramic Seam Sealed • 6MHz to 125MHz

ABMM1 7.2 x 5.2 x 1.2mm
• Ceramic Seam Sealed • 6MHz to 125MHz

★ **ABMM2** 6.0 x 3.6 x 1.2mm
• Ceramic Seam Sealed • 7.3728MHz to 110MHz

★**ABM2** 8.0 x 4.5 x 1.4mm
• Ceramic Glass Sealed • 8.0MHz to 100MHz

ABMC2 11.0 x 5.0 x 2.0mm
• Resistance Welded • 3.5MHz to 70MHz

★**ABLSG** 11.4 x 4.7 x 4.2mm
With 3rd lead case-grounded, ideal for EMI shielding
• HC49US, Resistance Welded
• 3.579545 MHz to 75 MHz

★ **ABLS-LR** 11.4 x 4.7 x 4.2mm
Ultra Low ESR low frequency crystal
• HC49US, Resistance Welded • 3.0MHz to 36MHz

★**ABLS** 11.4 x 4.7 x 4.2mm
• HC49US, Resistance Welded
• 3.579545MHz to 75MHz

★ **ABLS2** 11.4 x 4.7 x 3.3mm ←***Reduced Height***
• HC49US, Resistance Welded
• 3.579545MHz to 70MHz

★**ABLS3** 11.4 x 4.7 x 2.5/2.6mm ←***Reduced Height***
• HC49US, Resistance Welded
• 3.579545MHz to 70MHz

★**ABC2** 11.5 x 5.5 x 2.0mm ←***Reduced Height***
• Ceramic Glass Sealed • 3.5MHz to 70MHz

★**ABSM2** 12.5 x 4.6 x 3.7mm
• Molded Plastic • 3.579545MHz to 66.6666MHz

ABSM3A 12.5 x 4.95 x 5.1mm
• HC49US, Resistance Welded
• 3.579545MHz to 54MHz

ABSM3B 12.5 x 4.85 x 5.1mm
• HC49US, Resistance Welded
• 3.579545MHz to 60MHz

MHz Thru-Hole Crystals

ABU, ABU5 7.8 x 8.0 x 3.1mm
• UM Type Resistance Welded • 6MHz to 200MHz

ABL 11.5 x 5.0 x 3.5mm
• HC49US Resistance Welded
• 3.579545MHz to 70MHz

ABL2 11.5 x 5.0 x 2.5mm
• HC49US Resistance Welded
• 3.579545MHz to 70MHz

ABL3 11.5 x 5.0 x 2.0mm
• HC49US Resistance Welded
• 3.579545MHz to 70MHz

AB 11.5 x 13.46 x 5.0mm/19.33 x 19.80 x 9.0mm
• HC49U/HC51U Resistance Welded
• 1.8432MHz to 160MHz

★**AB308** 8.5 x 3.0mm
• Cylindrical Type • 4MHz to 70MHz

kHz SMD Crystals

★**ABS05** 1.6 x 1.0 x 0.5mm ***Industry smallest package***
• Lowest Profile , 32.768kHz

★**ABS06** 2.0 x 1.2 x 0.6mm
• Ultra Low Profile , 32.768kHz

★**ABS06L** 2.0 x 1.2 x 0.38mm
• Lowest Profile , 32.768kHz

★**ABS06-107** 2.0 x 1.2 x 0.60mm
• Ultra Low Profile, 4pF, ESR Optimized, 32.768kHz

★ **ABS07** 3.2 x 1.5 x 0.90mm
• Low Profile , 32.768kHz

ABS07L 3.2 x 1.5 x 0.38mm
• Lowest Profile, Low Height, 32.768kHz

★ **ABS07-120** 3.2 x 1.5 x 0.90mm
• Low Profile, 6pF, ESR Optimized, 32.768kHz

★ **ABS09** 4.10 x 1.5 x 0.9mm
• Low Profile , 32.768kHz
Not recommended for new designs. Please consider our reduced size ABS07 or ABS06

★ **ABS10** 4.9 x 1.8 x 1.0mm
• Low Profile , 32.768kHz
Not recommended for new designs. Please consider our reduced size ABS07 or ABS06

★ **ABS13** 6.9 x 1.4 x 1.3mm
• Molded Plastic • 32.768kHz

★**ABS25** 8.0 x 3.8 x 2.5mm
• Molded Plastic • 32.768kHz, 30kHz to 100kHz

★ **AB26TRB** 6.0 x ϕ1.9mm
• Cylindrical Type Reflowable • 32.768kHz

AB26TRJ 6.0 x 2.5 x 2.1mm
• Cylindrical Type Reflowable • 25kHz to 200kHz

★ **AB26TRQ** 5.2 x 1.45 x 1.45mm
• Cylindrical Type Reflowable • 32.768kHz

kHz Cylindrical Thru- Hole Crystals

★ **AB15T** 5.0 x ϕ1.4mm
• Cylindrical Type • 32.768kHz

★ **AB26T** 6.2 x ϕ2.1mm
• Cylindrical Type • 32.768kHz, 30kHz to 200kHz

★ **AB38T** 8.3 x ϕ3.2mm
• Cylindrical Type • 32.768kHz

Automotive & Industrial Grade Crystals

NEW

Member of AIAG Automotive Industry Action Group

★ **ABS07AIG** 3.2 x 1.5 x 0.8mm
• 32.768 kHz • 2 Pad SMD

★ **ABM11AIG** 2.0 x 1.6 x 0.5mm
• 18 to 50 MHz • 4 Pad SMD

★ **ABM10AIG** 2.5 x 2.0 x 0.6mm
• 12 to 62.50 MHz • 4 Pad SMD

★ **ABM8AIG** 3.2 x 2.5 x 0.75mm
• 12 to 54 MHz • 4 Pad SMD

★ **ABM8GAIG** 3.2 x 2.5 x 0.8mm
• 10 to 30 MHz • 4 Pad SMD

★ **ABM3AIG** 5.0 x 3.2 x 1.3mm
• 8 to 20 MHz • 2 Pad SMD

★ **ABM3BAIG** 5.0 x 3.2 x 1.0mm
• 12 to 54 MHz • 4 Pad SMD

★ **ABM3CAIG** 5.0 x 3.2 x 1.3mm
• 8 to 20 MHz • 4 Pad SMD

★ **ABM4AAIG** 7.0 x 5.0 x 1.6mm
• 6 to 25 MHz • 2 Pad SMD

★ **ABM4BAIG** 7.0 x 5.0 x 1.6mm
• 6 to 25 MHz • 4 Pad SMD

ABS06-107-32.768kHz-T;

Ultra Low ESR; 4pF Plated - Tuning Fork Crystal

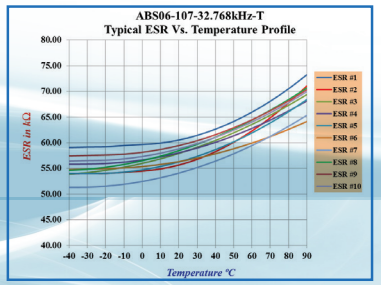
ABRACON's ABS06-107-32.768kHz-T Tuning Fork Crystal is optimized for Power Sensitive Designs, requiring minimal plating load (4pF) and Ultra Low ESR. With guaranteed maximum ESR of 80kΩ, this device is ideally suited for Ultra Low Power - Real Time Clocking solutions, requiring exceptionally low power consumption (Reference; ST Micro STM32L1, F2 & F4 µcontrollers).

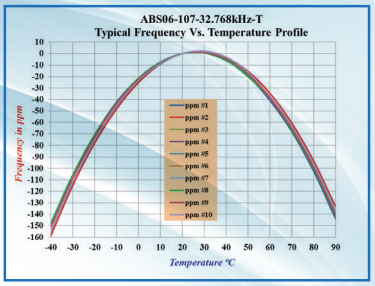
Applications:

- Power Sensitive, battery operated Consumer Electronics
- PDA and Smartphone
- Communication & measurement equipment
- Commercial & Industrial applications
- Wireless communications

What ABS06-107-32.768kHz-T offers designers?

- 4pF plating load facilitates sustained oscillations with very low oscillator loop transconductance (gm) < 3µA/V
- Guaranteed maximum ESR of 80kΩ ensures lower overall power consumption & higher Gain Margin
- Tight Frequency Set Tolerance < ±20 ppm into a 4pF Effective Oscillator Loop Load
- Wide Operating Temperature Range (-40ºC to +85ºC)
- < ±175 ppm typical stability over -40ºC to +85ºC; ±250 ppm guaranteed; referenced to measured frequency at 25ºC±3ºC
- Developed in close-cooperation with ST Micro for STM32L1, F2 & F4 Reference Designs
- Space saving 2.0x1.2x0.6 mm, RoHS Compliant SMT package
- Low cost, available through Abracon's Global Distributors





Reference Design:
ABS06-107-32.768kHz-T device is Qualified on the following ST Micro's Reference Designs STM32F2 , STM32F4 and STM32L1

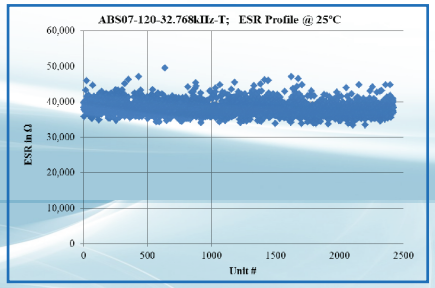
ABS07-120-32.768kHz-T ;

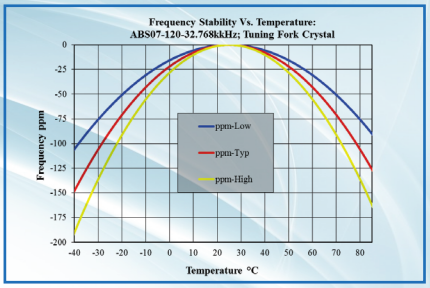
Ultra Low ESR; 6pF Plated - Tuning Fork Crystal

ABRACON's ABS07-120-32.768kHz-T Tuning Fork Crystal is optimized for Power Sensitive Designs, requiring lower plating load and Ultra Low ESR. With guaranteed maximum ESR of 60kΩ, this device is ideally suited for Ultra Low Power - Real Time Clocking solutions, requiring exceptionally low power consumption.

Applications:

- Power Sensitive, battery operated Consumer Electronics
- PDA and Smartphone
- Communication & measurement equipment
- Commercial & Industrial applications
- Wireless communications





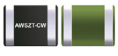
What ABS07-120-32.768kHz-T offers designers?

- 6pF plating load facilitates sustained oscillations with lower oscillator loop transconductance (gm) < 5µA/V
- Guaranteed maximum ESR of 60kΩ ensures lower overall power consumption
- Tight Frequency Set Tolerance < ±20 ppm
- Wide Operating Temperature Range (-40ºC to +85ºC)
- Developed in close-cooperation with ST Micro for ST32F4 Reference Design
- Space saving 3.2x1.5x0.9 mm, RoHS Compliant SMT package
- Low cost, available through Abracon's Global Distributors

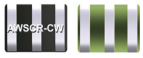
Reference Design:

ABS07-120-32.768kHz-T device is Qualified on ST Micro's Reference Design; STM32F4 MCU solutions.

SMD Ceramic Resonators

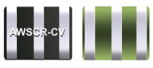


★ **AWSZT-CW** 2.5 x 2.0 x 1.2mm
• Low Resonant Impedance • 20MHz to 60MHz



★ **AWSCR-CW** 2.5 x 2.0 x 1.2mm
• Built-in Capacitance • Low Resonant Impedance
• 20MHz to 60MHz

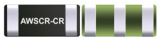
AWSCR-CE 3.2 x 1.3 x 1.0mm
• Built-in Capacitance • Low Resonant Impedance
• 8MHz to 12MHz



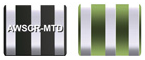
★ **AWSCR-CV** 3.7 x 3.1mm
• Built-in Capacitance • Low Resonant Impedance
• 8MHz to 13MHz, 16MHz to 60MHz ***Height varies per frequency***

★ **AWSZT-CV** 3.7 x 3.1 mm
• Low Resonant Impedance • 8MHz to 13MHz, 16MHz to 60MHz ***Height varies per frequency***

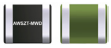
AWSZT-CR 4.5 x 2.0 x 1.2mm
• Low Resonant Impedance • 4MHz to 8MHz



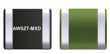
AWSCR-CR 4.5 x 2.0 x 1.2mm
• Built-in Capacitance • Low Resonant Impedance
• 4MHz to 8MHz



★ **AWSCR-MTD** 4.7 x 4.1 mm
• Built-in Capacitance • Low Resonant Impedance
• 6MHz to 60MHz ***Height varies per frequency***



AWSZT-MWD 4.7 x 4.1 mm
• Low Resonant Impedance • 6MHz to 13MHz
Height varies per frequency



★ **AWSZT-MXD** 4.7 x 4.1 mm
• Low Resonant Impedance • 13.01MHz to 60MHz
Height varies per frequency

AWSCR-CP 6.0 x 3.0 x 1.7mm
• Built-in Capacitance • Low Resonant Impedance
• 4.0MHz to 12.00MHz

AWSZT-CP 6.0 x 3.0 x 1.7mm
• Low Resonant Impedance • 4.0MHz to 12.00MHz

★ **AWSZT-MGD** 7.4 x 3.4 x 1.8 mm
• Low Resonant Impedance • 2MHz to 8MHz

AWSCR-MGD 7.4 x 3.4 x 1.8mm
• Built-in Capacitance • Low Resonant Impedance
• 1.84MHz to 8MHz

Thru-Hole Ceramic Resonators

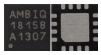
★ **HWZT-MD** Dimensions vary per frequency
• Low Resonant Impedance
• 2MHz to 6MHz, 12.51MHz to 60MHz

★ **HWZT-RS** 5.5 x 5.0 x 3.0mm
• Low Resonant Impedance • 6.01MHz to 12.5MHz

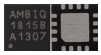
★ **AWCR-MD** Dimensions vary per frequency
• Built-in Capacitance • Low Resonant Impedance
• 2MHz to 6MHz, 12.51MHz to 60MHz

★ **AWCR-RS** 5.5 x 5.0 x 3.0mm
• Built-in Capacitance• Low Resonant Impedance
• 6.01MHz to 12.5MHz

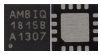
RTC IC- Ultra Low Power



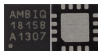
★ **AB1815** 3.0 x 3.0mm
• SPI • -40 to +85°C • 256B RAM
• On-board Power & VBAT Switch, RTC consumes <55nA



★ **AB1805** 3.0 x 3.0mm
• I²C • -40 to +85°C • 256B RAM
• On-board Power & VBAT Switch, RTC consumes <55nA



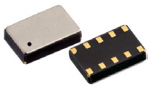
★ **AB0815** 3.0 x 3.0mm
• SPI • -40 to +85°C • 256B RAM
• On-board VBAT Switch, RTC consumes <55nA



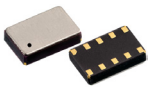
★ **AB0805** 3.0 x 3.0mm
• I²C • -40 to +85°C • 256B RAM
• On-board VBAT Switch, RTC consumes <55nA

RTC IC + Oscillator

★ **AB-RTCMC-32.768kHz-ZIZE-S2**
• 5.0 x 3.2 x 1.2 mm • -40 to +85°C • SPI



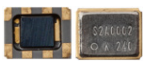
★ **AB-RTCMC-32.768kHz-B5ZE-S3**
• 3.7 x 2.5 x 0.9 mm • -40 to +85°C • I²C



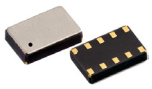
★ **AB-RTCMC-32.768kHz-B5GA-S3**
• 3.7 x 2.5 x 0.9 mm • -40 to +85°C • I²C

★ **AB-RTCMC-32.768kHz-AIGZ-S7**
• 3.2 x 1.5 x 0.8 mm • -40 to +85°C • I²C

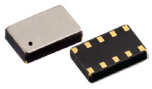
RTC IC + TCXO



★ **AB-RTCMK-32768kHz**
• 3.2 x 2.5 x 1.0 mm
• +/-5ppm over -40 to +125°C • I²C



★ **AB-RTCMC-32.768kHz-EOZ9-S3**
• 3.7 x 2.5 x 0.9 mm
• +/-30ppm over -40 to +125°C • I²C



★ **AB-RTCMC-32.768kHz-EOA9-S3**
• 3.7 x 2.5 x 0.9 mm
• +/-30ppm over -40 to +125°C • SPI

Real Time Clock Family Product Highlights

SPOT™

Ultra-Low Power Semiconductors. Redefined.

Abracon redefines the meaning of ultra-low power semiconductors by announcing the immediate availability of the world's lowest power Real Time Clock and Real Time Clock with Integrated Power Management families. Sub-Threshold Power optimized techonolgy by ambiq micro provides power requirements more than 7X lower than any other industry RTC (as low as 14nA), these are the first semiconductors based on the innovative SPOT™ (Sub-Threshold Power Optimized Technology) CMOS platform. This family of full-featured products includes a host of innovative timing and power management features designed to lower overall system power requirements and decrease product cost.

The AB18x5 product family sets a new standard for RTC devices with a number of innovative timing features combined with groundbreaking ultra-low power requirements. By combining clock functions and system power management, the AB18x5 family combines the functions of several chips into a single, low cost solution. The low-cost AB08x5 family contains all of the low power and advanced timing features of the AB18x5 but does not have the power management capabilities.

