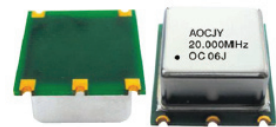


SMD OVEN CONTROLLED CRYSTAL OSCILLATOR



25.4 x 22.1 x 12.5 mm

AOCJY Series



RoHS
Compliant

FEATURES:

- 25.4 x 22.1 x 12.5 mm True SMT- RoHS Compliant Reflow-able Package
- SC-Cut, High "Q" resonator based design
- Either Sinewave or CMOS RF output
- Available with ± 30 ppb over -40°C to $+75^{\circ}\text{C}$ operating temperature Range
- Tighter Stabilities to ± 5.0 ppb over 0°C to $+50^{\circ}\text{C}$ also available
- Exceptional long-term Aging of ± 500 ppb over 10-Year Product Life
- Excellent close-in phase noise (-130 dBc/Hz Typical @100 Hz offset from 10MHz carrier)

APPLICATIONS:

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

1.000MHz to 160.000MHz: CMOS output
1.000MHz to 100MHz: Sinewave output *

STANDARD SPECIFICATIONS:

PARAMETERS

ABRACON P/N:	AOCJY Series	
Frequency range:	1.000 MHz to 160.00 MHz: CMOS output 1.000 MHz to 100MHz Sinewave output * (please contact Abracon for > 80.00MHz resonant frequency)	
Standard Available frequencies:	10.00, 12.80, 13.00, 16.384, 20.00, 26.00, 38.40, 38.88, 40.00, 100.00 MHz	
Operating temperature:	0°C to $+50^{\circ}\text{C}$ (see options)	
Frequency Stability vs. Temperature		
0°C to $+50^{\circ}\text{C}$:	± 5.00 ppb max.	Standard
-20°C to $+70^{\circ}\text{C}$:	± 10.00 ppb max.	Option "E"
-40°C to $+75^{\circ}\text{C}$:	± 30.00 ppb max.	Option "F"
Frequency Stability vs. Supply Voltage		
Voltage ($\pm 5\%$ Vdd):	± 20 ppb Max.	
Warm-up (@ 25°C):	$\leq \pm 100$ ppb Max. (in < 3 minutes @ $+25^{\circ}\text{C}$)	
Aging:		
Daily aging (after 30 days):	± 1.0 ppb	
Yearly aging:	± 100 ppb	
10-Years aging:	± 500 ppb	
Supply voltage (Vdd):	3.3Vdc $\pm 5\%$ (see options)	
Reference voltage(Vref):	+2.80V ± 0.20 V (For Vdd= $+3.3$ V version) +4.50V ± 0.20 V (For Vdd= $+5.0$ V version) {Available as an output to facilitate oscillator tuning}	
Power @ turn on:	3.60 Watts Max.	
Steady state @ 25°C :	1.40 Watt Max.	
Output load:	15pF (for LVCMOS output) 50 Ω (for Sinewave output)	
Output Voltage (LVCMOS):	VOH = $0.9 * V_{dd}$ min. VOL = $0.1 * V_{dd}$ max.	
Output Voltage (Sinewave):	2.0 dBm min.	
Rise & Fall Times (LVCMOS):	5ns max.	
Duty Cycle (LVCMOS):	45%/55% Typ.	
Control voltage range:	0 to Vdd	
Frequency pull range:	± 0.70 ppm Min.	
Frequency pull slope:	Positive	
Center control voltage:	Vdd/2 ± 0.5 Volts	
Control voltage port impedance:	10k Ω min.	
Spurious reponse:	-70 dBc	
Phase noise (10MHz carrier):	-90dBc Typ. (@ 1 Hz) -100dBc Typ. (@10 Hz) -130dBc Typ. (@100 Hz) -140dBc Typ. (@1,000 Hz) -150dBc Typ. (@10,000 Hz)	

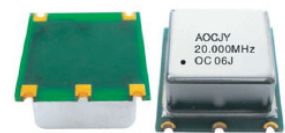
ABRACON IS
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ABRACON
CORPORATION

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SMD OVEN CONTROLLED CRYSTAL OSCILLATOR



25.4 x 22.1 x 12.5 mm

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OPTIONS AND PART IDENTIFICATION (Left blank if standard)

