

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# SMD OVEN CONTROLLED CRYSTAL OSCILLATOR

### **AOCJY Series**





25.4 x 22.1 x 12.7 m m

Moisture Sensitivity Level (MSL) – This product is Hermetically Sealed and not Moisture Sensitive - MSL = 1

#### > FEATURES:

- 25.4 x 22.1 x 12.7 mm True SMT- RoHS Compliant Reflow-able Package
- SC-Cut, High "Q" resonator based design
- Either Sinewave or CMOS RF output
- Available with  $\pm 30$  ppb over  $-40^{\circ}$ C to  $+75^{\circ}$ C operating temperature Range
- Tighter Stabilities to  $\pm 5.0$  ppb over 0°C to  $\pm 50$ °C also available
- Exceptional long-term Aging of ±500 ppb over 10-Year Product Life
- Excellent close-in phase noise (-135 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

#### **STANDARD SPECIFICATIONS:**

Parameters	Minimum	Typical	Maximum	Units	Notes
RF Output					
Engavonav	10.00		100.00	MHz	CMOS output
Frequency	10.00		100.00	MHz	Sinewave output
Standard Available Frequencies	10.00, 12.80, 13.00, 16.384, 20.00, 26.00, 38.40, 38.88, 40.00, 100.00 MHz				
Operable Temperature Range	0		50	° C	See Stability Options
<b>Frequency Stability Options</b>					
0° C to +50°C			±5.00	ppb	Default Spec.
-20° C to +70°C			±10.00	ppb	Option "E"
-40° C to +75°C			±30.00	ppb	Option "F"
Frequency Stability vs. Supply Voltage (Vdd ± 5%)			±20.00	ppb	
Warm-Up @ 25 °C			±100.00	ppb	In ≤ 3-minutes
Power Consumption @ turn on			3.60	Watts	
Power Consumption Steady State			1.40	Watt	
Supply Voltage (Vdd)	3.135	3.30	3.465	Volts	See Options
Reference Voltage (Vref) (available as an output to facilitate oscillator tuning)	2.60	2.80	3.00	Volts	For Vdd=+3.3V version
	4.30	4.50	4.70	Volts	For Vdd=+5.0V version
Aging					
Daily aging (after 30 days)			±1.0	ppb	
Yearly			±100	ppb	
10-Years			±500	ppb	
Waveform	LVCMOS				
Level "1" (Logic High)	0.9*Vdd			Volts	
Level "0" (Logic Low)			0.1*Vdd	Volts	
Load		15		pf	
Rise & Fall Time			5.0	ns	
Duty Cycle	45		55	%	



# SMD OVEN CONTROLLED CRYSTAL OSCILLATOR





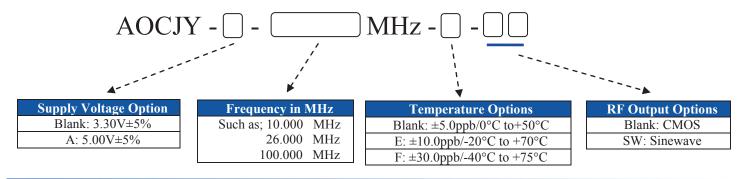


25.4 x 22.1 x 12.7 m m

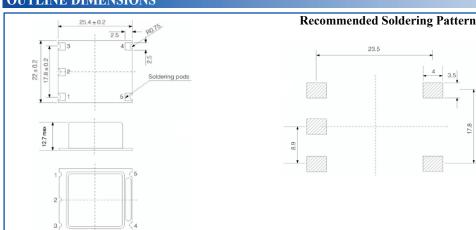
#### > STANDARD SPECIFICATIONS contd.

Parameters	Minimum	Typical	Maximum	Units	Notes
Waveform	Sinewave				
Peak Power	2.00			dBm	
Output Load		50		Ω	
Spectral Content					
Spurious Response			-70	dBc	
Phase Noise @ 10MHz Carrier (Vdd=3.3V)					
@ 1 Hz offset			-90	dBc / Hz	
@ 10 Hz offset			-120	dBc / Hz	
@ 100 Hz offset			-135	dBc / Hz	
@ 1,000 Hz offset			-145	dBc / Hz	
@ 10,000 Hz offset			-150	dBc / Hz	
@ 100,000 Hz offset			-150	dBc / Hz	
@ 1,000,000 Hz offset			-150	dBc / Hz	
Electrical Frequency Adjustment					
Control Voltage Range (Vc)	0.0		Vdd	Volts	
Frequency Pull Range	±0.7			ppm	
Frequency Pull Slope		Positive			
Control Voltage Port Impedance	10			kΩ	
Center Control Voltage	(Vdd/2) -0.5	Vdd/2	(Vdd/2) +0.5	Volts	

#### > OPTIONS AND PART IDENTIFICATION (Left blank if standard)



#### **OUTLINE DIMENSIONS**



Pin	Function		
1	Control Voltage		
2	Vref		
3	Supply Voltage		
4	RF-output		
5	Ground. Case		

**Dimensions: Inches (mm)** 

ABRACON IS ISO9001:2008 CERTIFIED



# SMD OVEN CONTROLLED CRYSTAL OSCILLATOR

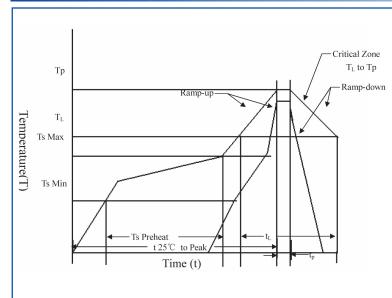






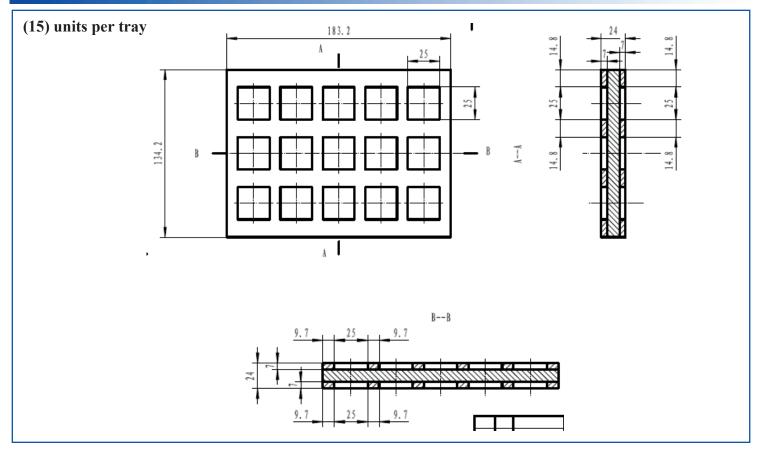
25.4 x 22.1 x 12.7 m m

#### > REFLOW PROFILE:



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

#### **PACKAGING:**



**ATTENTION:** Abracon Corporation's products are COTS – Commercial-Off-The-Shelf products; suitable for Commercial, Industrial and, where designated, Automotive Applications. Abracon's products are not specifically designed for Military, Aviation, Aerospace, Life-dependant Medical applications or any application requiring high reliability where component failure could result in loss of life and/or property. For applications requiring high reliability and/or presenting an extreme operating environment, written consent and authorization from Abracon Corporation is required. Please contact Abracon Corporation for more information.



