

SMD OVEN CONTROLLED CRYSTAL OSCILLATOR

AOCXS Series



25.4 x 22.1 x 15.3mm

FEATURES:

- 25.4 x 22.1 x 15.3 True SMT – RoHS Compliant Reflow-able Package
- SC-Cut high “Q” resonator based design
- Available with ± 30 ppb stability over -30°C to $+70^{\circ}\text{C}$ operating temperature
- Exceptional long-term Aging of ± 350 ppb over 10-year product life
- Excellent close-in phase noise (-135 dBc/Hz @ 100Hz offset – 10 MHz carrier)

APPLICATIONS:

- Cellular Infrastructure
- Radar systems
- Test & Measurement Equipment
- GPS tracking with precision hold-over accuracy
- WiMax / WLAN

STANDARD SPECIFICATIONS:

PARAMETERS	
ABRACON P/N	AOCXS Series
Frequency range	5.000MHz to 40.000MHz
Standard Frequencies (Fc)	5.0; 10.0; 16.384; 19.44; 24.576, 32.768 MHz
Operating temperature	0°C to $+70^{\circ}\text{C}$ (see options)
Freq. Stability vs. Operable Temperature Voltage ($\pm 5\%$ Vdd) Warm-up @ 25°C	± 30 ppb (see options)
	± 10 ppb
	± 20 ppb (in 4-minutes @ $+25^{\circ}\text{C}$ referenced to 1-hour)
Aging: at time of shipment daily aging (> 30 days) yearly aging 10 year aging	± 1.0 ppb
	± 1.0 ppb
	± 100 ppb
	± 350 ppb
Supply Voltage (Vdd)	$3.3\text{Vdc} \pm 5\%$ (see options)
Power at Turn-on	3-Watts
Steady State @ 25°C	1-Watt
Output Load	15pF (CMOS)
Output Voltage	$\text{VOH} = 2.4 \text{ V min.}; \text{VOL} = 0.4 \text{ V max.}$
Control Voltage Range (Vc)	0 to 2.8V
Frequency Pull Range	± 0.4 ppm to ± 1.0 ppm
Frequency Pull Slope	Positive
Center Control Voltage	$1.40 \text{ V} \pm 0.4\text{V}$ to set the frequency to $\text{Fc} \pm 0.00$ ppb
Control Voltage Port Impedance	100k Ω min.
Spurious Response	-70 dBc
Typical Close-In Phase Noise (10 MHz Carrier)	-115dBc/Hz @ 10Hz offset, -135dBc/Hz @ 100Hz offset, -140dBc/Hz @ 1kHz offset

OPTIONS AND PART IDENTIFICATION:

(Left blank if standard)

AOCXS - Frequency - -

Supply Voltage Option	
Blank	3.3 V
A	12.0 V
B	5.0 V

Temperature Options	
D	0°C to $+50^{\circ}\text{C}$
Blank	0°C to $+70^{\circ}\text{C}$
F	-30°C to $+70^{\circ}\text{C}$

Freq. Stability	
R	± 20 ppb max.
Blank	± 30 ppb max.
H	± 50 ppb max.

ABRACON IS
ISO 9001 / QS 9000
CERTIFIED



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30332 Esperanza, Rancho Santa Margarita, California 92688
tel 949-546-8000 | fax 949-546-8001 | www.abracon.com