AOCJY - - MHz - -

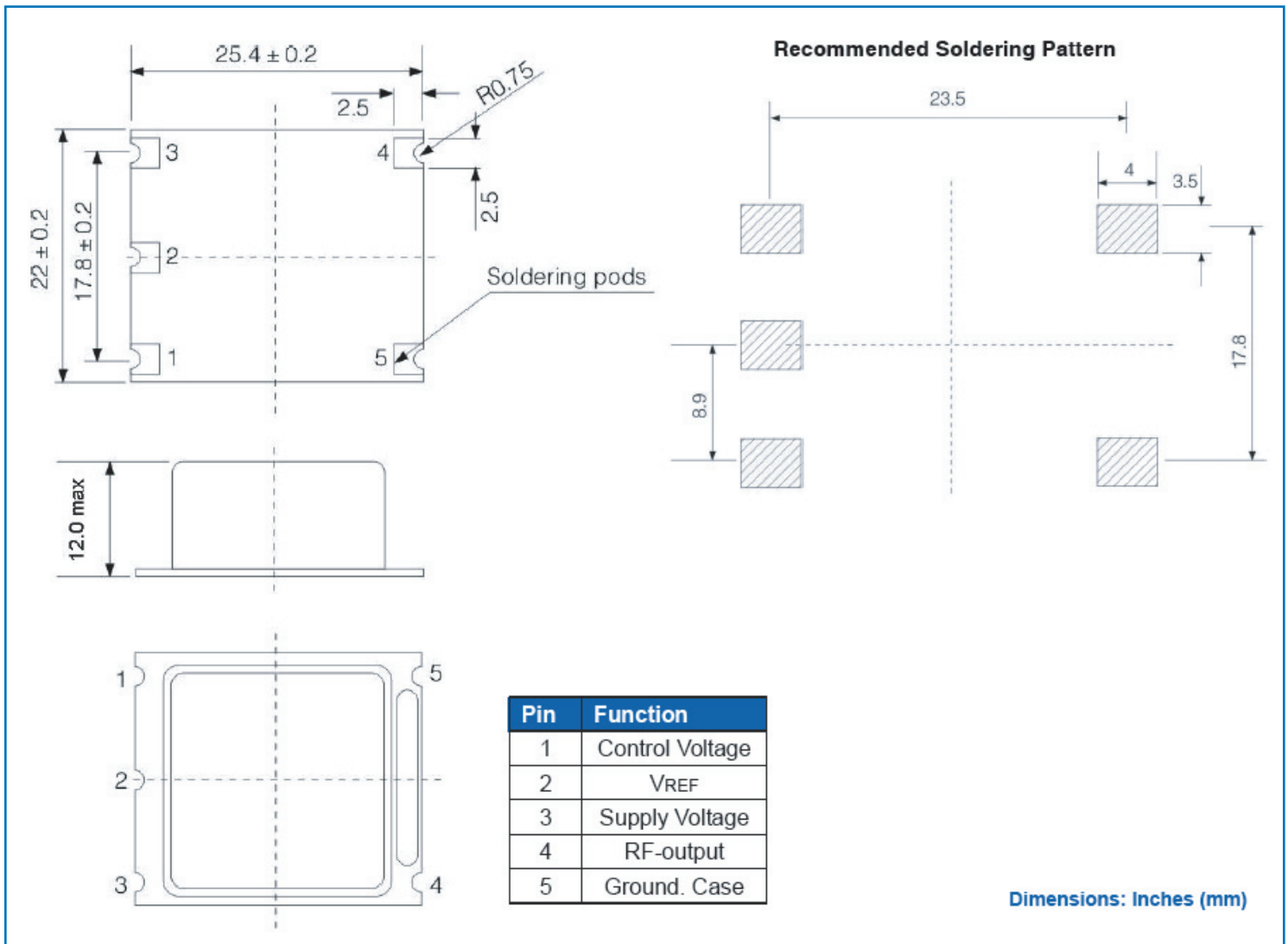
Vdd (V)
Blank: 3.3±5%
A: 5.0±5%

Frequency in MHz
e.g. 10.000MHz
20.000MHz
100.000MHz

Operating Temp.
Blank: ± 5.0 ppb/0°C ~ +50°C
E: ± 10.0 ppb/-20°C ~ +70°C
F: ± 30.0 ppb/-40°C ~ +75°C