Features

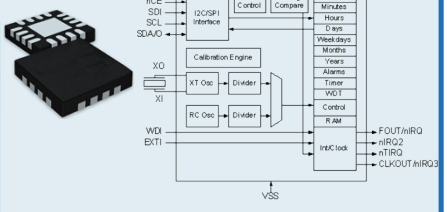
All AB08x5 and AB18x5 devices include the following capabilities:

- Ultra-Low Crystal Mode Supply Current for High Accuracy- 55nA
- RC Oscillator for Extreme Low Power Applications – 14nA
- Autocalibration for Accurate Timekeeping with Very Low Power- 18nA
- Distributed Low Jitter Digital Calibration Enables More Precise Timing
- Extended Crystal Calibration Supports a Wide Range of Crystals
- Advanced Timing Functions - A Superset of Most Legacy RTCs
- Available I2C and SPI Interfaces for System Flexibility
- Sophisticated Battery Management for Compact RTC Backup Applications
- Optional On-Chip RAM with No Power Penalty
- Low Resistance Power Switch Allows External Component Power Gating
- Sleep Manager Dramatically Reduces Overall System Power
- Host Reset Manager for Power Control Flexibility

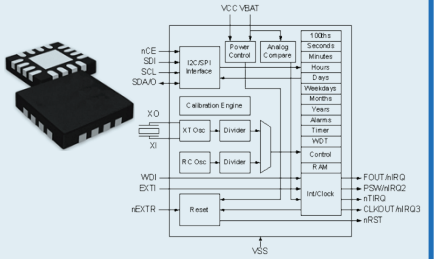
Applications

- Battery Operated Devices
- Wireless Sensors
- Smart Cards
- Smart Appliances
- Consumer Electronics
- Data Loggers
- Medical Devices

AB08x5 RTC

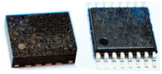


AB18x5 RTC + Power Management

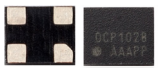


Part Number	Baseline Timekeeping		Advanced Timekeeping				Power Management				System Interface
	Crystal Oscillator	Number of GPIO Outputs	RC Oscillator	Calibration/ Auto-Calibration	Watchdog Timer	RAM (Bytes)	VBAT Switch	Reset Management	External Interrupts	Power Switch & Sleep Finite State Machine	
AB0805	■	4	■	■	■	256	■		■		I²C
AB0815	■	3	■	■	■	256	■		■		SPI
AB1805	■	4	■	■	■	256	■	■	■	■	I²C
AB1815	■	3	■	■	■	256	■	■	■	■	SPI

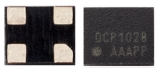
MEMS Oscillators



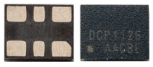
★ **AB-557-03** 3.5 x 2.5 x 0.85mm
PCIe Clock Generator • 2.25 to 3.6Vdc • LVCMOS, LVDS, LVPECL, HCSL output • 100MHz



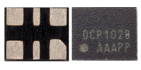
★ **ASDM** 2.5 x 2.0 x 0.85mm
• 1.8Vdc to 3.3Vdc • Plastic QFN Package
• LVCMOS output • 1.0MHz to 150MHz



★ **ASDMB** 2.5 x 2.0 x 0.85mm ***Industrial Grade***
• 1.8Vdc to 3.3Vdc • Plastic QFN Package
• LVCMOS output • 1.0MHz to 150MHz
• 10ppm • -40 to +105°C



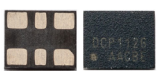
ASDMDC 2.5 x 2.0 x 0.85mm
Industrial Grade 3G MEMS Oscillator
• Pin Configurable Dual LVCMOS output, Low power, and low jitter for high speed data communication
• 2.25Vdc to 3.6Vdc • Plastic QFN Package
• 2.3MHz to 170MHz



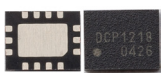
★ **ASDMP** 2.5 x 2.0 x 0.85mm
Industrial Grade High Performance MEMS Oscillator
• Low power, and low jitter for high speed data communication • 2.25Vdc to 3.6Vdc
• Plastic QFN Package
• LVPECL/LVDS/HCSL:10MHz to 460MHz
LVCMOS: 10MHz to 170MHz

★ **ASEM** 3.2 x 2.5 x 0.85mm
• 1.8Vdc to 3.3Vdc • Plastic QFN Package
• LVCMOS output • 1.0MHz to 150MHz

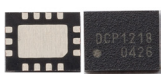
★ **ASEMB** 3.2 x 2.5 x 0.85mm ***Industrial Grade***
• 1.8Vdc to 3.3Vdc • Plastic QFN Package
• LVCMOS output • 1.0MHz to 150MHz • 10ppm
• -40 to +105°C



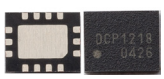
★ **ASEMP** 3.2 x 2.5 x 0.85mm
Industrial Grade High Performance MEMS Oscillator
• Low power, and low jitter for high speed data communication • 2.25Vdc to 3.6Vdc • Plastic QFN Package • LVPECL/LVDS/HCSL:10MHz to 460MHz
LVCMOS: 10MHz to 170MHz



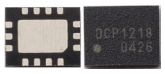
★ **ASEMCC** 3.2 x 2.5 x 0.85mm
Industrial Grade 3G MEMS Oscillator
• Pin Configurable LVCMOS output, Low power, and low jitter for high speed data communication
• 2.25Vdc to 3.6Vdc • Plastic QFN Package
• 10MHz to 170MHz



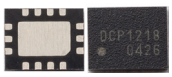
★ **ASEMDC** 3.2 x 2.5 x 0.85mm
Industrial Grade 3G MEMS Oscillator
• Pin Configurable Dual LVCMOS output, Low power, and low jitter for high speed data communication
• 2.25Vdc to 3.6Vdc • Plastic QFN Package
• 10MHz to 170MHz



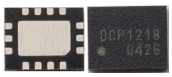
★ **ASEMDHC** 3.2 x 2.5 x 0.85mm
Industrial Grade 3G MEMS Oscillator
• Pin Configurable dual HCSL output, Low power, and low jitter for high speed data communication
• 2.25Vdc to 3.6Vdc • Plastic QFN Package
• 10MHz to 460MHz



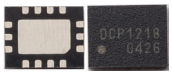
★ **ASEMDLC** 3.2 x 2.5 x 0.85mm
Industrial Grade 3G MEMS Oscillator
• Pin Configurable LVDS-CMOS dual output, Low power, and low jitter for high speed data communication • 2.25Vdc to 3.6Vdc • Plastic QFN Package • 10 MHz to 170MHz for LVCMOS, 10 MHz to 460MHz for LVDS



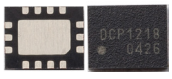
★ **ASEMCLP** 3.2 x 2.5 x 0.85mm
Industrial Grade 3G MEMS Oscillator
• Pin Configurable LVPECL output, Low power, and low jitter for high speed data communication
• 2.25Vdc to 3.6Vdc • Plastic QFN Package
• 10 MHz to 460MHz



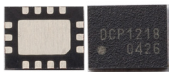
★ **ASEMCHC** 3.2 x 2.5 x 0.85mm
Industrial Grade 3G MEMS Oscillator
• Pin Configurable HCSL output, Low power, and low jitter for high speed data communication
• 2.25Vdc to 3.6Vdc • Plastic QFN Package
• 10 MHz to 460MHz



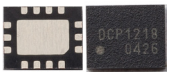
★ **ASEMCLV** 3.2 x 2.5 x 0.85mm
Industrial Grade 3G MEMS Oscillator
• Pin Configurable LVDS output, Low power, and low jitter for high speed data communication
• 2.25Vdc to 3.6Vdc • Plastic QFN Package
• 10 MHz to 460MHz



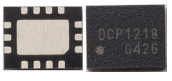
★ **ASEMDLP** 3.2 x 2.5 x 0.85mm
Industrial Grade 3G MEMS Oscillator
• Pin Configurable LVPECL Dual output, Low power, and low jitter for high speed data communication
• 2.25Vdc to 3.6Vdc • Plastic QFN Package
• 10MHz to 460MHz



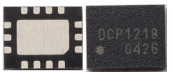
★ **ASEMDLV** 3.2 x 2.5 x 0.85mm
Industrial Grade 3G MEMS Oscillator
• Pin Configurable LVDS dual output, Low power, and low jitter for high speed data communication
• 2.25Vdc to 3.6Vdc • Plastic QFN Package
• 10MHz to 460MHz



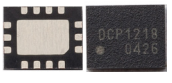
★ **ASEMDHCC** 3.2 x 2.5 x 0.85mm
Industrial Grade 3G MEMS Oscillator
• Pin Configurable HCSL-CMOS dual output, Low power, and low jitter for high speed data communication • 2.25Vdc to 3.6Vdc • Plastic QFN Package • 10MHz to 170MHz for LVCMOS, 10MHz to 460MHz for HCSL



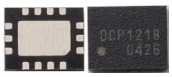
★ **ASEMDHLP** 3.2 x 2.5 x 0.85mm
Industrial Grade 3G MEMS Oscillator
• Pin Configurable HCSL-LVPECL dual output, Low power, and low jitter for high speed data communication • 2.25Vdc to 3.6Vdc
• Plastic QFN Package • 10 MHz to 460MHz



★ **ASEMDHLV** 3.2 x 2.5 x 0.85mm
Industrial Grade 3G MEMS Oscillator
• Pin Configurable HCSL-LVDS dual output, Low power, and low jitter for high speed data communication • 2.25Vdc to 3.6Vdc
• Plastic QFN Package • 10 MHz to 460MHz



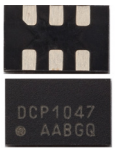
★ **ASEMDLPC** 3.2 x 2.5 x 0.85mm
Industrial Grade 3G MEMS Oscillator
• Pin Configurable LVPECL-CMOS dual output, Low power, and low jitter for high speed data communication • 2.25Vdc to 3.6Vdc • Plastic QFN package • 10 MHz to 170MHz for LVCMOS, 10 MHz to 460MHz LVPECL



★ **ASEMDLVP** 3.2 x 2.5 x 0.85mm
Industrial Grade 3G MEMS Oscillator
• Pin Configurable LVDS-LVPECL dual output, Low power, and low jitter for high speed data communication • 2.25Vdc to 3.6Vdc
• Plastic QFN Package • 10 MHz to 460MHz

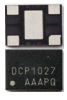
★ **ASFLM** 5.0 x 3.2 x 0.85mm
• 1.8Vdc to 3.3Vdc • Plastic QFN Package
• LVCMOS output • 1.0MHz to 150MHz

★ **ASFLMB** 5.0 x 3.2 x 0.85mm ***Industrial Grade***
• 1.8Vdc to 3.3Vdc • Plastic QFN Package
• LVCMOS output • 1.0MHz to 150MHz • 10ppm
• -40 to +105°C



★ **ASFLMP** 5.0 x 3.2 x 0.85mm
Industrial Grade High Performance MEMS Oscillator
• Low power, and low jitter for high speed data communication • 2.25Vdc to 3.6Vdc
• Plastic QFN Package • LVPECL/LVDS
HCSL:10MHz to 460MHz LVCMOS: 10MHz to 170MHz

★ **ASVM** 7.0 x 5.0 x 0.85mm
• 1.8Vdc to 3.3Vdc • Plastic QFN Package
• LVCMOS output • 1.0MHz to 150MHz



★ **ASVMB** 7.0 x 5.0 x 0.85mm ***Industrial Grade***
• 1.8Vdc to 3.3Vdc • Plastic QFN Package
• LVCMOS output • 1.0MHz to 150MHz • 10ppm
• -40 to +105°C

★ **ASVMP** 5.0 x 3.2 x 0.85mm
Industrial Grade High Performance MEMS Oscillator
• Low power, and low jitter for high speed data communication • 2.25Vdc to 3.6Vdc • Plastic QFN Package • LVPECL/LVDS/HCSL:10MHz to 460MHz
LVCMOS: 10MHz to 170MHz

SMD Crystal Oscillators

★ **ASCO** 1.6 x 1.2 x 0.7mm
• 1.8, 2.5, 3.3Vdc, LVCMOS • 1.0MHz to 80MHz

★ **ASA, ASA1, ASA2** 2.0 x 1.6 x 0.7mm
• 3.3, 2.5, or 1.8Vdc • LVCMOS • 1MHz to 80MHz

★ **ASD, ASD1, ASD2, ASD3, ASD6**
• 2.5 x 2.0 x 1.0mm • 3.3, 3.0, 2.5 or 1.8Vdc
• LVCMOS • 0.75MHz to 60MHz

ASET 3.2 x 2.5 x 1.2mm
Precision Crystal Oscillator • 2.5 to 3.3 Vdc
• LVCMOS , Industrial grade tight temperature stability • 4MHz to 54MHz
• Temp. Stability +/- 10ppm from -40 to +85°C

★ **ASE** • 3.2 x 2.5 x 1.2mm
• 3.3Vdc • LVCMOS • 0.625MHz to 200MHz

★ **ASE2** • 3.2 x 2.5 x 1.2mm
• 2.5Vdc • LVCMOS • 0.625MHz to 166MHz

★ **ASE3** • 3.2 x 2.5 x 1.2mm
• 1.8Vdc • LVCMOS • 0.625MHz - 133MHz

ASE4 • 3.2 x 2.5 x 1.2mm
• 1.5Vdc • LVCMOS • 1MHz to 50MHz

ASE5 • 3.2 x 2.5 x 1.2mm
• 1.35Vdc • LVCMOS • 1MHz to 50MHz

ASE6 • 3.2 x 2.5 x 1.2mm ***Low Voltage***
• 1.0Vdc • LVCMOS • 1MHz to 50MHz

ASFLT • 5.0 x 3.2 x 1.05mm
Precision Crystal Oscillator • 2.5 to 3.3 Vdc
• LVCMOS • Industrial grade tight temperature stability • 4MHz to 54MHz • Temp. Stability +/- 10ppm from -40 to +85°C

ASF1 • 5.0 x 3.2 x 1.1mm
• 5.0Vdc • TTL/HCMOS • 0.321MHz to 125MHz

★ **ASFL1** • 5.0 x 3.2 x 1.3mm
• 3.3Vdc • TTL/LVCMOS • 0.321 MHz to133.33 MHz

ASFL2 • 5.0 x 3.2 x 1.4mm
• 2.5Vdc • TTL/LVCMOS • 0.321 MHz to 125 MHz

★ **ASFL3** 5.0 x 3.2 x 1.1mm
• 1.8Vdc • LVCMOS • 0.5MHz to 125MHz

★ **ASV** 7.0 x 5.0 x 1.8mm
• 3.3Vdc, 2.5Vdc, and 1.8Vdc • TTL/LVCMOS
• 0.312MHz to 200MHz

ASV1 7.0 x 5.0 x 1.6mm • 3.3Vdc, 2.5Vdc, and 1.8Vdc • LVCMOS/ TTL • 0.5MHz to 200MHz

ASV2 7.0 x 5.0 x 1.4mm • 3.3Vdc, 2.5Vdc, and 1.8Vdc • LVCMOS/ TTL • 0.5MHz to 133MHz

ASL 7.0 x 5.08 x 1.8mm
• 5Vdc • HCMOS/TTL • 1MHz to 125MHz

ASL1 7.0 x 5.08 x 1.4mm
• 5Vdc • HCMOS/TTL • 1MHz to 125MHz

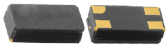
ABFM 7.0 x 5.0 x 1.8mm ***Low Phase Noise & Jitter***
• 3.3 or 2.5Vdc • LVPECL, LVDS, LVCMOS
• 30MHz to 280MHz

ALD 7.0 x 5.0 x 2.0mm ***Low Phase Noise & Jitter***
• 3.3 or 2.5Vdc • 0.75MHz to 800MHz
• LVPECL, LVDS, LVCMOS

ABNM 7.0 x 5.0 x 1.8mm • 3.3, 2.5Vdc
• LVCMOS, LVDS, LVPECL • 1 to 160MHz

32.768kHz SMD Crystal Oscillators

★ **ASDK** 2.5 x 2.0 x 0.95mm
• 1.8Vdc, 2.5Vdc, 3.3Vdc • LVCMOS • 32.768kHz
• Low current 2.2mA typical@3.3Vdc



★ **ASH7KW** 3.2 x 1.5 x 1.0mm ***Tuning Fork Crystal***
• 1.2 to 5.5Vdc • LVCMOS • 32.768kHz • -40 to +125°C

★ **ASH7K** 3.2 x 1.5 x 1.0mm ***Tuning Fork Crystal***
• 1.5Vdc to 3.6Vdc • 32.768kHz
• Low Current Consumption (0.7uA Max)

★ **ASHEK** 3.2 x 2.5 x 0.9mm ***Tuning Fork Crystal***
• Ultra low uA current consumption with LVCMOS output • 32.768kHz • 1.5µA max @3.3Vdc

★ **ASEK** 3.2 x 2.5 x 1.2mm
• 1.8Vdc, 2.5Vdc, 3.3Vdc • LVCMOS • 32.768kHz
• Low current 1.7mA typical @3.3Vdc

★ **ASFLK** 5.0 x 3.2 x 1.3mm • 2.5Vdc, 3.0Vdc, 3.3Vdc, 5.0Vdc • 32.768kHz • Low current 0.5mA typ@2.5 ~ 3.0Vdc, 1.5mA typ @5.0Vdc • LVCMOS

★ **ASVK** 7.0 x 5.0 x 1.8mm
• 2.8Vdc, 3.0Vdc, 3.3Vdc
• 32.768kHz Supply current 7.0mA max • LVCMOS

SMD Programmable Crystal Oscillators

★ **AP2S** 2.5 x 2.0 x 0.9mm
• 1.8, 2.5, 3.3Vdc, • 1.0MHz to 200MHz • LVCMOS
• Low jitter PLL technology

★ **AP3S** 3.2 x 2.5 x 1.2mm
• 1.8, 2.5, 3.3Vdc • 1MHz - 200MHz • LVCMOS
• Low jitter PLL technology

★ **AP5S** 5.0 x 3.2 x 1.2mm
• 2.5, 3.3Vdc • 10MHz to 200MHz • LVCMOS
• Low jitter PLL technology

★ **ASSFLP** 5.0 x 3.2 x 1.3mm
•2.5, 3.3Vdc • 8MHz to 160MHz • LVCMOS
• Low EMI
Solves EMI Compliance with low cost Systemic Solution

★ **AP7S** 7.0 x 5.0 x 1.6mm
• 2.5, 3.3Vdc • 10MHz to 200MHz • LVCMOS
• Low jitter PLL technology

★ **ASSVP** 7.0 x 5.0 x 1.4mm
•2.5, 3.3Vdc • 10MHz to 160MHz • LVCMOS
• Low EMI
Solves EMI Compliance with low cost Systemic Solution

SMD Low EMI Oscillators (Integrated Spread Spectrum reduces EMI up to 20dB!)

ASSFL 5.0 x 3.2 x 1.2mm
• 3.3Vdc • LVCMOS • 6MHz to 160MHz
Drop in replacement for 5 x 3.2mm XO's

ASSVJ 7.0 x 5.0 x 1.8mm ***Reduced Jitter Design***
• 3.3Vdc • LVCMOS •13 MHz to 200MHz
Drop in replacement for 7 x 5mm XO's

ASSV 7.0 x 5.0 x 1.8mm
• 3.3Vdc • LVCMOS • 5MHz to 160MHz
Drop in replacement for 7 x 5mm XO's

ASSL1, ASSV1 7.43 x 5.34 x 2.6mm
• 3.3, 5.0Vdc • CMOS • 8MHz to 128MHz
7 x 5mm XO drop in replacement

ASSM, ASSML 14.27 x 10.7 x 5.0mm
• 3.3, 5.0Vdc • CMOS • 4MHz to 128MHz
SMD Plastic XO drop in replacement

Thru-Hole TCXO/VCTCXO

ACTX1018(A), ACVTX1018(A) 18.3 x 12.0 x 8.0mm
• DIP, TTL/CMOS, 3.3Vdc or 5Vdc • 0.01MHz to 200MHz (3.3V), 0.01MHz to 160MHz (5V)

ACTX1018S(A), ACVTX1018S(A)18.3 x 12.0 x 8.0mm
• DIP, Clipped, Sine Wave, 3.3Vdc or 5Vdc
• 8MHz to 61.44MHz

ACVX1220 20.2 x 12.6 x 8.0mm
• Full-size DIP, 5Vdc, CMOS/TTL
• 1MHz to 160MHz

ACVX1220L 20.8 x 13.2 x 5.03mm
• Full-size DIP, 3.3Vdc, LVCMOS/TTL
• 1MHz to 120MHz

ACVX1222 20.8 x 13.2 x 5.08mm
• Full-size DIP, 3.3Vdc, LVCMOS/TTL
• 1MHz to 200MHz

ACVX1240 20.8 x 13.2 x 6.8mm
• Full-size DIP, 5Vdc, Sinewave output
• 8MHz to 200MHz

SMD TCXO/VCTCXO

★ **ASGTX** 9.0 x 7.0 x 2.24mm
• LVCMOS, LVPECL, LVDS • 3.3V
• 10MHz to 1500MHz

★ **ASTX-13, ASVTX-13** 2.0 x 1.6 x 0.8mm
• Clipped Sine • Seam Sealed SMD • 1.8, 2.8, 3.0Vdc
• 13MHz to 52MHz

★ **ASTX-12, ASVTX-12** 2.5 x 2.0 x 0.9mm
• Clipped Sine • Seam Sealed SMD
• 1.8 2.5, 2.8, 3.0Vdc • 13MHz to 52MHz

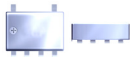
★ **ASTX-H12** 2.5 x 2.0 x 0.9mm
• LVCMOS • Seam Sealed SMD • 3.3, 2.8, 2.5Vdc
• 0.675kHz to 55MHz

★ **ASTX-H11** 3.2 x 2.5 x 1.0mm
• LVCMOS • Seam Sealed SMD • 2.5, 2.8, 3.3Vdc
• 0.675MHz to 55MHz

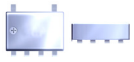
★ **ASTX-11, ASVTX-11** 3.2 x 2.5 x 0.9mm
• Clipped Sine • Seam Sealed SMD
• 2.5, 2.8, 3.0, 3.3Vdc • 10MHz to 40MHz

★ **ASTX-09, ASVTX-09** 5.0 x 3.2 x 1.5mm
• Clipped Sine • Seam Sealed SMD
• 2.5, 3.0, 3.3, 5.0Vdc • 6 MHz to 45MHz

ASTX-H09 5.0 x 3.2 x 1.2mm
• LVCMOS • Seam Sealed SMD • 3.0, 3.3Vdc
• 5MHz to 50MHz



ASTX-01H 11.4 x 9.6 x 4.0mm
• TTL/CMOS • 5.0Vdc • 2MHz to 30MHz



ASTX-01HA 11.4 x 9.6 x 4.0mm
• TTL/CMOS • 3.3Vdc • 2MHz to 30MHz

Automotive & Industrial Grade Oscillators

Member of AIAG Automotive Industry Action Group

ASH7KAIG 3.2 x 1.5 x 1.0 mm
• 32.768 kHz • 1.5 to 3.6Vdc • LVCMOS • 4 Pad SMD

ASAAIG 2.0 x 1.6 x 0.8 mm
• 4.0 to 50 MHz • 3.3Vdc, 2.5Vdc, 1.8Vdc
• LVCMOS • 4 Pad SMD

ASDAIG 2.5 x 2.0 x 0.95 mm
• 20 to 48 MHz • 3.3Vdc, 3.0Vdc, 2.5Vdc, 1.8Vdc
• LVCMOS • 4 Pad SMD

ASEAIG 3.2 x 2.5 x 1.2 mm
• 1.75 to 60 MHz • 3.3Vdc, 3.0Vdc, 2.5Vdc, 1.8Vdc
• LVCMOS • 4 Pad SMD

ASVTXAIG-12/ASTXAIG-12 2.5 x 2.0 x 0.9mm
• 13 to 52 MHz • 3.0Vdc, 2.8Vdc • Clipped Sine Wave
• 6 Pad SMD

ASVTXAIG-13/ASTXAIG-13 2.0 x 1.6 x 0.8mm
• 13 to 52 MHz • 3.0Vdc, 2.8Vdc, 1.8Vdc
• Clipped Sine Wave • 4 Pad SMD

TCXO's: *Custom Frequencies 10MHz ~ 1.50GHz* Shipped in 1~5 Days!