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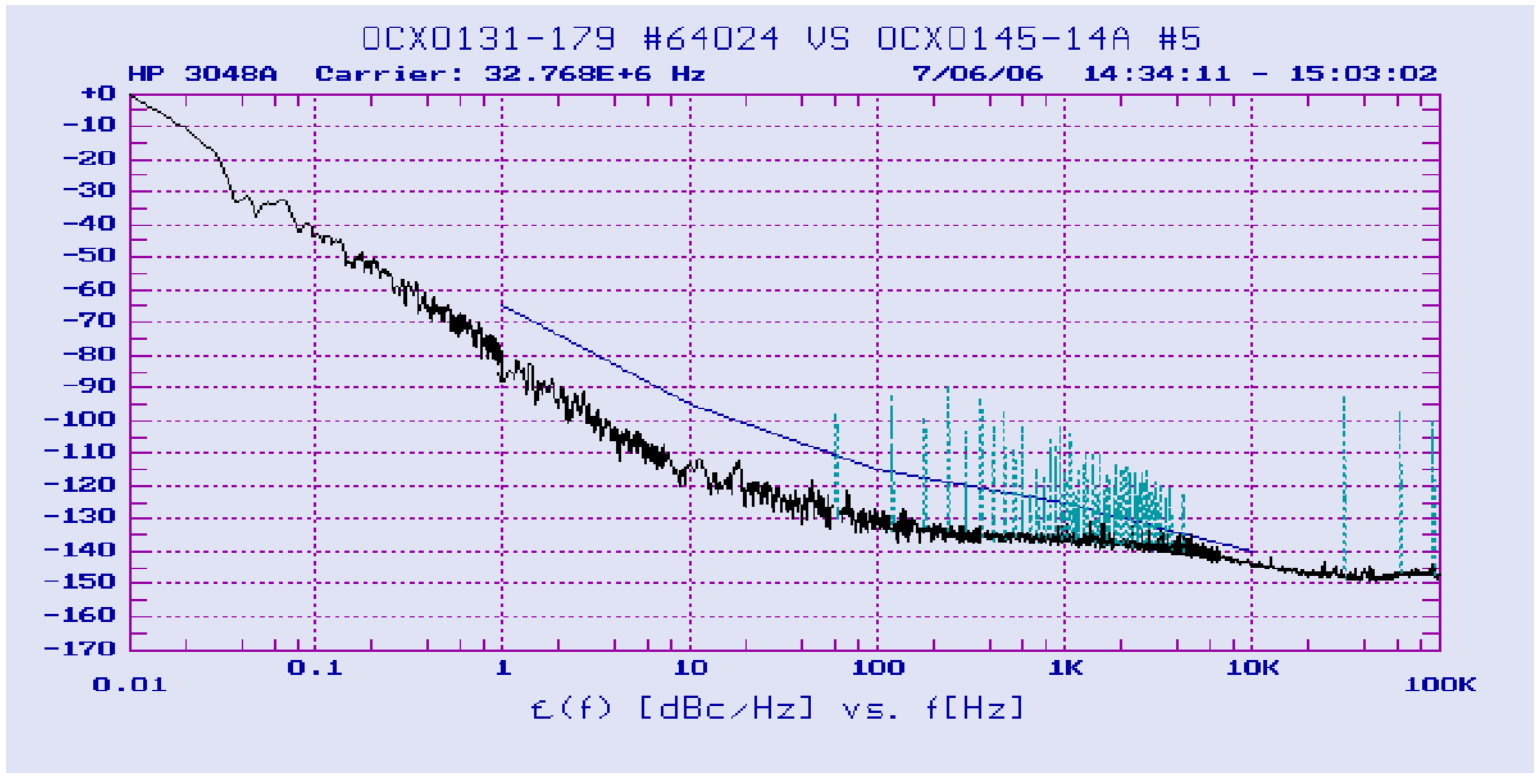


