

# OVEN CONTROLLED CRYSTAL OSCILLATOR

AOCJY4 Series



36.1x 27.2 x 13mm

## FEATURES:

- 36.1x 27.2 x 13mm Leaded- RoHS Compliant Reflow-able Package
- SC-Cut, High "Q" resonator based design
- Either Sinewave or CMOS RF output
- Available with  $\pm 10$  ppb over  $-40^{\circ}\text{C}$  to  $+75^{\circ}\text{C}$  operating temperature Range
- Tighter Stabilities to  $\pm 2.0$  ppb over  $0^{\circ}\text{C}$  to  $+50^{\circ}\text{C}$  also available
- Exceptional long-term Aging of  $\pm 500$  ppb max. over 10-Year Product Life
- Excellent close-in phase noise ( $-140$  dBc/Hz Typical @100 Hz offset; 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					
Frequency	10.00		40.00	MHz	Overall Frequency range
Standard Available Frequencies	10.00, 12.80, 13.00, 26.00, 38.88, 40.00 MHz				
Waveform	CMOS				
Level "1" (Logic High)	4.50			Volts	
Level "0" (Logic Low)			0.50	Volts	
Load		15		pf	
Rise & Fall Time			6.0	ns	
Duty Cycle	45		55	%	
Waveform	Sinewave				
Peak Power	2.00			dBm	
Output Load		50		$\Omega$	
Short Term Stability		$1 \times 10^{-10}$		/second	Alan Variance
Operable Temperature Range	-40		75	$^{\circ}\text{C}$	See Stability Options
Frequency Stability Options					
0 $^{\circ}\text{C}$ to +50 $^{\circ}\text{C}$ (Note #1)			$\pm 2.00$	ppb	Default Spec.
-20 $^{\circ}\text{C}$ to +70 $^{\circ}\text{C}$			$\pm 10.00$	ppb	Option "E"
-40 $^{\circ}\text{C}$ to +75 $^{\circ}\text{C}$			$\pm 10.00$	ppb	Option "F"
Frequency Stability vs. Supply Voltage (Vdd $\pm 5\%$ )			$\pm 1.00$	ppb	
Frequency Stability vs. Load Variation ( $\pm 10\%$ )			$\pm 1.00$	ppb	
Warm-Up @ 25 $^{\circ}\text{C}$			$\pm 100.00$	ppb	In $\leq 3$ -minutes
Power Consumption @ turn on			4.00	Watts	
Power Consumption Steady State			1.50	Watts	
Supply Voltage (Vdd)	4.75	5.00	5.25	Volts	See Options

**Note #1:**  $\pm 2.00$  ppb stability is only available for  $F_0 \leq 13$  MHz. For frequencies above 13 MHz, the best available frequency stability is  $\pm 10.00$  ppb over  $-20^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$  & over  $-40^{\circ}\text{C}$  to  $+75^{\circ}\text{C}$

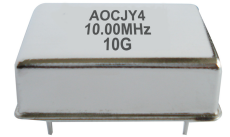


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AOCJY4 Series



RoHS  
Compliant



36.1x 27.2 x 13mm

STANDARD SPECIFICATIONS - continued.

Parameters	Minimum	Typical	Maximum	Units	Notes
<b>Aging</b>					
Daily			±1.0	ppb	
First Year			±100	ppb	
10-Years			±500	ppb	
<b>Spectral Content</b>					
Spurious Response			-35	dBc	
<b>Phase Noise (10MHz Carrier) @ 5V</b>					
@ 1 Hz offset			-90	dBc	
@ 10 Hz offset			-120	dBc	
@ 100 Hz offset			-140	dBc	
@ 1,000 Hz offset			-145	dBc	
@ 10,000 Hz offset			-150	dBc	
<b>Electrical Frequency Adjustment</b>					
Control Voltage Range (Vc)	0.0		5.00	Volts	
Frequency Pull Range	±0.700			ppm	
Frequency Pull Slope		Positive			
Control Voltage Port Impedance	10			kΩ	
Center Control Voltage	2.00	2.50	3.00	Volts	
Control Port Linearity		±10		%	
Reference Voltage (Vdd=5.0V)	4.40	4.50	4.60	Volts	Output @ Pin#2
Reference Voltage (Vdd=12.0V)	4.90	5.00	5.10	Volts	Output @ Pin#2
Storage Temperature	-40		+100	°C	