High Frequency; Fixed & Voltage Controlled TCXO's; ASGTX Series

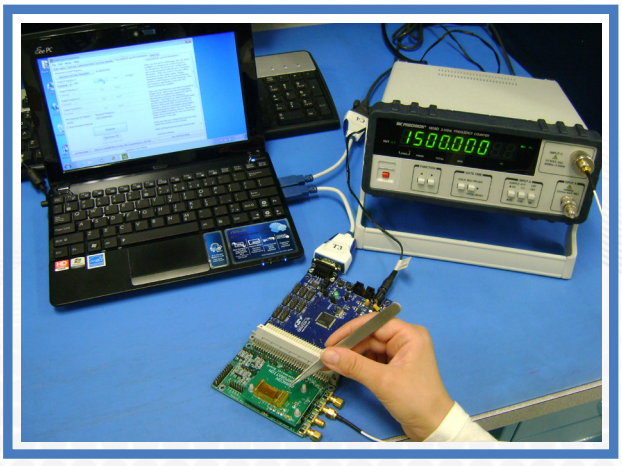
ABRACON's ASGTX series offers a High Frequency Fixed Clock TCXO or Voltage Controlled (VC)TCXO in a small profile 9x7x2.24 mm SMT package. These devices are factory configurable to any desired frequency from 10MHz to 250MHz with LVCMOS Output and 10MHz to 1.50GHz with LVDS or LVPECL Output.

With standard default temperature stability of ±1.00 ppm over -30ºC to +70ºC and ±2.00 ppm over -40ºC to +85ºC; this series fulfils Any Frequency Timing need up to 1.50GHz. Further, factory configurable mechanism shortens the lead-time to 1~5 business days

ASGTX– High Frequency TCXO/VCTCXO… tight stability, economical…1~5 days lead-time

Applications:

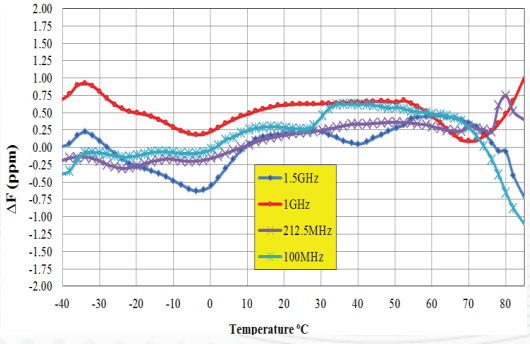
- Satellite Modem Communications Systems
- COTS – Military Communication Circuitry
- WiMax
- LTE, BTS
- CATV, LAN, LMDS
- Test & Measurement Equipment
- Avionics
- A/D and D/A Converters
- DDS based architecture
- Phase Locked Loops
- Point-to-Point Communication Networks



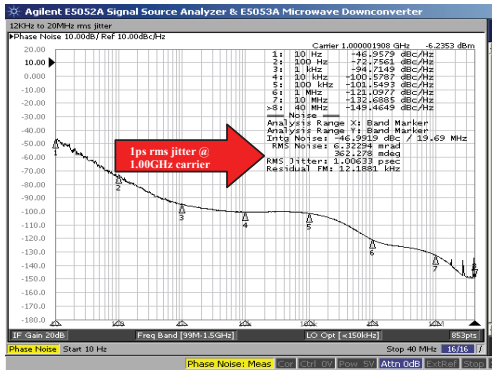
What ASGTX series offers designers?

- ***Any Frequency*** from 10MHz to 250MHz: LVCMOS
- ***Any Frequency*** from 10MHz to 1.50GHz: LVDS/LVPECL
- Wide Operating Temperature Range (-40ºC to +85ºC)
- ±1.00 ppm over -30ºC to +70ºC and ±2.00 ppm over -40ºC to +85ºC stability
- ±10 ppm Max. All inclusive Stability (including Aging) over 10-years
- ±10 ppm Minimum Frequency Pull ability in VCTCXO mode
- 1ps typical rms jitter with 1.80ps maximum @ 1.5GHz carrier
- +3.3V (±5%) operating Voltage
- 9.0 x 7.0 x 2.24 mm RoHS Compliant SMT package

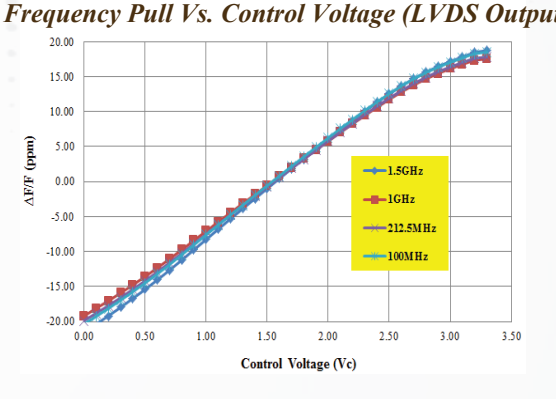
Frequency Stability Vs. Temperature (LVDS Output)



Typical Noise @ 1.00GHz Carrier



Frequency Pull Vs. Control Voltage (LVDS Output)



SMD VCXO's

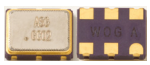
ASEV 3.2 x 2.5 x 1.2mm
• 1.8, 2.5, 2.8, 3.3Vdc • LVCMOS • 1.5MHz to 54MHz

ASFV 5.0 x 3.2 x 1.2mm
• 5Vdc, HCMOS • 1.5MHz to 50MHz

ASFLV 5.0 x 3.2 x 1.2mm
• 3.3Vdc, LVCMOS • 1.0MHz to 50MHz

★**ASG-C** 7.0 x 5.0 x 1.9mm
• 2.5, 3.3Vdc • LVCMOS • 10MHz to 250MHz

★**ASG-D** 7.0 x 5.0 x 1.9mm
• 2.5, 3.3Vdc • LVDS • 10MHz to 1.5GHz



★**ASG-P** 7.0 x 5.0 x 1.9mm
• 2.5, 3.3Vdc • LVPECL • 10MHz to 1.5GHz

★**ASG2-C** 2.5 x 2.0 x 1.0mm
• 2.5, 3.3Vdc • LVCMOS • 8MHz to 200MHz

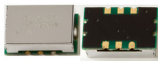
★**ASG2-D** 2.5 x 2.0 x 1.0mm
• 2.5, 3.3Vdc • LVDS • 8MHz to 1.5GHz

★**ASG2-P** 2.5 x 2.0 x 1.0mm
• 2.5, 3.3Vdc • LVPECL • 8MHz to 1.5GHz

ASLV 7.0 x 5.0 x 1.6mm
• 5Vdc, TTL/CMOS • 1MHz to 155.52MHz

★ **ASVV** 7.0 x 5.0 x 1.6mm
• 3.3Vdc, TTL/LVCMOS • 1MHz to 200MHz

ALVD 7.0 x 5.0 x 1.8mm
• 3.3Vdc • LVPECL, LVDS, LVCMOS
• 0.75MHz to 800MHz



★**ABLJO** 14.3 x 8.7 x 5.50mm
Ultra-Low Jitter XO/VCXO
• 3.3Vdc • LVCMOS • 80MHz to 200MHz
• 100 fs rms Max jitter

★**ABLNO** 14.3 x 8.7 x 5.50mm
Ultra Low Phase Noise XO/VCXO
• 3.3Vdc • LVCMOS • 50MHz to 156.25MHz
• -165dBc/Hz Floor

ASG2 Series

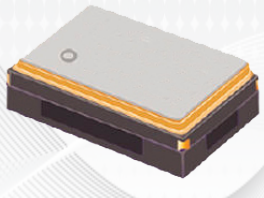
2.5 x 2.0 x 1.0mm Ultra Miniature 8MHz-1.5GHz Configurable; SMD XO & VCXO

ASG2 series is Miniature High Frequency - Precision Crystal Oscillators and VCXOs. It is introduced to meet the trend towards shorter lead times and suppliers' ability to offer low jitter - fixed or voltage controllable oscillators at high carrier frequencies, offering LVCMOS or Differential Output. Its a factory configurable surface mount oscillator capable of outputting any desired frequency between 8MHz and 1.5GHz in a 2.5 x 2.0 x 1.0 mm Ceramic SMT Package.

The ASG2 series is designed to offer exceptional, all-inclusive frequency stability of < ±50 ppm (tolerance, stability over temperature and aging) over a 15-year product life. Utilizing innovative architecture, this solution features exceptional Phase Noise characteristics at high carrier frequencies.

Key features:
- LVCMOS, LVDS or LVPECL output option
- +2.5V or +3.3V operation
- -40°C to +85°C standard operating temperature range
- Miniature size 2.5 x 2.0 x 1.0 mm Ceramic SMT Package
- Short lead times

Applications:
- Networking
- SONET/SDH
- WiMax / WLAN
- Computing
- Phase Locked Loops
- Direct Digital Synthesis (DDS)
- DSL/ADSL
- Base Terminal Stations



ABLNO Series

Ultra-Low Phase Noise; Fixed & Voltage Controlled Crystal Oscillators

ABRACON's ABLNO series offers an Ultra-Low Phase Noise Fixed Clock Oscillator (XO) and Voltage Controlled Crystal Oscillator (VCXO's), in industry standard 9x14mm package. These devices are designed with High "Q", 3rd Overtone AT-Cut Quartz Blanks, enabling exceptionally clean, close-to-the-carrier phase noise. With 75fs maximum rms jitter over 12 kHz to 20MHz Bandwidth, ABLNO offers best-in-class jitter performance at an economical price point.

Key Features:
- Ultra-Low Phase Noise & Exceptionally low rms jitter; 100% tested at room temperature
- Can be used as a Platform Device followed by a simple division scheme to generate ÷2 & ÷4 frequencies. For instance, 100MHz ABLNO can be utilized to generate 100MHz, 50MHz & 25MHz on-board references
- Abracon is also offering an Evaluation Board to assist design engineers in evaluating ÷1, ÷2, ÷4 & ÷8 frequencies
- Industry leading frequency stability over temperature, without temperature compensation
- Linear & Monotonic Frequency Pull
- Exceptional long-term Aging
- Guaranteed ALL Inclusive Frequency Stability of ±28 ppm over 10-year product life

Applications:
- Satellite Modem Communication Systems
- COTS - Military communications
- Low Phase Noise Signal Sources
- High Definition TV
- Test & Measurement
- Ultra-Low Jitter RF Communication Circuitry

SAW Filters

For a Complete listing or our SAW Filters Go to www.abracon.com

E

5.0 x 5.0 x 1.5mm

F11

11.3 x 3.5 x 4.8mm

TO-39/3A

ϕ 9.5 x 3.3mm

TO-39/3B

ϕ 9.5 x 3.5mm

S3

3.8 x 3.8 x 1.5mm

S4

3.0 x 3.0 x 1.5mm

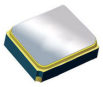
S6

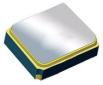
2.0 x 1.6 x 0.9mm

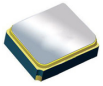
S9

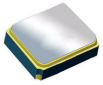
19.0 x 6.5 x 2.0mm

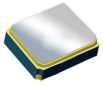
SAW Based Miniature - Band Pass Filters

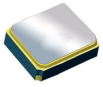

AFS20A05-719.00-T3 2.0 x 1.6 x 0.9mm
• 719MHz; 5MHz BW • Saw Band Pass Filter

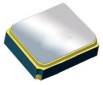

AFS20A26-915.00-T3 2.0 x 1.6 x 0.9mm
• 915MHz; 26MHz BW • Saw Band Pass Filter

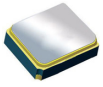

AFS20A20-1227.60-T3 2.0 x 1.6 x 0.9mm
• 1227.6MHz; 20MHz BW • Saw Band Pass Filter

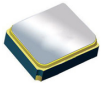

AFS20A02-1575.42-T3 2.0 x 1.6 x 0.9mm
• 1575.42MHz; 2MHz BW • Saw Band Pass Filter

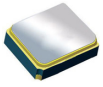

AFS20A42-1575.42-T3 2.0 x 1.6 x 0.9mm
• 1575.42MHz; 42MHz BW • Saw Band Pass Filter

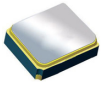

AFS20A53-1575.42-T3 2.0 x 1.6 x 0.9mm
• 1575.42MHz; 53MHz BW • Saw Band Pass Filter

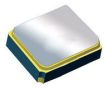

AFS20A05-1672.50-T3 2.0 x 1.6 x 0.9mm
• 1672.5MHz; 5MHz BW • Saw Band Pass Filter

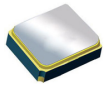

AFS20A20-1910.00-T3 2.0 x 1.6 x 0.9mm
• 1910MHz; 20MHz BW • Saw Band Pass Filter

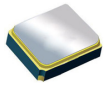

AFS20A15-2017.50-T3 2.0 x 1.6 x 0.9mm
• 2017.5MHz; 15MHz BW • Saw Band Pass Filter

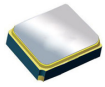

AFS14A11-722.00-T3 1.4 x 1.1 x 0.7mm
• 722MHz; 11MHz BW • Saw Band Pass Filter

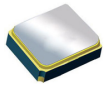

AFS14A26-915.00-T3 1.4 x 1.1 x 0.7mm
• 915MHz; 26MHz BW • Saw Band Pass Filter

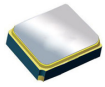

AFS14A34-1588.66-T3 1.4 x 1.1 x 0.7mm
• 1588.66MHz; 34.47MHz BW
• Saw Band Pass Filter

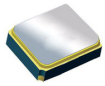

AFS14A35-1591.50-T3 1.4 x 1.1 x 0.7mm
• 1591.5MHz; 35MHz BW• Saw Band Pass Filter

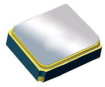

AFS14A35-1902.00-T3 1.4 x 1.1 x 0.7mm
• 1902.0MHz; 35MHz BW• Saw Band Pass Filter


AFS14A40-1900.00-T3 1.4 x 1.1 x 0.7mm
• 1900.0MHz; 40MHz BW• Saw Band Pass Filter


AFS14A15-2017.50-T3 1.4 x 1.1 x 0.7mm
• 2017.5MHz; 15MHz BW• Saw Band Pass Filter


AFS14A30-2185.00-T3 1.4 x 1.1 x 0.7mm
• 2185.0MHz; 30MHz BW• Saw Band Pass Filter


AFS14A72-2436.00-T3 1.4 x 1.1 x 0.7mm
• 2436.0MHz; 72MHz BW• Saw Band Pass Filter


AFS14A04-1575.42-T3 1.4 x 1.1 x 0.7mm
• 1575.42MHz; 4MHz BW • Saw Band Pass Filter

Dielectric Low Pass Filters


ALFC32-1200 3.2 x 2.5 x 1.5mm
• Multi-Layer 1200MHz • Low-Pass Filter


ALFC21-2450 2.0 x 1.25 x 0.9mm
• Multi-Layer 2450MHz • Low-Pass Filter

Dielectric Balun Filter

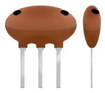

ADBLF21-2450.00-A-T 2.0 x 1.25 x 1.0mm
• 2450MHz Dielectric Balun Filter

Dielectric Band Pass Filters


ADFC32 3.2 x 2.5 x 1.5mm
• 1890, 2450MHz • Planar Design
• Band Pass Filter


ADFC21 2.0 x 1.25 x 0.95mm
• 2450, 5390, 5800MHz • Planar Design • Band Pass Filter

Ceramic Filters


AFC10.7 7.0 x 7.0 x 4.0mm • 10.7MHz


ASFC10.7M 7.0 x 3.0 x 1.5mm • 10.7MHz


AFC4.5M 9.0 x 7.0 x 4.0 mm • 4.5MHz

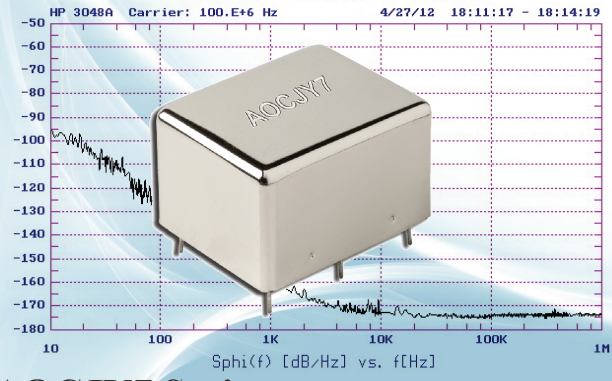
Monolithic Crystal Filters


ACF21U Series 7.8 x 8.0 x 3.1mm
• 21.4MHz • Fundamental


ACF45U Series 7.8 x 8.0 x 3.1mm
• 45MHz • Fundamental

OCXO

Ultra-Low Phase Noise Oven Controlled Crystal Oscillator



AOCJY7 Series - *25.4 x 25.4 x 12.7 mm Leaded*

- Exceptional Close to the carrier Maximum Phase Noise of -160dBc/Hz @ 1kHz & -174dBc/Hz @ 10kHz offset from 100.0 MHz Carrier
- SC-Cut, High "Q" resonator based design
- 100.0MHz carrier frequency
- Excellent Frequency Stability of ±50.0 ppb over the operating temperature range of -20ºC to +70ºC
- Tuned Sinewave output into a 50Ω load
- Industry Standard, 25.4x25.4x12.7 mm, RoHS compliant & Pb free package

OCXO- SMD

★ **AOCJY** 25.4 x 22 x 12.7mm
- 10MHz to 100MHz; ±5 ppb over 0ºC to +50ºC
- 10MHz to 100MHz; ±10 ppb over -20ºC to +70ºC
- 10MHz to 100MHz; ±30 ppb over -40ºC to +75ºC
- -135 dBc/Hz Phase Noise @ 100Hz offset from 10MHz

★ **AOCJYR** 9.7 x 7.5 x 4.3mm NEW
- 5MHz to 50MHz; ±20ppb ~ ±100ppb over -40 to 85°C
- -142dBc/Hz typ. Phase Noise @ 1kHz offset from 10MHz