RoHS
Compliant

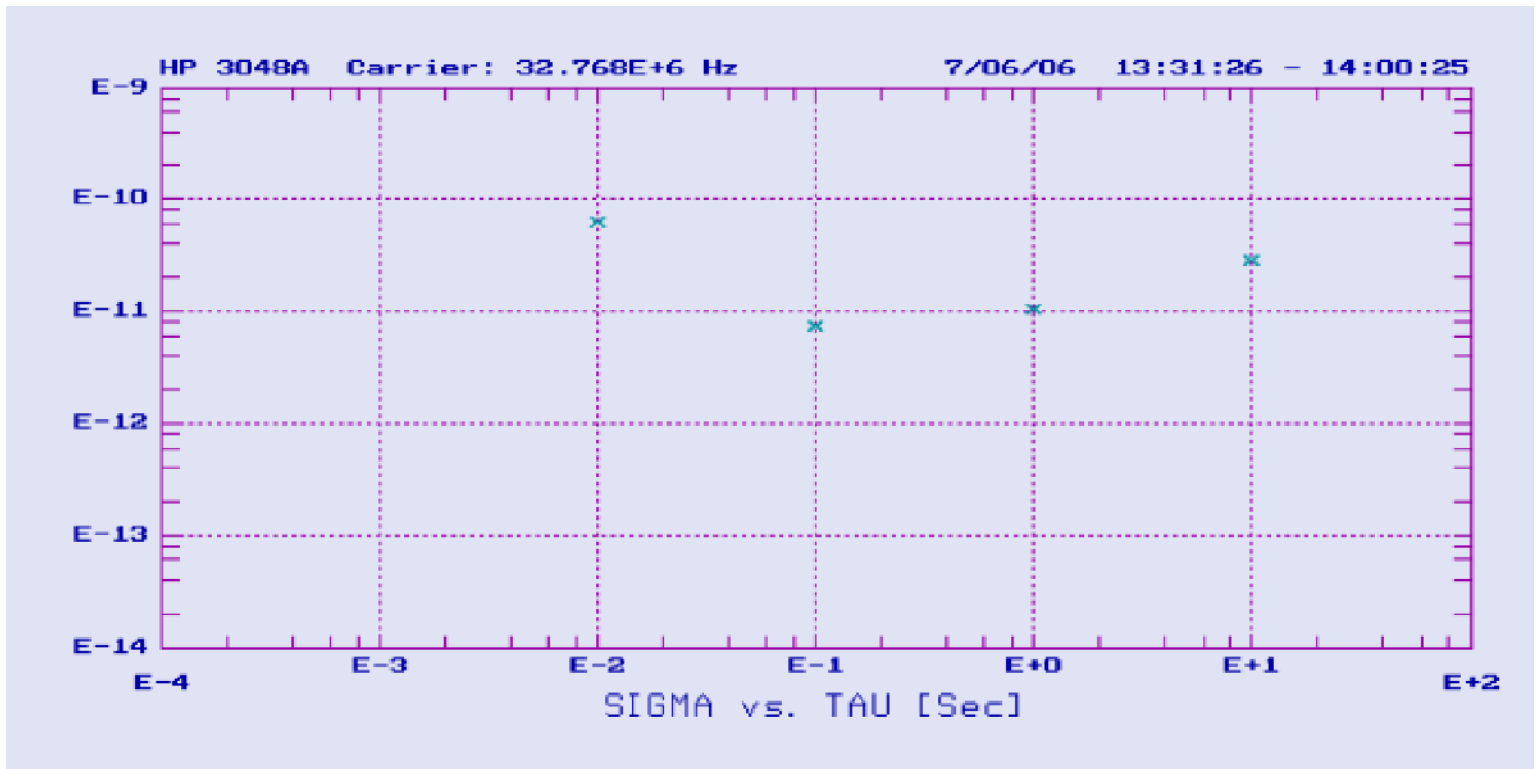


25.4 x 22.1 x 15.3mm

Typical Phase Noise Performance @ 32.768MHz Carrier (Measured at +25±°C):



Typical Allan Variance @ 32.768MHz Carrier $1 * E-10$



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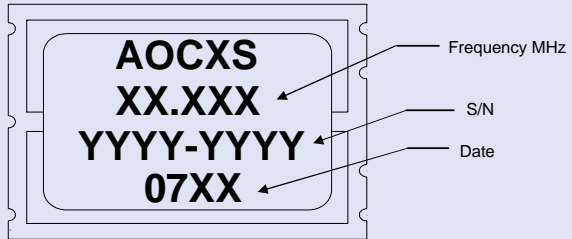
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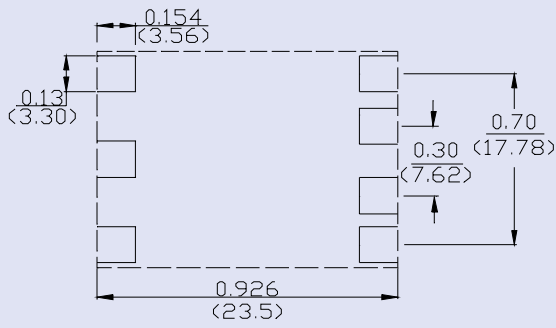
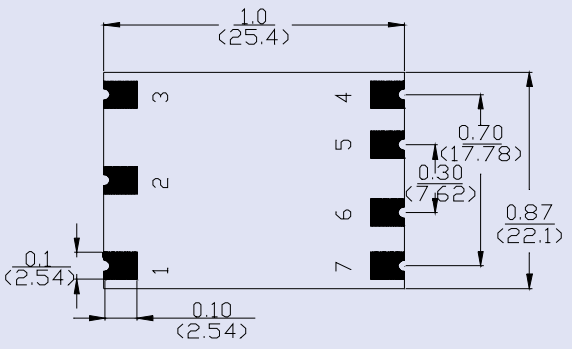
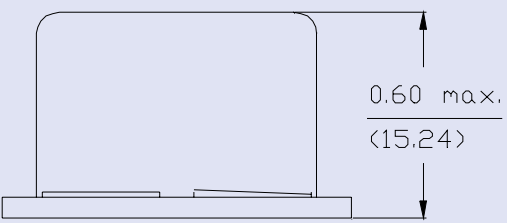
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Pb RoHS Compliant

OUTLINE DRAWING:



PIN	FUNCTION
1	Control Voltage (Vc)
2	Reference Voltage Out (Vref)
3	Supply Voltage (Vdd)
4	RF Output
5	Not Connected
6	0 Volts & Case
7	0 Volts & Case

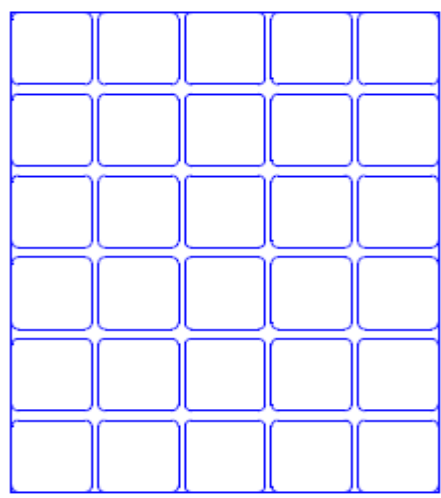


Dimensions: mm

Recommended Solder Pad Layout

Packing

Units are packaged in appropriate size trays, similar to as shown below:



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