AOCJY4 - [ ] - [ ] MHz - [ ] [ ] [ ]

Supply Voltage Option	
A	5.00V
B	12.00V

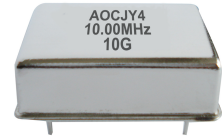
Temperature Options	
E	-20°C to +70°C
F	-40°C to +75°C

Frequency in MHz	
Such as;	10.000 MHz
	26.000 MHz
	40.000 MHz

RF Output Options	
Blank	CMOS
SW	Sinewave



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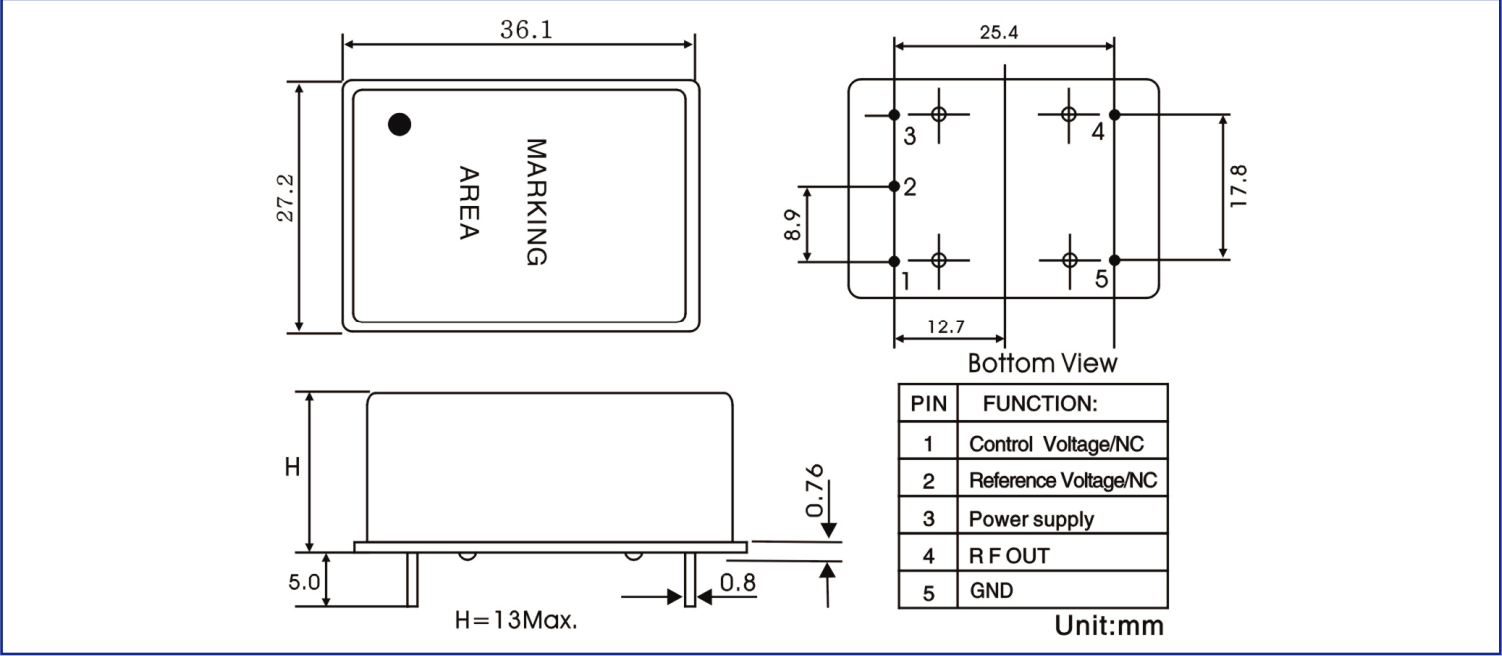