OCXO- Thru Hole

★ **AOCJY1** 20.8 x 13.2 x 7.8mm
- 10MHz to 100MHz; ±50 ppb over 0ºC to +50ºC
- 10MHz to 100MHz; ±200 ppb over -20ºC to +70ºC
- 10MHz to 100MHz; ±500 ppb over -40ºC to +75ºC
- -145 dBc/Hz Phase Noise @ 1kHz offset from 10MHz

★ **AOCJY2** 21 x 21 x 11mm
- 10MHz to 100MHz; ±5 ppb over 0ºC to +50ºC
- 10MHz to 100MHz; ±10 ppb over -20ºC to +70ºC
- 10MHz to 100MHz; ±30 ppb over -40ºC to +75ºC
- -140 dBc/Hz Phase Noise @ 100Hz offset from 10MHz

★ **AOCJY3** 25.4 x 25.4 x 13mm
- 10MHz to 100MHz; ±5 ppb over 0ºC to +50ºC
- 10MHz to 100MHz; ±10 ppb over -20ºC to +70ºC
- 10MHz to 100MHz; ±30 ppb over -40ºC to +75ºC
- -140 dBc/Hz Phase Noise @ 100Hz offset from 10MHz

★ **AOCJY4** 36.1 x 27.2 x 13mm
- 10MHz to 40MHz; ±2 ppb over 0ºC to +50ºC
- 10MHz to 40MHz; ±10 ppb over -20ºC to +70ºC
- 10MHz to 40MHz; ±10 ppb over -40ºC to +75ºC
- -140 dBc/Hz Phase Noise @ 100Hz offset from 10MHz

★ **AOCJY5** 36.1 x 27.2 x 13mm
- 10MHz; ±50 ppb over -55ºC to +85ºC
- -145 dBc/Hz Phase Noise @ 1kHz offset from 10MHz

★ **AOCJY6** 51 x 41 x 25mm
- 10MHz; ±0.10 ppb over -20ºC to +70ºC
- 10MHz; ±0.20 ppb over -20ºC to +70ºC
- 10MHz; ±0.50 ppb over -20ºC to +70ºC
- -145 dBc/Hz Phase Noise @ 1kHz offset from 10MHz

★ **AOCJY7** 25.4 x 25.4 x 12.7mm
- 100MHz; ±50 ppb over -20ºC to +70ºC
- -174 dBc/Hz Max. Phase Noise @ 10kHz offset from 100MHz

Stratum III

AST3 7.0 x 5.0 x 2.0mm
- 10 to 26MHz • 3.3, 5.0Vdc • LVCMOS

±280ppb over -20 to +70°C
±370ppb over -40 to +85°C

AST3TQ 7.0 x 5.0 x 1.90mm NEW
- 10 to 40MHz • 3.3Vdc • LVCMOS

±100ppb over -40 to +85°C
±280ppb over -50 to +90°C
±500ppb over -55 to +95°C

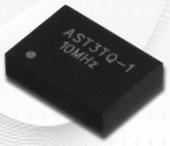
AST3TQ Series NEW

TCXO with -55 to +95°C Operating Temperature in a 5 x 7mm footprint !

ABRACON's AST3TQ series offers Wide Operating Temperature, Precision Fixed Clock TCXO's in a small profile 5x7x1.9 mm SMT package. These devices are available from 10MHz to 40MHz carrier frequencies with LVCMOS output; offering ±500 ppb frequency stability over -55ºC to +95ºC operating temperature.

Features:
- Industry standard, RoHS-Reflow Compliant, 5 x 7 x 1.9mm Hermetic Package
- Standard available frequencies: 10.00, 12.80, 19.20, 20.00, 25.00, 26.00, 30.72, 38.40 & 40.00MHz
- LVCMOS Output
- Frequency stabilities to include ±100ppb over -40ºC to +85ºC, ±280ppb over -50ºC to +90ºC and ±500ppb over -55ºC to +95ºC operating temperature range
- Excellent Phase Noise, Harmonics and Spurious content
- Typical rms jitter of 400fs @ 40MHz carrier & 1.0ps @ 10MHz carrier

Applications:
- COTS – Military Communication Circuitry
- WiMax
- LTE, BTS
- CATV, LAN, LMDS
- GPS Tracking with Hold-Over Accuracy



Bluetooth Modules

★**ABBTM-2.4GHz-31-T** 20.0 x 13.0 x 2.0mm
• Bluetooth Spec v1.2 (class 2) • UART • 1.8V, 3.3V
• HSP, HFP, A2DP, AVRCP

★**ABBTM-2.4GHz-33-T** 29.0 x 25.5 x 2.8mm
• Bluetooth Spec v1.2 (class 2) • UART • 1.8V, 3.3V
• HSP, HFP, A2DP, AVRCP • Built-in Antenna

★**ABBTM-2.4GHz-51-T** 20.0 x 13.4 x 2.2mm
• Bluetooth Spec v2.1 (class 2) • UART • 3.3V • HSP, HFP, A2DP, AVRCP

★**ABBTM-2.4GHz-52-T** 23.23 x 11.93 x 2.0mm
• Bluetooth Spec v2.1 (class 2) • UART • 3.3V • HSP, HFP, A2DP, AVRCP

★**ABBTM-2.4GHz-T** 26.9 x 13.0 x 2.5mm
• Bluetooth Spec v2.0+EDR (class 2) • UART • 3.3V
• SPP, OPP, PBAP • Built-in Antenna

★**ABBTM-NVC-MDCS42A** 25.8 x 13.4 x 2.2mm
• Bluetooth v2.1+EDR (class 2) • UART, USB • 3.3V
• SPP, HID, iAP

★**ABBTM-NVC-MDCS56** 23.24 x 11.93 x 2.05mm
• Bluetooth v2.1+EDR (class 2) • UART/I²C, PCM
• 3.3V • HFP, A2DP, AVRCP, SPP, iAP

★**ABBTM-NVC-MDCS71** 19.5 x 12.5 x 2.4mm
• Single mode Bluetooth v4.0 low energy • UART/I²C master • 1.8V to 3.6V • Proximity, Find Me, Heart Rate, HID, iBeacon

Frequency Translators

★**ABFT-20MHz** 7.0 x 5.0 x 2.0mm
• Input 10MHz; Output 20MHz • 3.3V • 14mA

★**ABFT-40MHz** 7.0 x 5.0 x 2.0mm
• Input 10MHz; Output 40MHz • 3.3V • 14mA

Passive Patch Antennas

★**APAE1575R1240ABDD1-T** 12.0 x 12.0 x 4.0mm
• 1575.42MHz • GPS • RHCP • 50Ω

★**APAE1575R1340ABDD6-T** 13.0 x 13.0 x 4.0mm
• 1575.42MHz • GPS • RHCP • 50Ω

★**APAE1575R1540AZDB2F-T** 15.0 x 15.0 x 4.0mm
• 1575.42MHz • GPS • RHCP • 50Ω

★**APAE1575R1820ABDC1-T** 18.0 x 18.0 x 2.0mm
• 1575.42MHz • GPS • RHCP • 50Ω

★**APAE1575R1840AADB7-T** 18.0 x 18.0 x 4.0mm
• 1575.42MHz • GPS • RHCP

★**APAE1575R1840BADB1F-T** 18.0 x 18.0 x 4.0mm
• 1575.42MHz • GPS • RHCP • 50Ω

★**APAE1575R2040ABDD2-T** 20.0 x 20.0 x 4.0mm
• 1575.42MHz • GPS • RHCP • 50Ω

★**APAE1575R2520ABDD7-T** 25.0 x 25.0 x 2.0mm
• 1575.42MHz • GPS • RHCP • 50Ω

★**APAE1575R2540AADBE-T** 25.0 x 25.0 x 4.0mm
• 1575.42MHz • GPS • RHCP • 50Ω

★**APAE1590R1340AKDB2-T** 13.0 x 13.0 x 4.0mm
• 1575.42/1590MHz • GPS + GLONASS • RHCP
• 50Ω

★**APAE1590R1350AKDB5-T** 13.0 x 13.0 x 5.0mm
• 1575.42/1590MHz • GPS + GLONASS • RHCP
• 50Ω

★**APAE1590R2540AKDB1-T** 25.0 x 25.0 x 4.0mm
• 1575.42/1590MHz • GPS+GLONASS • RHCP
• 50Ω • GLONASS:1575.42MHz (GPS), 1592.00 to 1608MHz (GLONASS)

★**APAE2338L2540DDDB1-T** 25.0 x 25.0 x 4.0mm
• 2338.00MHz • SDARS • LHCP • 50Ω

★**APAE868R2540JBDB2-T** 25.0 x 25.0 x 4.0mm
• 868.00MHz • RFID (EU) • RHCP • 50Ω

★**APAE915R2540ABDB1-T** 25.0 x 25.0 x 4.0mm
• 915.00MHz • RFID (USA) • RHCP • 50Ω

★**APAEA1575R0940K14-T** 9.0 x 9.0 x 4.0mm
•1575/1606MHz • GPS/WLAN • RHCP • 50Ω

★**APAES1575R1040J34-T** 10.0 x 10.0 x 4.0mm
• 1575/1606MHz • GPS/WLAN • RHCP • 50Ω

★**APAES868R8060C16-T** 80.0 x 80.0 x 6.0mm
• 868MHz • RFID • RHCP• 50Ω

★**APAES915R6460C16-T** 62.5 x 62.5 x 6.0mm
• 915MHz • RFID • RHCP • 50Ω

★**APAES915R80C16-T** 80.0 x 80.0 x 6.0mm
• 915MHz(US) • 868MHz(EU) • RFID • RHCP • 50Ω

★**APAES923R3640C16-T** 36.0 x 36.0 x 4.0mm
• 923MHz • RFID • RHCP • 50Ω

★**APAES923R4560C16-T** 45.0 x 45.0 x 6.0mm
• 923MHz • RFID • RHCP • 50Ω

Active (Internal) Patch Antenna

★**APAM2764YK0175** 27.0 x 27.0 x 6.4mm
• 1575.42MHZ • RHCP • 50Ω • Active Internal GPS

★**APAM1866YA18** 18.0 x 18.0 x 6.6mm
• 1575.42MHZ • RHCP • 50Ω • Active Internal GPS

★**APAM1568YE15V2.0** 15.0 x 15.0 x 6.8mm
• 1575.42MHZ • RHCP • 50Ω • Active Internal GPS

★**APAM1268JL02V2.0** 12.0 x 12.0 x 6.8mm
• 1575.42MHZ • RHCP • 50Ω • Active Internal GPS

★**APAM1368YB13V3.0** 13.0 x 13.0 x 6.8mm
• 1575.42MHZ • RHCP • 50Ω • Active Internal GPS

★**APAM1348YD13V2.0** 13.0 x 13.0 x 4.8mm
• 1575.42MHZ • RHCP • 50Ω • Active Internal GPS

★**APAM1068JL01V2.0** 10.0 x 10.0 x 6.8mm
• 1575.42MHZ • RHCP • 50Ω • Active Internal GPS

★**APAM0968JL03V2.0** 9.0 x 9.0 x 6.8mm
• 1575.42MHZ • RHCP • 50Ω • Active Internal GPS

RFID Tag

★**ART868X130903TX13** 13.0 x 9.0 x 3.0mm
• 865-868MHz Frequency Range • RFID Tag

★**ART868X2117225TX21** 21.0 x 17.0 x 2.25mm
• 865-868MHz Frequency Range • RFID Tag

★**ART868X25275YZ25** 25.0 x 25.0 x 2.75mm
• 865-868MHz Frequency Range • RFID Tag

★**ART915X130930TX13** 13.0 x 9.0 x 3.0mm
• 902-928MHz • FID Tag

★**ART915X2117225TX21** 21.0 x 17.0 x 2.25mm
• 902-928MHz frequency range • RFID Tag

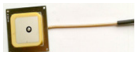
★**ART915X25275YZ25** 25.0 x 25.0 x 2.75mm
• 902-928MHz frequency range • RFID Tag

★**ART923X855406TX02** 85.0 x 54.0 x 0.635mm
• 902-928MHz frequency range • RFID Tag

★**ART923X1015YZ10** Φ10.0 x 1.5mm
• 920-925MHz frequency range • RFID Tag

RFID Reader

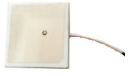
★**ARRCN5** 18.0 x 18.0mm
• 915MHz(US) • 868MHz(EU) • RFID Reader



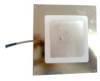
★**ARRAN5** 25.0 x 25.0mm
• 915MHz(US) • 868MHz(EU) • RFID Reader

★**ARRRN5** 36.0 x 36.0mm • 915MHz(US)
• 868MHz(EU) • RFID Reader

★**ARRSN5** 45.0 x 45.0mm
• 915MHz(US) • 868MHz(EU) • RFID Reader



★**ARRTN5** 63.5 x 63.5mm
• 915MHz(US) • 868MHz(EU) • RFID Reader



★**ARRUN5** 80.0 x 80.0mm • 915MHz(US)
• 868MHz(EU) • RFID Reader

Active (External) Patch Antennas

★**APAMS-101** 115.0 x 22.0 x 7.0mm
• GSM • Linear • 50Ω
• 820 to 960MHz (GSM900),
1710 to 1990 (GSM1800)

★**APAMS-102** 138.0 x 21.0 x 6.0mm
• GSM • Linear • 50Ω • 820 to 960MHz (GSM900)
, 1710 to 1880MHz (GSM1800), 1850 to 1990MHz
(GSM1900) 1900 to 2170MHz (UMTS)

★**APAMS-103** 78.0x25.0x3.8mm
• GSM • Linear • 50Ω • 820 to 960MHz (GSM900),
1710 to 1880MHz (GSM1800)

★**APAMS-104** 111.0 x Φ6.78mm
• GSM • Linear • 50Ω • 890 to 960MHz (GSM900)
1710 to 1880MHz (GSM1800)

★**APAMPS-105** Φ76.8 x 15.8mm • Active
• GPS + GSM • RHCP • 50Ω • 1575.42MHz

★**APAMPS-106** Φ75 x 14.1mm • Active
• GPS + GSM • RHCP • 50Ω • 1575.42MHz

★**APAMP-107** 48.6 x 39.2 x 15.2mm
• GPS Active • RHCP • 50Ω • 1575.42MHz

★**APAMP-108** 54.5 x 44.5 x 14.8mm
• GPS Active • RHCP • 50Ω • 1575.42MHz

★**APAMP-109** 50.6 x 50.6 x 15.1mm
• GPS Active • RHCP • 50Ω • 1575.42MHz

★**APAMP-110** 49.2 x 40.0 x 15.2mm
• GPS Active • RHCP • 50Ω • 1575.42MHz

★**APAMP-111** 38.3 x 35.0 x 12.0mm
• GPS Active • RHCP • 50Ω • 1575.42MHz

★**APAMP-112** 46.0 x 38.0 x 15.0mm
• GPS Active • RHCP • 50Ω • 1575.42MHz

★**APAMP-113** 38.0 x 34.0 x 12.0mm
• GPS Active • RHCP • 50Ω • 1575.42MHz

★**APAMP-114** 26.0 x 23.0 x 12.0mm
• GPS Active • RHCP • 50Ω • 1575.42MHz

★**APAMP-115** 40.0 x 35.0 x 13.1mm
• GPS Active • RHCP • 50Ω • 1575.42MHz

★**APAMP-116** 44.0 x 37.0 x 14.5mm
• GPS Active • RHCP • 50Ω • 1575.42MHz

★**APAMP-117** 44.0 x 37.0 x 14.5mm
• GPS+GLONASS • RHCP • 50Ω • 1575.42MHz

★**APAMS-118** 108.1 x Ø10.0mm
• GSM900:890-960MHZ (gain: 2db)
• GSM1800:1710-1880MHZ(gain: 3db) • Linear
• 50Ω • GSM External

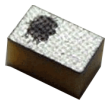
★**APAMS-119** 78.0 x Ø12.0mm
• 890~960MHz/1710~1880MHz • Vertical • 50Ω
• GSM External

★**APAMS-120** 77.0 x Ø7.0mm
• 2350-2450MHZ,5700-5900MHZ • Linear • 50Ω
• GSM External

★**APAMS-121** 86.0 x Ø10.0mm
• 2350-2450MHZ • 5700-5900MHZ • Linear • 50Ω
• GSM External

Chip Antennas

★**ACA-101-T** 4.0 x 2.0 x 1.2 mm • Bluetooth/WLAN
• 2442.5MHz • 85MHz BW • 50Ω • Linear



★**ACA-102-T** 1.4 x 1.1 x0.7mm • Bluetooth/WLAN
• 2442.5MHz • 85MHz BW• 50Ω • Linear

★**ACA-103-T** 5.0 x 2.0 x 1.2 mm
• Bluetooth/WLAN • 2442.5MHz & 5487.5MHz
• 85MHz BW & 675MHz BW • 50Ω • Linear

★**ACA-104-T** 3.0 x 1.5 x 1.2 mm • GPS
• 1575MHz • 10MHz BW • 50Ω • Linear

★**AMCA31-2R450G-S1F-T** 3.2 x 1.6 x 1.2mm
• Bluetooth/ WLAN • Peak Gain 0.5 dBi typ
• 2450MHz, ≥90MHz B/W 50Ω • Linear

★**AMCA31-2R800G-S1F-T** 3.2 x 1.6 x 1.2mm
• WLAN / WiMax • Peak Gain 0.5 dBi typ
• 2800MHz, ≥100MHz B/W 50Ω • Linear

★**AMCA52-2R350G-S1F-T** 5.2 x 2.1 x 1.0mm
• WCS / WiMax • Peak Gain 2.5 dBi typ
• 2350MHz, ≥150MHz B/W 50Ω • Linear

★**AMCA52-2R510G-S1F-T** 5.2 x 2.1 x 1.0mm
• WCS / WiMax • Peak Gain 2.5 dBi typ
• 2510MHz, ≥200MHz B/W 50Ω • Linear

Chip Antennas

★**AMCA52-2R540G-S1F-T** 5.2 x 2.1 x 1.0mm
• WLAN / WiMax • Peak Gain 2.5 dBi typ
• 2540MHz, ≥200MHz B/W 50Ω • Linear

★**AMCA52-2R710G-S1F-T** 5.2 x 2.1 x 1.0mm
• WLAN / WiMax • Peak Gain 2.5 dBi typ
• 2710MHz, ≥200MHz B/W 50Ω • Linear

★**AMCA52-2R780G-S1F-T** 5.2 x 2.1 x 1.0mm
• WLAN / WiMax • Peak Gain 2.5 dBi typ
• 2780MHz, ≥200MHz B/W 50Ω • Linear

★**AMCA62-2R640G-01F-T** 6.0 x 2.0 x 1.0mm
• WLAN / WiMax • Peak Gain 2.5 dBi typ
• 2640MHz, ≥200MHz B/W 50Ω • Linear

★**AMCA72-2R470G-S1F-T** 7.0 x 2.0 x 1.0mm
• WiFi / Bluetooth / ISM • Peak Gain 2.7 dBi typ
• 2470MHz, ≥200MHz B/W 50Ω • Linear

★**AMCA72-2R860G-02F-T** 7.0 x 2.0 x 1.0mm
• WLAN / WiMax • Peak Gain 2.7 dBi typ
• 2860MHz, ≥200MHz B/W 50Ω • Linear

★**AMCA81-3R010G-S1F-T** 8.0 x 1.0 x 1.0mm
• LTE Band 42 / WLAN • Peak Gain 2.0 dBi typ
• 3010MHz, ≥200MHz B/W 50Ω • Linear

★**AMCA92-2R660G-S1F-T** 9.0 x 2.0 x 1.0mm
• LTE Band 38 / WiMax • Peak Gain 3.0 dBi typ
• 2660MHz, ≥200MHz B/W 50Ω • Linear

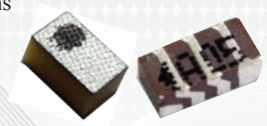
Please see page-24 for AWCCA series

Chip Antennas- ACA Series

The ACA Series is a range of solid dielectric chip antennas designed to operate across Bluetooth, WiFi and GPS bands, where their compact size makes them ideal for wireless connectivity solutions.

