



PLETRONICS OLA5008-10.0M OCXO Oscillator



OLA5 Series
25.4 x 25.4 x 12.7 mm
5 Pin Metal Package

Features

- Ultra Low Phase Noise
- Hermetically Sealed Package
- 5.0V nominal Supply Voltage
- 10.0 MHz Frequency
- Voltage control function
- Low Power Consumption, Fast Warm Up Time

Applications

SONET / SDH / DWDM
Test & Measurement
Telecom Transmission & Switching Equipment
Base Stations / Picocell
Wireless Communication Equipment

Electrical Characteristics

Parameter	Min	Typ	Max	Unit	Condition
Frequency	-	10	-	MHz	
Frequency Stability vs Temperature	-	-	±3	ppb	-40 to +85°C
Frequency Stability vs Supply	-	-	±0.5	ppb	± 5% voltage change
Frequency Stability vs Load	-	-	±0.5	ppb	± 5% load change
Short Term	-	-	0.05	ppb	root Allan variance τ=1 sec
Warm-up	-	-	±10	ppb	In 10 minutes @ +25°C, referenced to 1 hour
Aging	-	-	±0.5	ppb	At time of shipment
	-	-	±0.5	ppb	per day after 30 days
	-	-	±50	ppb	per year
	-	-	±0.3	ppm	10 years
Initial Calibration	-	-	±0.1	ppm	After turn on 15±1minutes @25°C±1, ≤90 days following date code, Vcontrol = 2.5V ± 0.001V
Operating Temperature Range	-40	-	+85	°C	
Supply Voltage ¹ V _{CC}	4.75	5.0	5.25	V	
Control Voltage	0	2.5	5	V	Input Impedance 100kohms min
Pullability	±0.5	-	-	ppm	Referenced to frequency at nominal center voltage
Linearity	-	-	±10	%	Slope positive
Input Power	-	-	800	mA	Warm up
	-	-	1.3	W	Steady state
Phase Noise	1 Hz	-95	-90	dBc/Hz	
	10 Hz	-125	-120		
	100 Hz	-140	-135		
	1 kHz	-148	-145		
	10 kHz	-152	-150		
Storage Temperature Range	-55	-	105	°C	

Output

Parameter	Min	Typ	Max	Unit	Condition
Output Waveform	Sinewave				
Level	+6	+8	+10	dBm	
Harmonics	-	-	-30	dBc	
Spurious	-	-	-60	dBc	
Load	-	50	-	Ω	± 5%

Note: ¹ Place a 10nF power supply bypass capacitor next to device for correct operation



Device Marking

PLE
OLA5008
10.0M
YMDz
S/N: xxx

PLE = Pletronics
OLA5008 = Model number/Part number
10.0M = Frequency (M = MHz)
YMD = Date code (Year-Month-Day: See Table below)
z = Internal Factory Code
S/N: xxx = Serial number

Specifications such as part number, frequency stability, supply voltage and operating temperature range, etc. are not identified from marking. External packaging labels and packing list will correctly identify the ordered Pletronics part number.

Codes for Date Code YMD (Year Month Day)

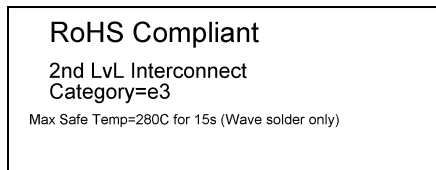
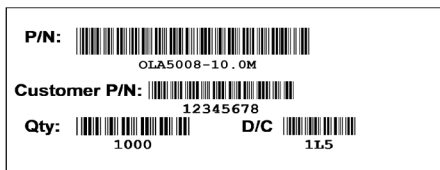
Code	2	3	4	5	6	Code	A	B	C	D	E	F	G	H	J	K	L	M
Year	2022	2023	2024	2025	2026	Month	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC

Code	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	T	U	V	W	X	Y	Z
Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

Package Labeling

P/N Label is 1" x 2.6" (25.4mm x 66.7mm)
Font is Courier New
Bar code is 39-Full ASCII