36.1x 27.2 x 13mm

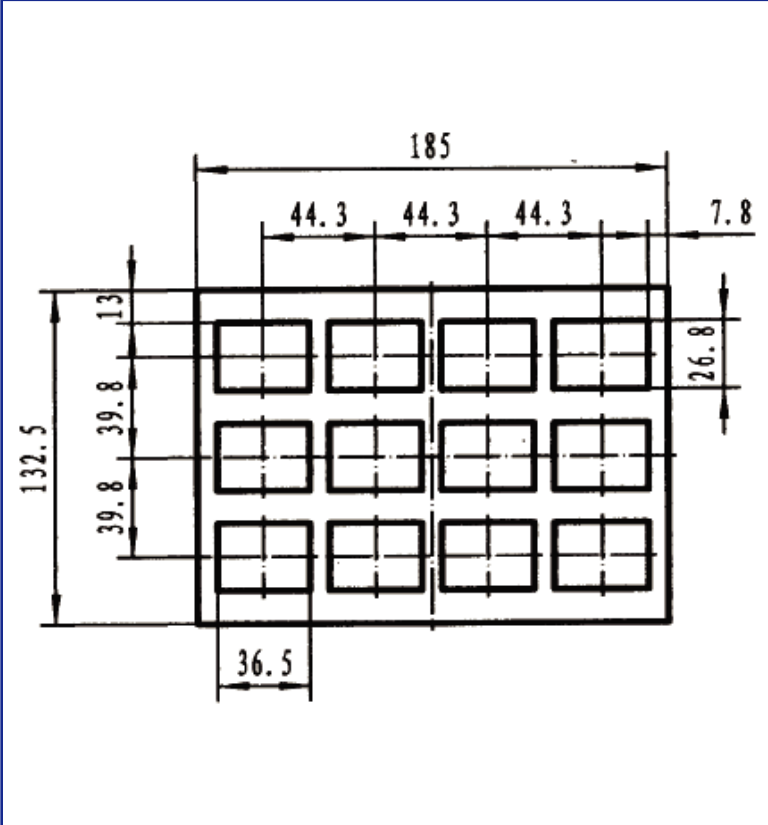
AOCJY4 Series

**Pb** RoHS Compliant

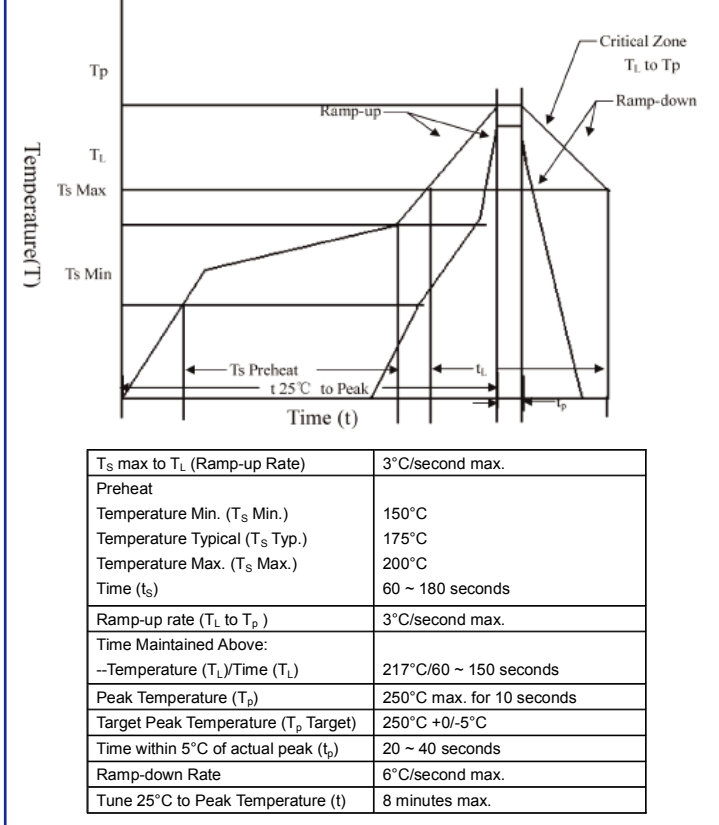
## OUTLINE DIMENSIONS



## PACKAGING: 12 pcs/tray



## REFLOW PROFILE:



**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.

ABRACON IS ISO9001:2008 CERTIFIED



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