Key Features:
- Use of high dielectric ceramics materials allows compact design
- Single or multi-band, across a range of bands, making them ideal for multi-band applications like Mobile Phone / Tablets
- They offer low profile, light weight, small form factor suitable for compact applications
- Excellent gain and directivity performance relative to their size
- Ease of matching during application development
- Better SAR response than PCB traces
- Improved isolation allowing multiple antenna applications
- Their omni-directional radiation highly suitable for mobile communications

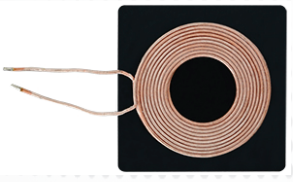
Applications:
- Bluetooth exists in many products, such as telephones, tablets, media players, and gaming systems
- Bluetooth Headsets / Intercoms
- Bluetooth Audio Headsets
- Keyboards / Mouse
- Games Consoles / Controllers
- Wireless bridge between two Industrial Ethernet networks
- Short range transmission of health sensor data from medical devices to mobile phone, or dedicated "Telehealth" devices
- Personal security applications – tags



Wireless Charging Coil Assemblies AWCCA Series

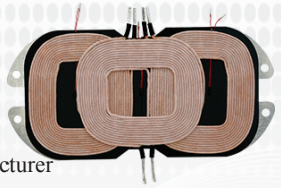
What is Inductive Charging?
Inductive charging sometimes known as "Wireless Charging" uses an electro-magnetic field to transfer energy between two devices.

Energy is sent through the inductive couplings between a base unit and mobile device to charge a battery or power a d.c. electrical device.



Key Features:
- High Quality Litz windings
- Low dc resistance
- High Q-Factor value
- Competitive prices
- Broad range of sizes, thickness and inductance
- AWCCA-107T52H40-C01-B referenced to IDT9036A

Applications:
- In Car charging Systems
- Batteries and Battery Chargers
- Consumer Electronics
- Digital Cameras and Camcorders
- Infrastructure and Furniture Manufacturer
- Mobile Phone Charging Systems
- Power Supplies
- Hand Power Tools



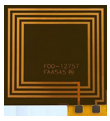
Abracon offers customization of Wireless Charging Coils to meet different customer or standard requirements

NFC Antennas

★**ANFCA-6040-A02** 60 x 40mm
- Wide operating temperature range -40°C to +85°C
- Ultra thin flexible antenna structure (140 - 240 µm)
- 1.9±10% (µH) • Q = 40 • Peel and Stick antenna designs.
- Ferrite sheet backing optimizes magnetic fields

★**ANFCA-5040-A02** 50 x 40mm
- Wide operating temperature range -40°C to +85°C
- Ultra thin flexible antenna structure (140 - 240 µm)
- 1.8±10% (µH) • Q = 40 • Peel and Stick antenna designs
- Ferrite sheet backing optimizes magnetic fields

★**ANFCA-5035-A01** 50 x 35mm
- Wide operating temperature range -40°C to +85°C
- Ultra thin flexible antenna structure (140 - 240 µm)
- 2.7±10% (µH) • Q = 40 • Peel and Stick antenna designs
- Ferrite sheet backing optimizes magnetic fields



★**ANFCA-4545-A01** 45 x 40mm
- Wide operating temperature range -40°C to +85°C
- Ultra thin flexible antenna structure (140 - 240 µm)
- 1.5±10% (µH) • Q = 40 • Peel and Stick antenna designs
- Ferrite sheet backing optimizes magnetic fields

★**ANFCA-4535-A01** 45 x 35mm
- Wide operating temperature range -40°C to +85°C
- Ultra thin flexible antenna structure (140 - 240 µm)
- 1.45±10% (µH) • Q = 20 • Peel and Stick antenna designs
- Ferrite sheet backing optimizes magnetic fields

★**ANFCA-4040-A02** 40 x 40mm
- Wide operating temperature range -40°C to +85°C
- Ultra thin flexible antenna structure (140 - 240 µm)
- 1.7±10% (µH) • Q = 40 • Peel and Stick antenna designs
- Ferrite sheet backing optimizes magnetic fields

★**ANFCA-4030-A01** 40 x 30mm
- Wide operating temperature range -40°C to +85°C
- Ultra thin flexible antenna structure (140 - 240 µm)
- 1.5±10% (µH) • Q = 25 • Peel and Stick antenna designs
- Ferrite sheet backing optimizes magnetic fields

★**ANFCA-4030-A02** 40 x 30mm
- Wide operating temperature range -40°C to +85°C
- Ultra thin flexible antenna structure (140 - 240 µm)
- 1.7±10% (µH) • Q = 40 • Peel and Stick antenna designs
- Ferrite sheet backing optimizes magnetic fields

★**ANFCA-3225-A02** 32 x 25mm
- Wide operating temperature range -40°C to +85°C
- Ultra thin flexible antenna structure (140 - 240 µm)
- 1.8±10% (µH) • Q = 35 • Peel and Stick antenna designs
- Ferrite sheet backing optimizes magnetic fields

★**ANFCA-2525-A02** 25 x 25mm
- Wide operating temperature range -40°C to +85°C
- Ultra thin flexible antenna structure (140 - 240 µm)
- 1.8±10% (µH) • Q = 35 • Peel and Stick antenna designs
- Ferrite sheet backing optimizes magnetic fields

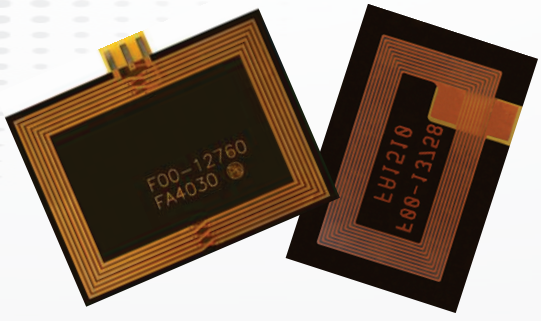
★**ANFCA-2515-A02** 25 x 15mm
- Wide operating temperature range -40°C to +85°C
- Ultra thin flexible antenna structure (140 - 240 µm)
- 1.8±10% (µH) • Q = 30 • Peel and Stick antenna designs
- Ferrite sheet backing optimizes magnetic fields

★**ANFCA-1510-A02** 15 x 10mm
- Wide operating temperature range -40°C to +85°C
- Ultra thin flexible antenna structure (140 - 240 µm)
- 1.8±10% (µH) • Q = 30 • Peel and Stick antenna designs
- Ferrite sheet backing optimizes magnetic fields

ANFCA Series;
NFC Flexible Peel & Stick Antennas

The ANFCA series is a range of NFC antennas designed to operate at 13.56MHz. Its design is constructed from a flexible and very thin-layered structure to form a compact peel and stick NFC antenna

Key Features:
- Ultra thin flexible antenna structure (140 - 240 µm).
- Peel and Stick antenna designs.
- Ferrite backed design that optimizes magnetic fields, increasing the resultant field strength of the antenna.
- -40°C to +85°C operating temperature range.
- Matching to leading NFC controller IC's.
- Wide range of sizes and shapes to meet different application designs.
- Competitive price.
- Customized solutions available.



Applications:
- Cashless Payment Readers
- Physical Access Readers
- Ticket readers
- NFC Wallets
- Rugged PDA's with NFC for industrial use.
- Peer to Peer links to enable other wireless links like WiFi NFC enabled speaker

Circuit Protection- Varistors

★**AMCV-0201** 0.6 x 0.3 x 0.3mm
• ESD Protection • DC- 5.5 to 14V • AC- 4 to 10V
• Energy: 0.005 to 0.01J • Surge Current: 1 to 5A

★**AMCV-0402** 1.0 x 0.5 x 0.5mm
• ESD Protection • DC- 5.5 to 26V • AC- 4 to 18.4V
• Energy: 0.005 to 0.05J • Surge Current: 2 to 10A

★**AMCV-0402LC** 1.0 x 0.5 x 0.5mm
• High Speed Circuits • DC-14 to 26V
• AC- 10 to 18.4V
• Energy: 0.003 to 0.005J • Surge Current: 1 to 2A

★**AMCV-0603** 1.6 x 0.8 x 0.8mm
• ESD Protection • DC- 5.5 to 26V • AC- 4 to 18.4V
• Energy: 0.005 to 0.05J • Surge Current: 3 to 20A

★**AMCV-0603LC** 1.6 x 0.8 x 0.8mm
• High Speed Circuits • DC- 14 to 26V
• AC- 10 to 18.4V • Energy: 0.003 to 0.005J
• Surge Current: 1 to 2A

★**AMCV-0805** 2.0 x 1.25 x 0.85mm
• ESD Protection • DC- 5.5 to 30V
• AC- 4 to 21.3V • Energy: 0.005 to 0.05J
• Surge Current: 3 to 15A

★**AMCV-1206H** 3.2 x 1.6 x 1.05mm
• Surge Current • DC- 5.5 to 100V
• AC- 4 to 75V • Energy: 0.7 to 1.2J
• Surge Current: 250 to 300A

★**AMCV-1210H** 3.2 x 2.5 x 1.7mm
• Surge Current • DC- 5.5 to 100V
• AC- 4 to 75V • Energy: 0.7 to 2.0J
• Surge Current: 300 to 400A

★**AMCV-1812H** 4.5 x 3.2 x 2.5mm
• Surge Current • DC- 5.5 to 100V
• AC- 4 to 75V • Energy: 1.0 to 4.0J
• Surge Current: 600 to 800A

★**AMCV-2220H** 4.5 x 3.2 x 2.5mm
• Surge Current • DC- 5.5 to 100V
• AC- 4 to 75V • Energy: 2.3 to 12.0J
• Surge Current: 900 to 1200A

Circuit Protection - NTC Thermistors

★**ABNTC-0402** 1.0 x 0.5 x 0.5mm
• R25: 3.3 to 680kΩ • B25/50: 3380 to 4400K
• Power: 100mW

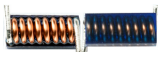
★**ABNTC-0603** 1.6 x 0.8 x 0.8mm
• R25: 3.3 to 130kΩ • B25/50: 3450 to 4700K
• Power: 100mW

★**ABNTC-0805** 2.0 x 1.25 x 0.85mm
• R25: 2.0 to 1300kΩ •B25/50: 3450 to 4700K
• Power: 200mW

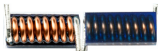
Tantalum Capacitors

★**ATCC-211(A, B, P)**
• A: 3.2 x 1.60 x 1.6mm
B: 3.5 x 2.80 x 1.9mm
P: 2.0 x 1.25 x 1.1mm
• DC - 4 to 50V • Capacitance: 1 to 220uF
• ESR: 0.5 to 25Ω

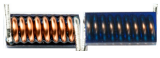
Inductors- Air Coil



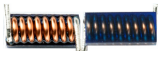
★**AIAC-0805C** 2.85 x 1.80 x 2.10mm
• Range: 3.9~ 68nH • DCR(Max): 2.6 ~ 42.2mΩ • Idc (max): 320 to 1200mA • Q(min): 70 to 80@300MHz
• SRF(min): 1300 to 3000MHz



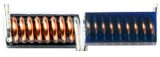
★**AIAC-1008C** 3.20 x 1.90 x 2.20mm
• Range: 6.8~ 120nH • DCR(Max): 4.0 ~ 63.4mΩ
•Idc(Max):320 to 1200mA • Q (Min) 70 to 80@300MHz • SRF(Min): 950 to 3000MHz



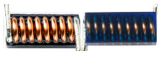
★**AIAC-1512C** 3.30 x 2.50 x 2.60mm
• Range: 2.5~18.5nH • DCR (Max): 0.8~3.9mΩ
• Idc (Max): 4.0~4.8A • Q (Min): 132~145@150MHz
• SRF (Min): 2.5 ~ 3GHz



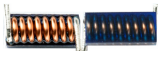
AIAC-1606C 4.04 x 3.10 x 1.37mm NEW
• Range: 5.6~ 7.15nH • DCR(Max): 9.0 ~ 10.0mΩ
• Idc (max): 1.6 A • Q(min): 100@800MHz
• SRF(min): 6.0 to 6.5GHz



★**AIAC-1812** 4.7 x 3.5 x 3.5mm
• Range: 22~ 120nH • DCR(Max): 4.8 ~ 11.1mΩ
•Idc(Max):2.2~3.2A • Q (Min)100@150MHz
• SRF(Min): 2.2 ~ 3.2GHz



★**AIAC-2712C** 6.00 x 2.50 x 2.60mm
• Range: 17.5~43nH • DCR (Max): 4.5~6.7mΩ
• Idc (Max): 2.5~3.5A • Q (Min):100@150MHz
• SRF (Min): 1.0~2.2GHz



★**AIAC-4125C** 9.0 x 4.4 x 4.6mm
• Range: 90~538nH • DCR (Max): 14~42mΩ
• Idc (Max): 2.0~3.5A • Q (Min): 100@50MHz
• SRF (Min): 0.4~1GHz

Inductors- Axial Leaded

AIAM-01 2.41 x ϕ6.35mm
• Inductance Range: 0.022~1000μH• DCR (Max):0.025~72Ω • Idc (Max): 28~ 2400mA • Q: 50~25@50~796MHz • SRF (Min): up to 900 MHz

★**AIAP-01** 9.14 x ϕ3.3mm - *Epoxy Coated*
• Range: 1.0~100μH • DCR (Max): 0.018~75Ω
• Idc (Max): 3300~52mA • SRF (Min): 0.27~190MHz

★**AIAP-02** 14.0 x ϕ6.4mm • Range: 3.9~18000μH
• DCR (Max):0.019~48.3Ω • Idc (Max): 0.09~7.3A

★**AIAP-03** 22.9 x ϕ11.4mm
• Range: 3.9~120000μH • DCR(Max): 0.007~37Ω
• Idc (Max): 15.5~0.070A

AIAP-05 17.8 x ϕ6.4mm • Range: 3.9~18000μH
• DCR (Max): 0.019~48.3Ω • Idc (Max):0.039~1.28mA

AIAS-03 10.4 x ϕ4.11mm
• Range: 0.10~100,000μH • DCR (Max):0.025~678Ω
• Idc (Max): 3~1790mA • Q:18~60@0.079~25MHz
• SRF (Min): 0.11~250MHz

AICC-00 4.06 x ϕ2.54mm
• Range: 0.22~220μH • DCR (Max): 0.40~ 20Ω
• Idc (Max): 35~400mA • Q (Min): 35~40MHz@0.796~25.2MHz • SRF (Min): 5~150MHz

AICC-01 7.11 x ϕ3.05mm -
• Range: 0.022~1000μH • DCR (Max): 0.40~33Ω
• Idc (Max): 40~400mA • Q (Min):35~50M-Hz@0.796~25.2MHz • SRF (Min): 1.4~150MHz

AICC-02 6.22 x ϕ2.8mm • Range: 0.27~1000μH
• DCR (Max): 0.08~20Ω • Idc (Max): 60~1110mA
• Q (Min): 40~60MHz @0.796~25.2MHz • SRF (Min): 360~1.2MHz

AICC-03 9.53 x ϕ3.30mm
• Range: 0.022~1000µH • DCR (Max): 0.21~14Ω
• Idc (Max): 100~880mA
• Q (Min): 25~85@0.796~25.25MHz
• SRF (Min): 1.4~380MHz

AICC-04 7.62 x ϕ3.00mm
• Range: 0.10~1000µH • DCR (Max): 0.08~27.4Ω
• Idc (Max): 28~1380mA • Q(Min): 38
~60MHz@0.796~25.2MHz • SRF (Min):1.8~680MHz

Inductors- Ceramic

★**AIMC-0201** 0.6 x 0.3 x 0.3mm
• Range: 1~47nH • DCR (Max):0.2~3.6Ω
• Ir (mA): 0.05~0.3 • Q (Min): 4~5@100MHz
• SRF (Min): 1.6~12GMHz

★**AIMC-0402** 1.0 x 0.5 x 0.5mm
• Range: 1~120nH • DCR (max):0.08~2.8Ω
• Ir (A): 0.15~0.4 • Q (Min): 9@100MHz
• SRF (MHz): 0.6~10GHz

★**AIMC-0402HQ** ***High Q*** • 1.0 x 0.6 x 0.5mm
• Range: 1~15nH • DCR (max):0.05~0.22Ω
• Ir (A): 0.43~1 • Q (Min): 20~22@250MHz
• SRF (MHz): 4~6GMHz

★**AIMC-0603** 1.6 x 0.8 x 0.8mm
• Range: 1~220nH • DCR (max): 0.05~2.1Ω
• Ir (A): 0.3~0.5 • Q (Min): 8~12@50~100MHz
• SRF (Min): 0.4~10GHz

★**AIMC-0805** 2.0 x 1.25 x 0.85mm
• Range: 1.5~220nH DCR (max): 0.1~1.4Ω
• Ir (A): 0.3~0.6 • Q (Min): 10~15@50~100MHz
• SRF (Min): 0.35~6GHz

Inductors- Drum Core

★**AIRD-01** - ***Radial*** 21.0 x ϕ16.5 mm
• Range: 1~680uH • DCR (Max): 3~700mΩ
• Ir (A): 0.8~9

★**AIRD-02** - ***Radial*** 21.0 x ϕ21.0 mm
• Range: 1~2200uH • DCR (Max): 0.003~1.54Ω
• Ir (A): 0.8~11.4

★**AIRD-03** - ***Radial*** 21.0 x ϕ28.0 mm
• Range: 1~19000uH • DCR (Max): 0.003~9Ω
• Ir (A): 0.5~21

★**AIRD-06** - ***Radial*** 21.0 x ϕ21.0 mm
• Range: 1~2200uH • DCR (Max): 0.003~1.54Ω
• Ir (A): 0.8~11.4 • Q (Min): 15@0.1MHz

★**AISR-01** - ***Radial*** 14.0 x ϕ10.8mm
• Range: 1000~120000uH • DCR (Max): 3.4~97Ω
• Ir (mA): 8~90 • Q (Min): 70~100@0.05MHz

★**AISR-04** - ***Radial*** 10.0 x ϕ10.30mm
• Range: 10~1000uH • DCR (Max): 0.02~1.5Ω
• Ir (A): 0.39~3.9 • SRF (Min): 1.5~32MHz

★**AISR-875** - ***Radial*** 7.5 x ϕ7.8mm
• Range: 10~10000uH • DCR (Max): 0.05~33Ω
• Ir (mA): 84~2900

AIUR-01 - ***Radial*** 7.5 x ϕ8.5mm
• Range: 100~15000uH • DCR (Max): 2~80Ω
• Ir (mA): 30~200 • Q (Min): 10@79.6~796kHz
• SRF (Typ): 0.5~6.1MHz

★**AIUR-02H** - ***Radial*** 12.0 x ϕ8.5mm
• Range: 1~1000uH • DCR (Max): 0.021~1.18Ω
• Ir (A): 0.22~3.5 • Q (Min): 15~20@0.25~7.96MHz

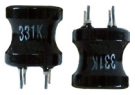
★**AIUR-03** - ***Radial*** 12.0 x ϕ9.0mm
• Range: 1~1000uH • DCR (Max): 0.013~2.9Ω
• Ir (A):0.29~10 • Q (Min): 20@0.252~7.96MHz
• SRF (Min): 1.3~150MHz

★**AIUR-04** - ***Radial*** 11.2 x ϕ8.5mm
• Range: 100~27000uH • DCR (Max): 2~80Ω
• Ir (A): 30~200mA • Q (Min): 30~40@79.6~796kHz
• SRF (Min): 0.3~5.3MHz

★**AIUR-05** - ***Radial*** 9.0 x ϕ8.5mm
• Range: 2.2~1500H • DCR (Max): 0.012~3.5Ω
• Ir (A): 0.15~3A • Q (Min): 10@0.252~7.96MHz
• SRF (Min): 1.2~50MHz

★**AIUR-06** - ***Radial*** 18.3 x ϕ12.7mm
• Range: 3.9~15000uH • DCR (Max): 0.016~20.5Ω
• Ir (A): 0.1~6.5

★**AIUR-07** - ***Radial*** 4.6 x ϕ6.0mm
• Range: 10~1000uH • DCR (Max): 0.1~6.3Ω
• Ir (A): 0.1~1.05 • Q (Min): 24~60@0.1~2.52MHz



★**AIUR-08** - ***Radial*** 10.0 x ϕ10.0mm
• Range: 10~1000uH • DCR (Max): 0.03~1.7Ω
• Ir (A): 0.53~5.3

★**AIUR-09** - ***Radial*** 6.0 x ϕ10.0mm
• Range: 100~1000uH • DCR (Max): 0.044~3.3Ω
• Ir (A): 0.36~3.6

★**AIUR-10** - ***Radial*** 7.5 x ϕ8.0 mm
• Range: 5.6~10000uH • DCR (Max): 0.08~25Ω
• Ir (A): 0.1~2.45

★**AIUR-11** - ***Radial*** 11.43 x ϕ9.53mm
• Range: 3.9~68000uH • DCR (Max): 0.022~115Ω
• Ir (A): 0.036~1.6

AIUR-12 - ***Radial*** 7.20 x ϕ8.20mm
• Range: 10~4700uH • DCR (Max): 0.07~18Ω
• Ir (A): 0.07~1.5 • Q (Min): 30@0.1MHz
• SRF (Min): 0.3~20MHz

AIUR-15 - ***Radial*** 20.0 x ϕ18.0mm
• Range: 22~1000uH • DCR (Max): 0.03~0.71Ω
• Ir (A): 1~5.7

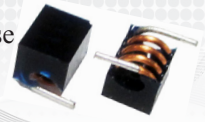
AIUR-16 - ***Radial*** 9.50 x ϕ7.00mm
• Range: 3.9~33000uH • DCR (Max): 0.02~100Ω
• Ir (A): 0.03~1.3

AIAC-1606C Series

SMT Air Coil Inductor in low profile
4.04 x 3.10 x 1.37mm

Abracon's AIAC-1606C Series air core inductors combine Q factor of up to 100 and SRF as high as 6.5GHz, making them ideal for IF/RF applications. Constructed with 1.37mm height package, it can work over wide temperature range of -40°C to 125°C.