RoHS Label is 1" x 2.6" (25.4mm x 66.7mm)
Font is Arial



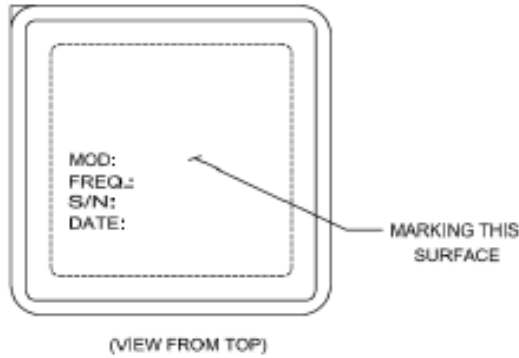
Pletronics Inc. certifies this device is in accordance with the RoHS (by exemption 6c, 7a, 7c-i) and REACH directives.
Pletronics Inc. guarantees the device does not contain the following: Cadmium, Hexavalent Chromium, Mercury, PBB's, PBDE's
Moisture Sensitivity Level: 1 As defined in J-STD-020D
Second Level Interconnect code: e3

Environmental

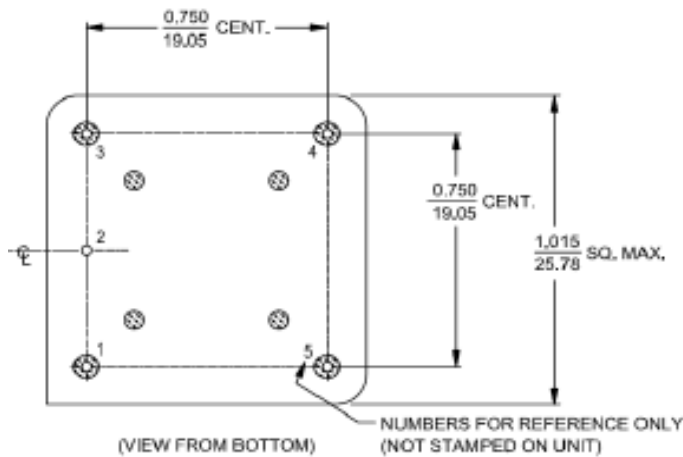
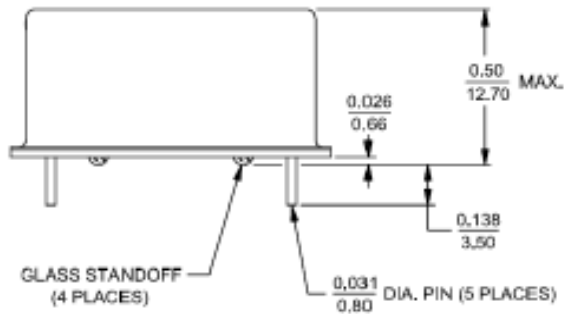
Reliability: Environmental Compliance

Parameter	Ref Standard	Condition
Humidity	MIL-STD-202, Method 103, Test Condition A	95% RH@ +40°C, non-condensing, 240 hours
Mechanical Shock (non-operating)	MIL-STD-202, Method 213 Test Cond J	30g, 11ms, half-sine
Vibration (non--operating)	MIL-STD-202, Method 201	0.06" Total p-p, 10 to 55 Hz

Mechanical Dimensions / Pin Connections



PIN CONNECTIONS	
PIN	FUNCTION
1	R. F. OUTPUT
2	0 VOLTS & CASE
3	VCO INPUT
4	NOT CONNECTED
5	+VDC



TOLERANCES:
UNLESS OTHERWISE SPECIFIED:
ANGLES: ± 1 DEGREE
FRACTIONS: $\pm 1/32$ INCH
DECIMALS: .XX ± 0.015 , .XXX ± 0.010 INCH
INCH
mm (REFERENCE ONLY)

For Optimum Jitter Performance, Pletronics recommends:

- A ground plane under the device
- Do not route large transient signals (both current and voltage) under the device
- Do not place near a large magnetic field such as a high frequency switching power supply
- Do not place near piezoelectric buzzers or mechanical fans
- Minimize air flow across the device



Important Notice

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