RF Output
Blank: CMOS
SW: Sinewave

OUTLINE DIMENSIONS

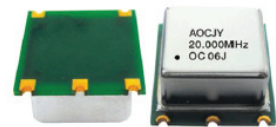


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AOCJY Series

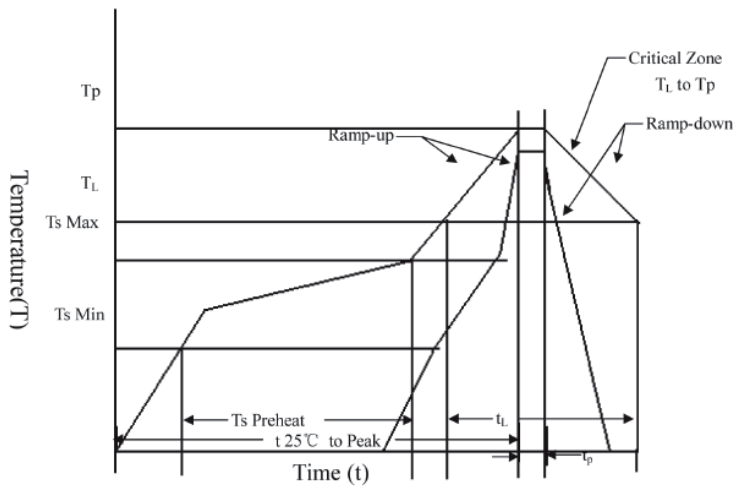


RoHS
Compliant



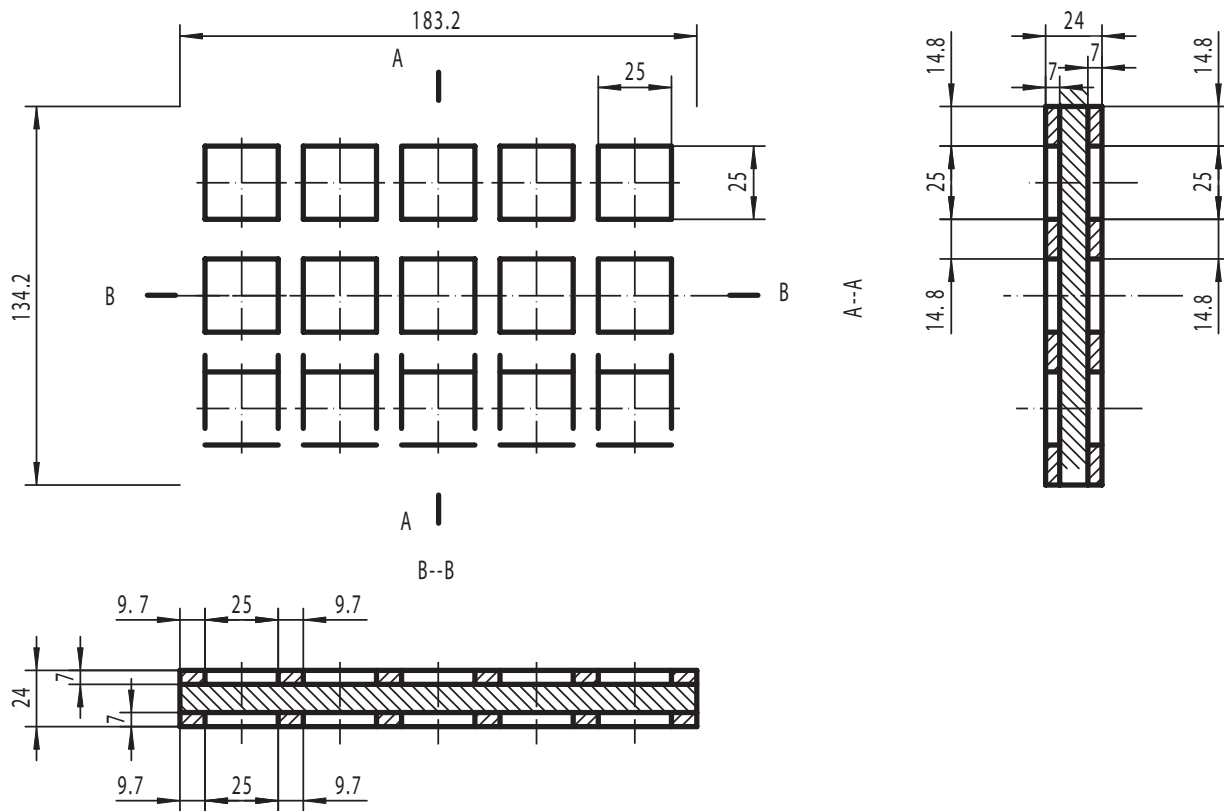
25.4 x 22.1 x 12.5 mm

REFLOW PROFILE:



T _s max to T _L (Ramp-up Rate)	3°C/second max.
Preheat	
Temperature Min. (T _s Min.)	150°C
Temperature Typical (T _s Typ.)	175°C
Temperature Max. (T _s Max.)	200°C
Time (t _s)	60 ~ 180 seconds
Ramp-up rate (T _L to T _p)	3°C/second max.
Time Maintained Above:	
--Temperature (T _L)/Time (T _L)	217°C/60 ~ 150 seconds
Peak Temperature (T _p)	250°C max. for 10 seconds
Target Peak Temperature (T _p Target)	250°C +0/-5°C
Time within 5°C of actual peak (t _p)	20 ~ 40 seconds
Ramp-down Rate	6°C/second max.
Tune 25°C to Peak Temperature (t)	8 minutes max.

PACKAGING: 15 pcs/tray



APPLICATION NOTES: (Click on a note below to view the file)

- > [AOCJY OCXO Vref](#)
- > [AOCJY Frequency vs. Vc \(V\)](#)

NOTE: Abracon manufactured products are intended for general commercial and industrial use. For applications requiring high reliability and/or presenting extreme operating environment, written consent & authorization from Abracon is required.

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