Features:
• Small and low profile air core inductors feature high Q and SRF
• Wide Range Frequency Response
• Tolerance as low as 2%
• Standard flat top jacket suitable for pick and place



Inductors- Ferrite

★**AIML-0402** 1.0 x 0.5 x 0.5mm
• Range: 1~2.7µH • DCR (Max):00.9~2Ω
• Idc (Max): 10~15mA • Q (Min): 20@10MHz
• SRF (Min): 22~40MHz

★**AIML-0603** 1.6 x 0.8 x 0.8mm
• Range: 0.047~27µH • DCR (Max):0.2~2.75Ω
• Idc (Max): 1~50mA • Q (Min):15~35@1~50MHz
• SRF (Min): 12~600MHz

★**AIML-0603HC** ***High Current*** 1.6 x 0.8 x 0.8mm NEW
• Range: 3.3~4.7µH • DCR (Max):0.40~0.50Ω
• Idc (Max): 60~80mA • SRF (Min): 50~70MHz

★**AIML-0805** 2.00 x 1.25 x 0.85mm
• Range:0.047~47µH • DCR (Max): 0.2~1.8Ω
• Idc (Max): 4~300mA • Q (Min):15~55@1~50MHz
• SRF (Min): 12~350MHz

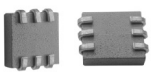
AIML-0805HC ***High Current*** NEW
2.00 x 1.25 x 1.15mm
• Range: 1.0~22.0µH • DCR (Max):0.15~0.70Ω
• Idc (Max): 40~400mA • SRF (Min): 18~75MHz

AIML-1008HC ***High Current*** NEW
2.50 x 2.00 x 0.85mm
• Range: 1.0~4.7µH • DCR (Max):0.085~0.12Ω
• Idc (Max): 150~300mA • SRF (Min): 20~60MHz

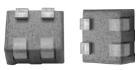
★**AIML-1206** 3.2 x 1.6 x 1.1mm
• Range: 0.047~390µH • DCR (Max): 0.15~3Ω
• Idc (Max): 5~300mA • Q (Min): 20~50@1~50MHz
• SRF (Min): 11~320MHz

AIML-1206HC ***High Current*** NEW
3.20 x 1.60 x 1.10mm
• Range: 1.0~10.0µH • DCR (Max):0.10~0.50Ω
• Idc (Max): 100~300mA • SRF (Min): 28~90MHz

Ferrite Chip Beads- Chip Bead Array



★**ACSB-04** 5.60 x 5.00 x 1.50mm
• Impedance: 50Ω@100MHz • DCR (Max): 9Ω
• Idc (Max): 5A



★**ACSB-05** 5.60 x 4.80 x 3.00mm
• Impedance: 35Ω@100MHz • DCR (Max): 3mΩ
• Idc (Max): 5A

Ferrite Chip Beads- General Purpose

★**ACML-0201** 0.6 x 0.3 x 0.3mm
• Impedance Range: 60~600Ω@100MHz
• DCR (Max): 0.4~1.7Ω• Idc (Max): 200mA

★**ACML-0402** 1.0 x 0.5 x 0.5mm
• Impedance Range: 5~1500Ω@100MHz
• DCR (Max): 0.05~1.6Ω • Idc (Max): 100~500mA

★**ACML-0603** 1.60 x 0.80 x 0.80mm
• Impedance Range: 6~2000Ω@100MHz
• DCR (Max): 0.05~1Ω • Idc (Max): 200~1000mA

ACML-0603U 1.65 x 0.80 x 0.80mm
• Impedance Range: 22~600Ω@100MHz
• DCR (Max): 10~150mΩ • Idc (Max): 1000~6000mA

★**ACML-0805** 2.00 x 1.25 x 0.85mm
• Impedance Range: 7~2000Ω@50~100MHz
• DCR (Max): 0.05~0.8Ω • Idc (Max): 200~2200mA

ACML-1206 3.2 x 1.6 x 0.9 mm
• Impedance Range: 19~3000Ω@50~100MHz
• DCR (Max): 0.05~1Ω • Idc (Max): 200~2000mA

★**ALFB-01** Φ3.50 x 4.70mm NEW
• Impedance Range: 110Ω min@100MHz

Ferrite Chip Beads- High Current

ACML-0402H 0.6 x 0.3 x 0.3mm
• Impedance Range: 60~600Ω@100MHz
• DCR (Max): 0.4~1.7Ω• Idc (Max): 200mA

★**ACML-0402HC** 1.00 x 0.50 x 0.50mm
• Impedance Range: 5~300Ω@100MHz
• DCR (Max): 0.05~0.30Ω• Idc (Max): 1000~2000mA

★**ACML-0603H** 1.60 x 0.80 x 0.80mm
• Impedance Range: 5~600Ω@100MHz
• DCR (Max): 0.03~0.35Ω • Idc (Max): 800~2000mA

ACML-0805H 2.00 x 1.25 x 0.85mm
• Impedance Range: 30~600Ω@100MHz
• DCR (Max): 0.02~0.25Ω• Idc (Max): 500~3000mA

★**ACSB-02** 8.50 x 3.10 x 2.60mm
• Impedance: 90Ω@100MHz • DCR (Max): 0.9mΩ
• Idc (Max): 5A

★**ACSB-03** 4.00 x 3.10 x 2.60mm
• Impedance: 47Ω@100MHz • Idc (Max): 5A

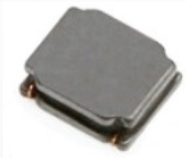
ASPI-2010HC Series- *2.0 x 1.6 x 1.0mm SMD*

High Current, Wirewound Power Inductor with Metalized Ferrite Core

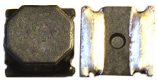
Abracon's ASPI-2010HC series of SMD power inductors is designed for consumer products and portable equipment with demanding current handling requirements. Constructed with a metalized ferrite core, specialized copper wire, the core is coated with a magnetic resin compound for shielding. This unique combination yields the ability to handle large amounts of current with lower RDC, compared to traditional ferrite power inductors.

Applications:
• Smart Phones, Tablets, Notebooks, Desktops
• Servers
• Blu-Ray Disc Recorders, Set Top Boxes, Portable Gaming Consoles and Navigation Devices

Key features include:
• A metalized ferrite core that provides saturation current as high as 4.5A
• A DCR as low as 40mΩ to reduce power loss
• Magnetic resin shielding to minimize leakage flux and EMI
• A core design resulting in excellent shock resistance
• A wide operating temperature range from -40°C to +125°C
• Space saving 2.0x1.6x1.0mm, RoHS compliant and lead-free SMD package



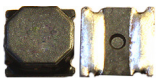
Inductors- Low Profile Wire-Wound



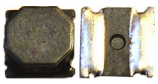
★**ASPI-0310FS** 3.0 x 3.0 x 1.0mm
Low Profile Wire Wound
• L Range: 1~47µH • DCR (Max): 50~1600mΩ
• Idc (Max): 0.28~2.3A

★**ASPI-0312FS** 3.0 x 3.0 x 1.2mm
Low Profile Wire Wound
•L Range: 1~47µH • DCR (Max): 50~1450mΩ
• Idc (Max): 0.25~1.49A

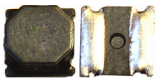
★**ASPI-0315FS** 3.0 x 3.0 x 1.5mm
Low Profile Wire Wound
• L Range: 1~100µH • DCR (Max): 28~2100mΩ
• Idc (Max): 0.25~2.3A



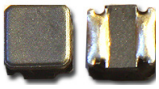
★**ASPI-0410FS** 4.0 x 4.0 x 1.0mm
Low Profile Wire Wound
• L Range: 1~47µH • DCR (Max): 100~1810mΩ
• Idc (Max): 0.24~1.8A



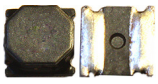
★**ASPI-0412FS** 4.0 x 4.0 x 1.2mm
Low Profile Wire Wound
• L Range: 0.82~100µH • DCR (Max): 0.065~2.873Ω
• Idc (Max): 0.25~1.65A



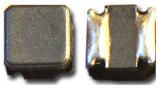
★**ASPI-0418FS** 4.0 x 4.0 x 1.88mm
Low Profile Wire Wound
• L Range: 0.82~220µH • DCR (Max): 16~2960mΩ
• Idc (Max): 0.28~4A



ASPI-0425 4.0 x 4.0 x 2.5mm
Low Profile Wire Wound
• L Range: 1~220µH • DCR (Max): 12~2300mΩ
• Idc (Max): 0.2~3A



★**ASPI-0612FS** 6.0 x 6.0 x 1.2mm
Low Profile Wire Wound
• L Range: 2.2~100µH • DCR (Max): 78~2171mΩ
• Idc (Max): 0.32~1.8A



★**ASPI-0615FS** 6.0 x 6.0 x 2.0mm
Low Profile Wire Wound
• L Range: 0.5~47µH • DCR (Max): 9~370mΩ
• Idc (Max): 3.0~0.77A

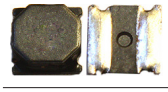
ASPI-0628 6.0 x 6.0 x 2.8mm
Low Profile Wire Wound
• L Range: 0.9~100µH • DCR (Max): 13~600mΩ
• Idc (Max): 0.65~4.6A

ASPI-0645 6.0 x 6.0 x 4.5mm
Low Profile Wire Wound
• L Range: 1~220µH • DCR (Max): 10~920mΩ
• Idc (Max): 0.5~6.5A

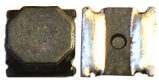
★**ASPI-0840** 8.0 x 8.0 x 4.0mm
Low Profile Wire Wound
• L Range: 0.47~6.8µH • DCR (Max): 0.059~0.816Ω
• Idc (Max): 0.52~2.3A

★**ASPI-2010** 2.0 x 2.0 x 1.2mm
Low Profile Wire Wound
• L Range: 0.47~6.8µH • DCR (Max): 0.059~0.816Ω
• Idc (Max): 0.52~2.3A

★**ASPI-2010HC** 2.0 x 1.6 x 1.0mm NEW
Low Profile Wire Wound
• L Range: 0.24~10µH • DCR (Max): 0.040~0.826Ω
• Idc (Max): 0.65~3.00A • SRF (Min): 15~145MHz



ASPI-2012 2.0 x 2.0 x 1.2mm
Low Profile Wire Wound • L Range: 0.16~33µH •
DCR (Max): 0.031~2.16Ω • Idc (Max): 0.30~2.5A



★**ASPI-2410** 2.4 x 24 x 1.0mm
Low Profile Wire Wound • L Range: 0.68~22µH •
DCR (Max): 60~1470mΩ • Idc (Max): 0.4~2.5A

★**ASPI-2510** 2.5 x 2.0 x 1.0mm
Low Profile Wire Wound
• L Range: 0.47~10µH • DCR (Max): 38~712mΩ
• Idc (Max): 0.56~2.5A

★**ASPI-2512** 2.5 x 2.0 x 1.2mm
Low Profile Wire Wound
• L Range: 0.47~10µH • DCR (Max): 47~630mΩ
• Idc (Max): 0.59~2.15A

★**ASPI-2515** 2.5 x 2.0 x 1.5mm
Low Profile Wire Wound
• L Range: 0.47~10µH • DCR (Max): 35~445mΩ
• Idc (Max): 0.75~2.8A

Inductors- Molded Wire-Wound

AISM-1008 2.5 x 2.0 x 1.8mm
• Range: 0.01~100µH • DCR (Max):0.26~21Ω
• Idc (Max): 530~60mA
• Q (Min):25~15@25.2~0.796MHz
• SRF (Min): Up to 230MHz

★**AISM-1210** 3.2 x 3.5 x 2.2mm
• Range: 0.01~330µH • DCR (Max):0.13~34Ω
• Idc (Max): 5~2500mA • Q (Min):
15~30@0.796~100MHz• SRF (Min): Up to 2500MHz

★**AISM-1812** 4.8 x 3.5 x 3.5mm
• Range: 0.1~820µH • DCR (Max):0.2~43Ω
• Idc (Max): 30~800mA • Q (Min):
30~50@0.796~25.2MHz• SRF (Min): Up to 300MHz

AISM-1812H 4.5 x 3.2 x 3.2mm
• Range: 1.0~330µH • DCR (Max): 0.11~13Ω
• Idc (Max): 90~1050mA • Q (Min):
10~20@0.796~7.96MHz • SRF (Min): Up to 200MHz

AISM-2220 5.8 x 5.2 x 5.2mm
• Range: 1.0~1000µH • DCR (Max): 0.03~15Ω
• Idc (Max): 85~1800mA
• Q (Min):10~20@0.252~7.96MHz
• SRF (Min): Up to 95MHz

★**ASPI-0520LR** 5.6 x 5.2 x 2.0mm
Low Resistance • L Range: 1.0~5.6µH
• DCR(Max): 0.0185~0.075Ω • Idc (Max): 3.3~7.5A

★**ASPI-0530HI** 5.6 x 5.2 x 3.0mm
High Current • L Range: 1.5~2.2µH
• DCR(Max): 0.014~0.035Ω • Idc (Max): 5.5~7A

★**ASPI-0530LR** 5.6 x 5.2 x 3.0mm
Low Resistance • L Range: 1.5~5.6µH
• DCR(Max): 0.02~0.065Ω • Idc (Max): 4.0~7.0A

★**ASPI-0630HI** 7.2 x 6.65 x 3.0mm
High Current • L Range: 1.0~10.0µH
• DCR(Max): 0.010~0.105Ω • Idc (Max): 3~11.0A

★**ASPI-0630LR** 7.2 x 6.65 x 3.0mm
Low Resistance • L Range: 0.47~22.0µH
• DCR(Max): 0.004~0.167Ω • Idc (Max): 2.5~18.0A

★**ASPI-1040HI** 11.15 x 10.0 x 4.0 mm
High Current • L Range: 0.16~10.0µH
• DCR(Max): 0.065~0.3Ω • Idc (Max): 7.5~40.0A

ASPI-1338 12.9 x 13.8 x 3.8mm *High Current*
• L Range: 0.22~8.2µH• DCR (Max): 1.3~31mΩ
• Idc (Max): 8~38.5A

ASPI-1367 14.0 x 12.9 x 6.7mm ***High Current***
• L Range: 0.1~10.0µH
• DCR (Max): 0.005~0.019Ω • Idc (Max): 10~16A

ASPI-4020HI 4.5 x 4.1 x 2.1mm ***High Current***
• L Range: 0.1~3.3µH • DCR(Max): 4.0~87mΩ
• Idc (Max): 2.5~12.0A

ASPI-7318 7.3 x 6.8 x 3.0mm ***High Current***
• L Range: 0.1~22µH • DCR (Max): 1.7~230mΩ
• Idc (Max): 2~30A

Inductors- Power

★**ASMCI-0603** 1.6 x 0.8 x 0.8mm
• L Range: 0.1~10µH • DCR (Max): 0.14~0.9Ω
• Idc (Max): 50~700mA

★**ASMCI-0805** 2.0 x 1.25 x 1.25mm
• L Range: 0.1~10µH • DCR (Max): 0.07~0.5Ω
• Idc (Max): 60~1000mA

★**ASMPH-0603** 1.6 x 0.8 x 0.8mm
• L Range: 0.22~2.2µH • DCR (Max): 0.1~0.3Ω
• Idc (Max): 300~1250mA

★**ASMPH-0805** 2.0 x 1.25 x 0.9mm
• L Range: 0.47~4.7µH • DCR (Max): 0.08~0.25Ω
• Idc (Max): 280~1200mA

★**ASMPH-0806** 2.0 x 1.6 x 0.9mm
• L Range: 0.47~4.7µH • DCR (Max): 0.08~0.14Ω •
Idc (Max): 220~1500mA

★**ASMPH-1008** 2.5 x 2.0 x 0.9mm
• L Range: 0.47~4.7µH • DCR (Max): 0.04~0.11Ω
• Idc (Max): 320~1500mA

ASPI-0312S 3.2 x 3.2 x 1.2mm
• L Range: 1.2~22µH • DCR (Max): 78~1187mΩ
• Idc (Max): 0.3!~1.4A

★**ASPI-0316S** 3.2 x 3.2 x 1.5mm
• L Range: 1.0~33µH • DCR (Max): 70~1283mΩ
• Idc (Max): 0.29~1.9A

★**ASPI-0320S** 3.2 x 3.2 x 2.0mm
• L Range: 1.5~47µH • DCR (Max): 95~1157mΩ
• Idc (Max): 0.32~1.4A

★**ASPI-0412S** 4.2 x 4.2 x 1.2mm
• L Range: 1.2~27µH • DCR (Max): 71~989mΩ
• Idc (Max): 0.39~1.88A

★**ASPI-0418S** 4.2 x 4.2 x 1.8mm
• L Range: 1.2~33µH • DCR (Max): 63~524mΩ
• Idc (Max): 0.61~1.9A

★**ASPI-0315S** 3.8 x 3.8 x 1.8mm
• L Range: 3.3~330µH • DCR (Max): 0.085~9.45Ω
• Idc (Max): 0.32~1.10A

★**ASPI-0428S** 4.7 x 4.7 x 3.0mm
• L Range: 1.2~180µH • DCR (Max): 0.024~1.54Ω
• Idc (Max): 0.22~2.56A

ASPI-0503S 5.7 x 5.7 x 3.0mm
• L Range: 2.5~470µH • DCR (Max): 0.018~2.69Ω
• Idc (Max): 02.6~0.20A

★**ASPI-0602S** 6.7 x 6.7 x 3.0mm
• L Range: 3.3~100µH • DCR (Max): 0.024~0.535Ω
• Idc (Max): 0.54~3A

ASPI-0638S 6.7 x 6.7 x 4.0mm
• L Range: 3.3~100µH • DCR (Max): 0.02~0.36Ω
• Idc (Max): 0.65~3.5A

ASPI-0703S 7.3 x 7.3 x 3.2mm
• L Range: 2.2~1000µH • DCR (Max): 0.032~9.4Ω
• Idc (Max): 0.16~3.2A

★**ASPI-0704S** 7.3 x 7.3 x 4.5mm
• L Range: 2.2~1000µH • DCR (Max): 0.03~6.0Ω
• Idc (Max): 0.18~5.0A

★**ASPI-104S** 10.1 x 10.0 x 3.8mm
• L Range: 1~330µH • DCR (Max): 0.006~1.09Ω
• Idc (Max): 0.7~13.6A

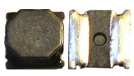
ASPI-1205S 12 x 12 x 6mm
• L Range: 1.3~330µH• DCR (Max): 0.01~0.51Ω
• Idc (Max): 0.68~8A

ASPI-1207S 12 x 12 x 8mm
• L Range: 1.0~330µH • DCR (Max): 0.006~0.471Ω
• Idc (Max): 1.2~14A

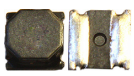
★**ASPI-0403S** 6.6 x 4.45 x 2.92mm
• L Range: 1~10000µH • DCR (Max): 0.04~32.8mΩ
• Idc (Max): 0.02~3A

★**ASPI-1306S** 18.54 x 15.24 x 7.62mm
• L Range: 10.0~1,000µH • DCR (Max): 0.04~2.01Ω
• Dc (Max): 0.53~3.9A

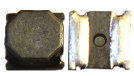
ASPI-0804TS 12.95 x 9.04 x 5.08mm
• L Range: 1~1000µH • DCR (Max): 0.025~1.45Ω
• Isat (Max): 0.085~4A



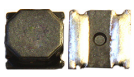
★**ASPI-3012S** 3.2 x 3.2 x 1.2mm
• L Range: 1.2~22µH • DCR (Max): 0.078~1.187Ω
• Idc (Max): 0.3~1.4A



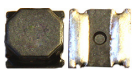
★**ASPI-4020S** 4.0 x 4.0 x 2.0mm
• L Range: 1~100µH • DCR (Max): 0.029~1.55Ω
• Idc (Max): 0.31~2.15A



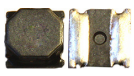
★**ASPI-4030S** 4.0 x 4.0 x 3.0mm
• L Range: 0.91~120µH • DCR (Max): 0.013~1.35Ω •
Idc (Max): 0.42~4.15A



ASPI-5040S 5.0 x 5.0 x 4.0mm
• L Range: 1.5~47µH • DCR (Max): 0.024~0.372Ω •
Idc (Max): 0.9~3.6A



★**ASPI-6045S** 6.0 x 6.0 x 4.5mm
• L Range: 0.82~330µH • DCR (Max): 0.008~1.27Ω •
Idc (Max): 0.57~5.9A



★**ASPI-8040S** 8.0 x 8.0 x 4.2mm
• L Range: 0.82~330µH • DCR (Max): 0.008~0.889Ω
• Idc (Max): 0.64~6.3A

Inductors- Thin Film

★**ATFC-0201** 0.6 x 0.3 x 0.23mm
• Range: 0.1~22nH • DCR (Ω):0.2~3.5 • Idc (mA):
80~300 • Q: 8@500MHz • SRF (Min): Up to 9GHz

★**ATFC-0201HQ High Q** 0.6 x 0.3 x 0.23mm
• Range: 0.1~4nH • DCR (Ω):0.05~0.4 • Idc (mA):
350~850 • Q: 14@500MHz • SRF (Min): Up to 6GHz

★**ATFC-0402** 1.0 x 0.5 x 0.32mm
• Range: 0.2~33nH • DCR (Ω):0.1~4.5 • Idc (mA):
75~800 • Q: 13@500MHz • SRF (Min): Up to 14GHz

★**ATFC-0402HQ High Q** 0.6 x 0.3 x 0.23mm
• Range: 1.3~4.7nH • DCR (Ω):0.12~0.5 • Idc (mA):
330~730 • Q: 16@500MHz • SRF (Min): Up to 7GHz

Inductors- Unshielded

AISC-1206H 3.2 x 1.6 x 1.8mm
• Range: 0.045~100µH • DCR (Max):0.027~8.45Ω
• Idc (Max): 1~175mA

★**AISC-1210H** 3.5 x 2.5 x 2.5mm
• Range: 0.15~680µH • DCR (Max):21~40000mΩ
• Idc (Max): 0.04~4.4A

★**AISC-1812H** 4.5 x 3.2 x 2.6mm
• Range: 1.0~2200µH • DCR (Max): 0.08~65Ω
• Idc (Max): 0.03~1.08A • SRF (MIin): 1.3~120MHz

AISC-2220H 5.7 x 5.0 x 4.7mm
• Range: 0.12~10000µH • DCR (Max): 0.01~140Ω
• Idc (Max): 0.05~6A

★**ASPI-0309** 3.0 x 3.0 x 0.8mm
• Range: 2.2~47µH • DCR (Max): 170~3300mΩ
• Idc (Max): 0.021~0.98A

ASPI-0302 3.5 x 3.0 x 2.3mm
• Range: 10~390µH • DCR (Max):0.23~7.8Ω
• Idc (Max): 0.115~0.76A

ASPI-0403 4.5 x 4.0 x 3.2mm
• Range: 1.0~68µH • DCR (Max): 0.049~1.12Ω
• Idc (Max): 0.37~2.56A

★**ASPI-0504** 5.8 x 5.2 x 4.5mm
• Range: 4.7~1000µH • DCR (Max): 0.04~14.4Ω
• Idc (Max): 0.15~3.5A

ASPI-0703 7.8 x 7.0 x 3.5mm
• Range: 10~330µH • DCR (Max): 0.081~1.495Ω
• Idc (Max): 0.28~1.44A

ASPI-0705 7.8 x 7.0 x 5.0mm
• Range: 10~470µH • DCR (Max): 0.07~1.96Ω
• Idc (Max): 0.34~2.3A

ASPI-1004 10.0 x 9.0 x 4.2mm
• Range: 10~560µH • DCR (Max): 0.053~1.904Ω
• Idc (Max): 0.32~2.38A

ASPI-1005 10.0 x 9.0 x 5.4mm
• Range: 10~1000µH • DCR (Max): 0.06~2.75Ω
• Idc (Max): 0.22~2.6A

ASPI-0402T 6.60 x 4.45 x 2.92mm
• Range: 1.0~1000µH • DCR (Max):0.05~13.8Ω
• Isat (Max): 0.07~2.9A

ASPI-0706HC 9.1 x 6.1 x 4.7mm
• Range: 0.18~47µH • DCR (Max): 0.003~0.47Ω
• Idc (Max): 0.72~10A

ASPI-0802T 12.9 x 9.4 x 3.0mm
• Range: 10~1000µH • DCR (Max): 0.11~8.4Ω
• Idc (Max): 0.05~2A

★**ASPI-0804HC** 13.5 x 10.2 x 6.0mm
• Range: 0.33~100µH • DCR (Max): 2~271mΩ
• Idc (Max): 1.2~16A

ASPI-0804T 13.5 x 9.5 x 5.5mm
• Range: 1~1000µH • DCR (Max): 0.009~3Ω
• Idc (Max): 0.3~9A

★**ASPI-0810T** 12.9 x 9.4 x 11.4mm
• Range: 1~1000µH • DCR (Max): 0.01~2Ω
• Idc (Max): 0.1~6.8A

ASPI-1306HC 22.4 x 16.0 x 8.0mm
• Range: 0.78~220µH • DCR (Max): 2.6~357mΩ
• Idc (Max): 2.6~30A

★**ASPI-1306T** 15.24 x 18.54 x 7.11mm
• Range: 1~1000µH • DCR (Max): 0.009~1.8mΩ
• Idc (Max): 0.56~8.6A

ASPI-1907HC 19.4 x 13.3 x 6.8mm
• Range: 0.47~100µH • DCR (Max): 0.003~0.206Ω
• Idc (Max): 1.8~25.1A

ASPI-5619 5.6 x 5.6 x 1.9mm
• Range: 1.5~47µH • DCR (Max): 0.033~0.703Ω
• Idc (Max): 0.65~3.5A

Inductors- Wire Wound

★**AISC-0402** 1.0 x 0.5 x 0.5mm
• Range: 1.0~47nH • DCR (Max): 45~750mΩ
• Idc (Max): 0.15~1.36A • Q (Min):13~26@250MHz
• SRF (Min): Up to 12.7GHz

★**AISC-0402HP *High Current*** 1.0 x 0.55 x 0.5mm
• Range: 2~68nH • DCR (Max): 0.038~0.95Ω
• Idc (Max): 320~2100mA • Q (Min):
22~26@200~250MHz • SRF (Min): Up to 8.5GHz

★**AISC-0603** 1.8 x 1.12 x 1.02mm
• Range: 1.8~560nH • DCR (Max): 0.043~8.1Ω
• Idc (Max): 700~1000mA • Q (Min):
18~40@100~250MHz • SRF (Min): Up to 6GHz

★**AISC-0603F** 1.6 x 1.0 x 1.0mm
• Range: 47~22000nH • DCR (Max): 0.06~11.4Ω
• Idc (Max): 70~1200mA
• SRF (Min): Up to 2.35GHz

AISC-0603HC *High Current* 1.8 x 1.12 x 1.02mm
• Range: 1.6~24nH • DCR (Max): 0.03~0.105Ω
• Idc (Max): 1800~2400mA • Q (Min):
24~42@250MHz • SRF (Min): Up to 12.5GHz

★**AISC-0603HP *High Current*** 1.8 x 1.12 x 1.02mm
• Range: 1.7~390nH • DCR (Max): 0.033~3.8Ω
• Idc (Max): 1800~2100mA • Q (Min): 13~40@100-
250MHz • SRF (Min): Up to 8.5GHz

★**AISC-0805** 2.3 x 1.7 x 1.55mm
• Range: 12~1000nH • DCR (Max): 0.15~17.5Ω
• Idc (Max): 150~600mA • Q (Min): 20~60@50-
500MHz • SRF (Min): Up to 4.1GHz

★**AISC-0805F** 2.3 x 1.7 x 1.55mm
• Range: 1~68uH • DCR (Max): 1.2~17.5Ω
• Idc (Max): 40~245mA • Q (Min): 8~15@2.5-
7.9MHz • SRF (Min): Up to 63MHz

★**AISC-0805HQ *High Current*** 2.29 x 1.73 x 1.52mm
• Range: 2.5~51nH • DCR (Max): 0.02~0.12Ω
• Idc (Max): 1000~1600mA • Q (Min): 65~98@2.5-
7.9MHz • SRF (Min): Up to 63MHz

★**AISC-0805LP** 2.29 x 1.73 x 1.03mm
• Range: 1.8~1000nH • DCR (Max): 0.03~3.5Ω
• Idc (Max): 1.7~800mA • Q (Min): 16~60@50-
1500MHz • SRF (Min): Up to 9.4GHz

★**AISC-1008** 2.92 x 2.79 x 2.29mm
• Range: 4.7~8200nH • DCR (Max): 0.11~10.7Ω
• Idc (Max): 150~1000mA • Q (Min): 17~65@25-
1500MHz • SRF (Min): Up to 6GHz

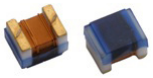
★**AISC-1008F** 2.92 x 2.79 x 2.29mm
• 2.92 x 2.79 x 2.29mm
• Range: 330~10000nH • DCR (Max): 0.17~2.95Ω
• Idc (Max): 300~700mA • Q (Min): 15~50@7.9-
100MHz • SRF (Min): Up to 600MHz

★**AISC-1008HQ** 2.92 x 2.79 x 2.29mm
• Range: 330~10000nH • DCR (Max): 0.17~2.95Ω
• Idc (Max): 300~700mA • Q (Min): 15~50@7.9-100MHz • SRF (Min): Up to 600MHz

★**AISC-1008LP** 2.92 x 2.79 x 1.4mm
• Range: 3.3~1000nH • DCR (Max): 0.03~3.7Ω
• Idc (Max): 300~1000mA • Q (Min): 35~72@15-500MHz • SRF (Min): Up to 6GHz

★**AISC-1206** 3.56 x 2.16 x 1.52mm
• Range: 3.3~1200nH • DCR (Max): 0.07~3.2Ω
• Idc (Max): 300~1000mA • Q (Min): 20~60@150-300MHz • SRF (Min): Up to 6.2GHz

★**AISC-1210** 3.65 x 2.95 x 2.70mm
• Range: 3.9~8600nH • DCR (Max): 0.05~1.1Ω
• Idc (Max): 200~1000mA • Q (Min): 15~60@150-300MHz • SRF (Min): Up to 6.0GHz



★**AISC-1210HS *High SRF*** 3.2 x 3.05 x 1.3mm
• Range: 2.2~33nH • DCR (Max): 0.5~5Ω
• Idc (Max): 220~800mA • Q (Min): 10@1MHz
• SRF (Min): Up to 150MHz

LAN Magnectics

★**ALAN-101** 11.43 x 9.24 x 5.51 mm
• 10/100 Base-T • 1CT : 1CT • IL: -1.1dB 0.1 to 100MHz • RL: -18dB @ 30MHz, -14dB @ 60MHz, -11.5dB @ 80MHz

★**ALAN-102** 12.70 x 9.30 x 6.35 mm
• 10/100 Base-T • 1CT : 1CT • IL: -1.1dB 0.1 to 100MHz • RL: -20dB @ 30MHz, -14dB @ 60MHz, -11.5dB @ 80MHz

★**ALAN-134** 12.70 x 9.30 x 6.35 mm
• 10/100 Base-T • 1CT : 1CT • IL: -1.0dB 0.3 to 100MHz • RL: -18dB @ 2-30MHz, -14.4dB @ 40MHz, -13.1dB @ 50MHz, -12 @ 60-80MHz

★**ALAN-508** 12.70 x 9.30 x 6.35 mm
• 10/100 Base-T POE • 1CT : 1CT • IL: -1.1dB 0.1 to 100MHz • RL: -18dB @ 30MHz, -14dB @ 60MHz, -11.5dB @ 80MHz

★**ALAN-511** 18.03 x 15.70 x 6.90 mm
• 1000 Base-T • 1CT : 1CT • IL: -1.0dB 0.1 to 100MHz • PoE+: 750mA

★**APT-106** 11.43 x 9.24 x 5.51 mm
• 10/100 Base-T • 1CT : 1CT • IL: -1.1dB 0.3 to 100MHz • RL: -20dB @ 30MHz, -14dB @ 60MHz, -11.5dB @ 80MHz

AISC- 0603HP

High Q, High SRF, High Current RF Wirewound Chip Inductors in 1.80 x 1.12 x 1.02mm SMD Package

Abracon's AISC-0603HP series of SMD inductors is designed for high volume RF applications. Constructed with low loss ceramic core wound with wire, it has high-Q, high self resonant frequency and high current to optimize performance at RF frequencies.
RF applications:

Smart Phone, Cordless Phone, Remote Control, Wireless LAN, Wireless Mouse, Wireless Keyboard, GPS, RFID, Base Station, Repeater, RF Transceiver, Bluetooth

Broadband Applications:
LED TV Filter, Tuner, Cable Modem, Set Top Box.

Other Applications:
USB2.0, IEEE1394.

Key features include:
- Higher Q and current than the standard AISC-0603 series.
- Tight inductance tolerance of 2% available.
- Wide operating temperature range of -40ºC to +125ºC.
- RoHS Compliant and lead free.

ALAN-511

1000 Base-T, Power over Ethernet Plus (PoE+) LAN Transformer in 24-pin with 6.90mm Maximum Height SMD Package

Abracon's ALAN-511 LAN Transformer is designed to work with gigabit PHY ICs. With the Power over Ethernet Plus (PoE+) capability, it enables power transmission over Ethernet cabling, eliminating the need for separate data and power wires to each network device.

Applications:
- IP phones and Cameras
- Network Infrastructure
- Mobile Devices
- RFID Tag Readers
- Game Consoles and other PoE-enabled devices

What ALAN-511 offers designers?
- Works with gigabit Ethernet with 750mA current capacity
- Supports 4 pairs of Category 5 UTP cables
- Provides a minimum inductance of 350µH and 1500Vrms isolation per IEEE 802.3 requirements
- Offers industry-leading insertion loss of 1.0dB maximum over 100kHz to 100MHz
- Operates over commercial temperature range of 0°C to +70°C
- Standard 18.03 x 15.70 x 6.90mm, RoHS compliant, SMT package

RJ45 Jack- Single port

★**ARJ-146** 16.60 x 13.50 x 32.60mm
• Tap Down, 10/100/1000 Base-T with PoE

★**ARJ11A** 16.26 x 13.84 x 21.59mm
• Tap Down, 10 Base-T

★**ARJ11B** 16.26 x 13.84 x 21.59mm
• Tap Down, 10/100 Base-T

★**ARJ11C** 16.26 x 13.84 x 21.59mm
• Tap Up, 10/100/1000 Base-T

★**ARJ11D** 16.26 x 13.84 x 21.59mm
• Tap Up, 10/100 Base-T

★**ARJ11E** 16.26 x 13.84 x 21.59mm
• Tap Down, 1000 Base-T

★**ARJ11F** 16.26 x 13.84 x 21.59mm
• Tap Up, 10/100/1000 Base-T

★**ARJ11G** 16.26 x 13.84 x 21.59mm
• Vertical, 10/100/1000 Base-T

★**ARJC Series**
16.2 x 13.55 x 25.3mm/ 16.0 x 13.55 x 21.1mm
• Tap Up, 10/100 Base-T

★**ARJE Series** Size varies
• Tap Up, 10/100/1000 Base-T

★**ARJP11A** 16.26 x 13.84 x 21.59 mm
• Tap Down, 10/100 Base-T, PoE & PoE+

★**ARJP11B** 16.26 x 13.84 x 21.59 mm
• Tap Down, 10/100 Base-T, PoE & PoE+

★**ARJP11C** 16.6 x 13.5 x 32.6 mm
• Tap Up, 10/100 Base-T, PoE

RJ45 Jack- Multi port

★**ARJ14A**
59.12 x 13.60 x 21.50 mm / 58.40 x 11.50 x 17.60 mm
• Tap Down, 10/100/1000 Base-T

★**ARJ21A** 17.27 x 28.40 x 25.30 mm
• Tap Up and Down, 10/100/1000 Base-T

★**ARJE-0029** 16.80 x 28.91 x 25.78mm
• Tap Up and Down, 10/100 Base-T, Dual USB Combo

★**ARJE-0032** 16.20 x 21.05 x 29.11mm
• Tap Up, 10/100 Base-T, Single USB Combo

★**ARJU21A** 16.78 x 21.08 x 26.00 mm
• Tap Up, 10/100 Base-T Single USB

★**ARJU31A** 17.40 x 30.40 x 26.10mm
• Tap Up, 10/100 Base-T Dual USB

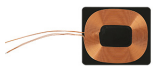
★**ARJU31B** 18.85 x 30.52 x 27.40 mm
• Tap Up, 10/100/1000 Base-T Dual USB

★**ARJ12A** 31.28 x 13.60 x 21.50 mm
• Tap Up and Down, 10/100/1000 Base-T

Wireless Charging Coils

NEW

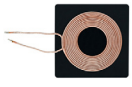
★**AWCCA-107T52 Series**
107.95mm x 52.5mm x 4mm
• Linear Array of Primary Coils, 2 lower coils (12.0µH), 1 upper coil (11.5µH) • For Tx applications working with 12V • High Permeability Shielding



★**AWCCA-38R32 Series**
107.95mm x 52.5mm x 4mm • Linear Array of Primary Coils, 2 lower coils (12.0µH), 1 upper coil (11.5µH) • For Tx applications working with 12V
• High Permeability Shielding

★**AWCCA-48R32 Series**
48.5mm x 32.5mm x 1.2mm • Wireless Charging Receiver single Coil (10.5µH) • For Tx or Rx Applications • High Permeability Shielding

★**AWCCA-50N50 Series** 50mm x 50mm, Height options 3.5mm, 4.0mm or 5.0mm
• Wireless Charging Coil for Transmitter or Receiver applications • 6.3µH & 24µH options
• High Permeability Shielding



★**AWCCA-53N53 Series**
53mm x 53mm x 5.0mm • Wireless Charging Coil for Transmitter or Receiver applications • 6.3µH & 24µH options • High Permeability Shielding

Common Mode Choke

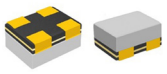
★**ACM-0603** 1.60 x 0.85 x 1.10mm
• Impedance Range: 22~250Ω@100MHz
• DCR (Max): 0.08~0.28Ω • Idc (Max): 400~500mA

ACM-21 2.0 x 1.2 x 1.2 mm
• Impedance Range: 67~370Ω@100MHz
• DCR (Max): 0.25~0.4Ω • Idc (Max): 280~400mA

ACM-21H for HDMI 2.0 x 1.2 x 1.2mm
• Impedance Range: 67~120Ω@100MHz
• DCR (Max): 0.30~0.40Ω • Idc (Max): 280~320mA

ACM-21U for USB3.0 2.0 x 1.2 x 1.2mm
• Impedance Range: 90Ω@100MHz
• DCR (Max): 0.40Ω • Idc (Max): 280mA

ACM-31 3.2 x 1.6 x 1.8mm
• Impedance Range: 90~2200Ω@100MHz
• DCR (Max): 0.30~1.20Ω • Idc (Max): 200~370mA



★**ACMF-03** 0.88 x 0.68 x 0.5mm
• Impedance Range: 35~90Ω@100MHz
• DCR (Max): 1.8~2.8Ω • Idc (Max): 100mA

★**ACMF-04** 1.25 x 1.00 x 0.50mm
• Impedance Range: 90Ω@100MHz
• DCR (Max): 2.8Ω • Idc (Max): 100mA

Chokes- Wide Band Choke

★**AWBC-03** Φ6.00 x 10.00mm
• Impedance: 320Ω@10MHz, 780Ω@50MHz, 580Ω@100MHz

AWBC-05 Φ6.00 x 10.00mm
• Impedance: 355Ω@10MHz, 790Ω@50MHz, 550Ω@100MHz

AWBC-09 Φ6.00 x 10.00mm
• Impedance: 598Ω@25MHz, 800Ω@100MHz,

Transformer

★**AITC-449**
8.20 x 6.60 x 5.40mm
• Inductance: 264uH min @100kHz
• DCR (Max): 1.5Ω • Turns Ratio: 1:1:1
• SRF (Min): 2.5MHz • Hipot: 500VDC, 1.0mA, 1sec

Chokes- Line Filter

ALFT-02A 18.6 x 13 x 20.6mm
• Inductance Range: 0.4~39mH
• DCR (Max): 0.06~1.9Ω • Idc (Max): 0.4~2.6A

ALFT-03A 23.9 x 18 x 21.6mm
• Inductance Range: 0.6~105mH • Idc (Max): 0.2~3A

★**ALFT-04** 28.58 x 16.26 x 5.85mm
• Inductance Range: 120~10000uH
• DCR (Max): 4.5~40mΩ • Idc (Max): 3~6A

ALFT-09V 16.5 x 11.5 x 17.0mm
• Inductance Range: 0.5~10mH
• DCR (Max): 0.2~3.6mΩ • Idc (Max): 0.3~1.4A

ALFT-16 13.97 x 11.43 x 6.35mm
• Inductance Range: 35~1600uH
• DCR (Max): 5~300mΩ • Idc (Max): 1~6A

ASTC-01 8.9 x 11.4 x 4.7mm
• Inductance Range: 0.42~299.87uH
• DCR (Max): 6~1525mΩ • Idc (Max): 0.32~5.5A

ASTC-02 11.4 x 13.9 x 6.35mm
• Inductance Range: 0.49~298.93uH
• DCR (Max): 5~1003mΩ • Idc (Max): 0.54~7.9A

ASTC-03 8.9 x 11.4 x 4.7mm
• Inductance Range: 0.4~302.5uH
• DCR (Max): 5~1432mΩ • Idc (Max): 0.22~5.5A

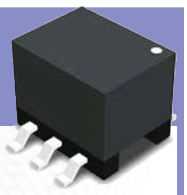
ASTC-04 11.4 x 13.9 x 6.35mm
• Inductance Range: 0.44~298.12uH
• DCR (Max): 4~672mΩ • Idc (Max): 0.62~7A

ASTC-4H 14 x 14 x 6.4mm
• Inductance Range: 0.31~1000uH
• DCR (Max): 3~1500mΩ • Idc (Max): 0.25~12.2A

ASTC-07C-702-1R5 16.38 x 14.22 x 8.89mm
• Inductance Range: 7000uH
• DCR (Max): 0.3mΩ • Idc (Max): 2A

AITC-449

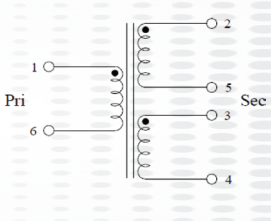
SMT Gate Drive Transformers



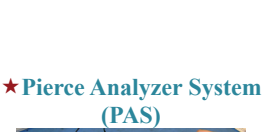
Abracon AITC-449 transformer is designed for high switching speed, transformer coupled MOSFET and IGBT gate drive circuits.

Key features include:
- Wide operating frequency from 50kHz to 2MHz
- Standard EP5 SMT package
- A wide operating temperature range from -40°C to +125°C
- Space saving 8.2 x 6.6 x 5.4mm, RoHS compliant SMD package

Applications:
- DC/AC Converter
- AC/AC Converter
- DC/DC Converter
- Motor Controller



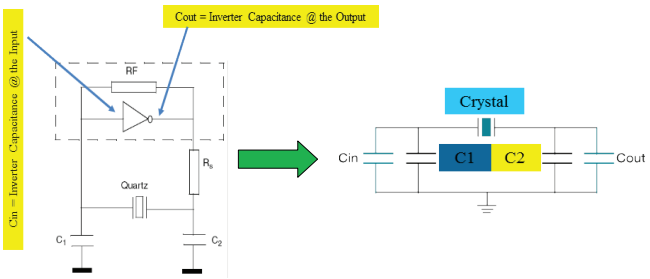
Parameters	Minimum	Typical	Maximum	Units	Notes
Operating Temperature	-40		125	°C	
Storage Temperature	-40		125	°C	
Operating Frequency	50kHz		2MHz		
Turns Ratio (±2%)		1:1:1			(1 - 6):(2 - 5):(3 - 4)
Inductance (Ls)	264			uH	@100kHz, 0.1Vrms, 0Adc, (1-6)
Leakage Inductance			0.30	uH	@100 KHz, 0.1Vrms, (1-6) , short (2-5), (3-4)
Capacitance			95	pF	@100 KHz, 0.1Vrms Pri to Sec
DCR			1.5	Ω	(1-6)
			1.5	Ω	(2-5)
			1.5	Ω	(3-4)
SRF	2.5			MHz	
Volt-time product		24.5		V-usec	
Hipot	500VDC, 1.0mA, 1Sec				Pri to Sec

Part Number	Description	Applications
★ABLNO Precision Frequency Divider Eval Board 	• ABLNO-EVAL is a Frequency Divider Evaluation Board designed to facilitate oscillator signal characterization • Built-in Divider scheme with exceptionally low Additive Jitter to characterize ÷1, ÷2, ÷4 or ÷8 combination of the reference signal • Contains Standard SMA connectors providing VDD, Vc, RF Output and External Oscillator signal connectivity • Ideally suited to characterize Phase Noise, jitter, frequency pull & frequency stability over temperature characterization • Rated for 10MHz to 200MHz frequency range	• With on-board 9x14 mm XO/VCXO lay out, a standard device, such as ABLNO VCXO can be soldered onto the board and fully characterized • Optional SMA connector port to characterize an external oscillator signal • Rated for -40°C to +85°C operation enabling frequency stability over temperature characterization of an oscillator device
★ABPSM-ULN-A 	• AC Adapter Input Voltage 100VAC to 240VAC; 50Hz and 60Hz cycles - World Wide Capability • Four DC Output Ports, 1.8V, 2.5V 3.3V & 5.0V • Current Sourcing Capability 200mA max each port • Exceptional low noise density; < 7nV / vHz @ 1kHz offset Typical • Better than 0.30uVrms over 0.1Hz to 1kHz bandwidth (best-in-class) • Convenient, Ultra Low Noise Solution offering most common bias levels • Portable - Small form factor [3.50” * 1.50” * 0.65”] Machined Aluminum enclosure • No external heat sinking is required • Low Cost	• Lab Grade Power Supply designed to replace bulky & noisy power supplies for everyday use • A must have for Noise Sensitive Measurements such as, S/N ratio, Spectral Purity, Jitter, Phase Noise & Harmonic Distortion • Ideal for testing circuits including: - Audio - Medical Diagnostic - RF - Jitter Sensitive Digital - Microwave
★Pierce Analyzer System (PAS) 	• Circuit characterization; providing best possible match between Quartz Crystal, oscillator loop and associated components • Eliminates probability of oscillator start-up issues related to inadequate design or marginal component performance • Eliminates production launch issues related to crystal oscillator based timing circuit • Solves for design margin uncertainty • Provides customer’s oscillator circuit overview in the form of a detailed report, which could be an ideal 3rd party assessment for the design history file or PPAP documentation. This report encompasses both the stand-alone crystal performance, as well as in-circuit behavior outlining safety factor as a function of crystal’s ESR, etc. • For additional information, please contact Abracon at: tech-support@abracon.com	Abracon provides a detailed test report encompassing: • Stand alone Quartz Crystal characteristics including: - Motional parameters (Cm, Lm, ESR &Co) - Narrow Band Frequency Response Plot - Wide Band Frequency Response PlotoAdmittance versus Suseptance Plot - Frequency dependence versus load capacitance plot • Oscillator loop - Initial frequency accuracy and drive level as seen by the crystal with measured ESR - Worst case projected drive level with maximum specified ESR - Safety Factor of the oscillator loop under both typical and maximum ESR - Recommendation on proper component selection (C1, C2 & Rs when applicable) for best compromise with respect to Safety Factor and Frequency accuracy - Recommendation on the Abracon Crystal part # with proper plating load and other key attributes to enable the most robust design, specific to the µcontroller/processor implemented
★SYNC-10.00MHz	Stand Alone 10.00MHz Portable Precision Frequency Reference - World Wide Capability • Built-in Stratum-III stability, 10.00MHz Signal tuned into 50Ω’s • Synchronization circuitry providing dynamic sync capability, enabling Calibration to a known source such as; a GPS Tracked 10.00MHz reference/10.00MHz Rubidium Source/10.00MHz OCXO based reference • Integrated re-chargeable batteries to provide true stand-alone capability in the field • Once sync’d; guaranteed ±300 ppb stability over 0°C to 60°C • Pocket Size - 3.50” * 1.50” * 1.00”; machined aluminum durable enclosure	• Ideally suited as an in-field Calibrated Precision 10.00MHz reference for trouble shooting or tuning hardware and Base Station related equipment • Reference source for lab use • Reference source to drive frequency counters and other timing related hardware or instruments • Precision Portable reference for inspection of in-field wireless transmitters

PAS (Pierce Analyzer System) …….. Abracon's Advanced Board Characterization Service

Today, majority of electronic circuits are based on clocked logic (including microprocessors, microcontrollers, FPGAs and CPLDs), requiring a timing source. Depending on the frequency accuracy requirements, some employ oscillators while others use off-the-shelf quartz crystals in conjunction with the built-in oscillator circuit; embedded in most microcontrollers and microprocessors.

Most if not all embedded solutions use the Pierce Oscillator configuration, integrated as part of the SOC (system-on-chip). The obvious advantages include cost, size and power compared to a stand-alone oscillator; while the key limitation is the proper matching of the quartz crystal with the on-board Pierce Oscillator.



The loop capacitors primarily influence the overall oscillator loop capacitance, as seen by the crystal. This effective loop capacitance determines how far the oscillator loop is resonating, relative to the desired resonant frequency. However, the overall long-term performance of the oscillator loop is influenced by the following factors:

- The reactive impedance (**Xc**) of these loop capacitors
- The Inverter Amplifier's transconductance ($\mathbf{g_m}$)
- The presence or absence of the current limiting resistor (**Rs**)
- The presence or absence of the Automatic Gain Control (**AGC**) or Automatic Level Control (**ALC**); with-in the integrated oscillator circuit

These factors collectively set the boundary condition of the design. This boundary condition, commonly referred to as the Safety Factor (SF), is an important parameter to ensure that the product design has sufficient margin to accommodate part-to-part and lot-to-lot variations; as well as, eliminating product-performance-uncertainty in production volume.

Historically, design engineers have optimized their circuit performance via trial & error, at the expense of significant investment in time. Further, to properly determine the oscillator loop dynamics, the most accurate determination is made by breaking the oscillator loop and conducting key measurements using specialized equipment such as a Current Probe.

Lastly, these measurements become increasingly sensitive if the timing loop is driven by a Tuning Fork (**32.768kHz**) crystal. These crystals are extremely sensitive to loading effects and to accurately determine the in-circuit behavior of these components, extreme care and accuracy is essential.

For instance, Automotive, Medical and Consumer Electronics solutions typically utilize Tuning Fork Crystals for their Real-Time-Clocking (RTC) needs. If the selected **SOC** has limited gain margin, there is a high probability that some percentage of these Crystals will not properly start under adverse conditions, such as cold operating temperature (-40ºC).

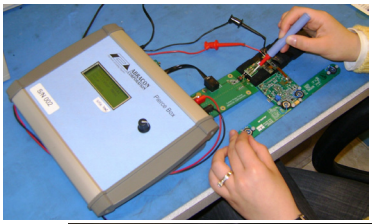
Another example would be a product designed to address the Zigbee related solutions, which typically have a hard boundary condition of ±40 ppm relative to the carrier, for proper operation. This ±40 ppm operational window actually needs to account for:

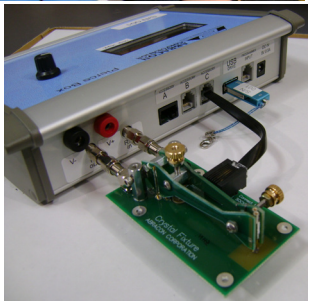
- Quartz Crystal set tolerance
- Shift through reflow
- Stability over temperature
- Aging during product-life-cycle
- Frequency pushing & pulling.

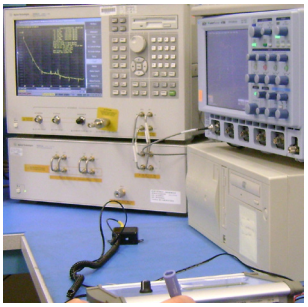
If the oscillator loop is not optimized, most of the ±40 ppm can potentially be consumed by the set tolerance of the quartz crystal alone; thereby causing potential field failures. These frequency domain failures could be primarily attributed to the oscillator frequency drifting over temperature or long term aging; to the point that the oscillator loop is no longer with-in the allocated ±40 ppm operational window. Besides the issues related to the oscillator loop accuracy in frequency domain, the oscillator loop drive level must also be properly quantified to ensure acceptable product performance over temperature and time.

Although relatively low on the checklist of design engineers, the Pierce Oscillator driven by an external resonator - such as a quartz crystal can present significant challenge during a typical product launch. Characterizing the oscillator loop during the design phase should be a priority to mitigate the risk during product launch, as well as, field returns down the road.

To overcome these challenges and provide an accurate assessment of the oscillator loop dynamics; Abracon's Advanced Engineering Team has developed a Proprietary Pierce Analyzer System (PAS); which is designed to analyze both the stand alone crystal, as well as the performance of that particular crystal in the final circuit.







Key Features:

- Circuit characterization; provides best possible match between Quartz Crystal, oscillator loop and associated components
- Eliminates probability of oscillator start-up issues related to inadequate Design or marginal component performance
- Eliminates production launch issues related to crystal oscillator based
- Timing circuit
- Solves for design margin uncertainty
- Provides customer's oscillator circuit overview in the form of a detailed report, which could be an ideal 3rd party assessment for the design history file or PPAP documentation. This report encom passes both the stand-alone crystal performance, as well as in-circuit behavior outlining safety factor as a function of crystal's ESR, etc.

- For additional information, please contact Abracon at: tech-support@abracon.com

About Abracon

Abracon Corporation is a global manufacturer of frequency control, signal conditioning, clock distribution and magnetic components. Abracon offers a wide selection of Quartz Crystals, Crystal and MEMS Oscillators, Real Time Clocks, Bluetooth Modules, Ceramic Resonators, SAW Filters and Resonators, Inductors, Transformers and Circuit Protection Components. The company is ISO9001-2008 certified with design & Application Engineering resources in California & Illinois; and Sales offices in Texas, California, China, Taiwan, Singapore, Scotland, and Germany. Abracon's products are offered through its Global Distribution Network.

ABRACON CORPORATION was established on August 5th, 1992 with the vision of becoming a top tier global manufacturer, with un-parallel Application Engineering & Sales support. In pursuit of this vision, Abracon obtained ISO9001-2008 quality certification, made select equity investments in both North American & off-shore manufacturing facilities and technology partners, established channel partnerships with up-coming technology companies and instituted a state-of-the art engineering laboratory at its California location.

In November of 2013, Abracon established a new Midwest order fulfillment center in Austin, Texas. The expansion was necessary because of Abracon's rapid growth and to better serve our East Coast and European customers.

Abracon offers a broad product line servicing commercial, industrial, consumer and select COTS-Military applications.

California Headquarters

30332 Esperanza | Rancho Santa Margarita
California 92688 | Phone: 949.546.8000

Texas - Order Fulfillment Center

5101 Hidden Creek Lane | Spicewood | Texas | 78669 | Phone: 512-371-6159

Standard Warranty

Abracon warrants that the Products will, for a period of one (1) year, be free from defects in material and workmanship and conform to the Abracon published specifications for the Products, in each case under normal use, conditions, and service. Abracon agrees to replace, without charge, any defective Products which are returned to Abracon and which are confirmed, by Abracon's inspection, to be defective within the terms of this warranty. The warranty period commences on the date of original sale by Abracon.

ISO9001:2008

PERRY JOHNSON REGISTRARS, INC.

Certificate of Registration

Perry Johnson Registrars, Inc., has assessed the Quality Management System of:

Abracon Corporation
30332 Esparanza, Rancho Santa Margarita, CA 92688 United States

(Hereinafter called the Organization) and hereby declares that Organization is in conformance with:

ISO 9001:2008

This Registration is in respect to the following scope:

Design, Manufacture, and Distribution of Electronic Components

This Registration is granted subject to the system rules governing the Registration referred to above, and the Organization hereby covenants with the Assessment body duty to observe and comply with the said rules.

For PJR:

Terry Boboige, President

Perry Johnson Registrars, Inc. (PJR)
755 West Big Beaver Road, Suite 1340
Troy, Michigan 48084
(248) 358-3388

UKAS MANAGEMENT SYSTEMS 008 · ANAB ACCREDITED · PERRY JOHNSON REGISTRARS, INC.

The use of the UKAS accreditation symbol is in respect to the activities covered by the Accreditation Certificate Number 105.

The validity of this certificate is dependant upon ongoing surveillance.

Effective Date:	Expiration Date:	Certificate No.:
May 3, 2013	March 9, 2014	C2013-01214

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June 2014