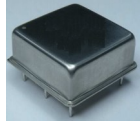




PLETRONICS OSA5 Series HCMOS OCXO



OSA5 Series
25.4 x 25.4 x 12.7 mm
5 Pin Metal Package

Features

- Ovenized Quartz Crystal High Precision Square Wave Generator
- HCMOS Output
- 3.3V nominal Supply Voltage
- 5.0MHz - 40MHz Frequency Range
- Voltage control option available
- SC Cut crystal

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	5	-	40	MHz	Standard frequencies are 10, 12.8, 13, 15.36, 19.2, 20, 25, 38.88MHz
Frequency Stability vs Temperature	±5	-	±10	ppb	±3ppb available over temp range 0 to 70°C
Frequency Stability vs Supply	-	-	±0.5	ppb	±5% voltage change
Warm-up	-	-	±10	ppb	In 10 minutes @ +25°C, referenced to 1 hour
Aging	-	-	±0.5	ppb	per day at time of shipment
	-	-	±50	ppb	per year
	-	-	±0.3	ppm	10 years
Operating Temperature Range	-40	-	+85	°C	
Supply Voltage ¹ V _{CC}	3.135	3.3	3.465	V	5.0V input voltage available
Current	-	-	1000	mA	@turn on
Steady State	-	-	1.3	W	@ 25°C
Spurious	-	-	-60	dBc	
Phase Noise	10 Hz 100 Hz 1 kHz 10 kHz	-120 -135 -145 -150	-	dBc/Hz	
Vcontrol Range (with Vc option)	0	1.65	3.3	V	
Pullability (with Vc option)	±0.5	-	-	ppm	Slope positive
Vcontrol Input Impedance	100	-	-	kΩ	
Reference Voltage (Optional)	+2.7	+2.8	+2.9	V	
Reference Voltage Load	9	-	-	kΩ	
Storage Temperature Range	-55	-	+125	°C	

HCMOS

Parameter	Min	Typ	Max	Unit	Condition
Output Waveform	Squarewave				Sinewave output is available
"1" Level	2.4	-	-	V	
"0" Level	-	-	0.4	V	
Load	-	15	-	pF	
Duty Cycle	45	50	55	%	@+1.65V

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



Device Marking

PLE
OSA5xxx
xx.xxM
YMDz
S/N: xxx

PLE = Pletronics
OSA5xxx = Model number/Part number*
xx.xxM = Frequency (M = MHz)
YMD = Date code (Year-Month-Day: See Table below)
z = Internal Code
S/N: xxx = Serial number

* A unique number is assigned for your exact specifications.

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	3	4	5	6	7	Code	A	B	C	D	E	F	G	H	J	K	L	M
Year	2023	2024	2025	2026	2027	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

P/N:	
OSA5001-10.0M	
Customer P/N:	
12345678	
Qty:	
1000	
D/C:	
9DW	
MSL: 1	

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

Font is Arial

RoHS Compliant
2nd Lvl Interconnect
Category=e3
Max Safe Temp=280C for 15s (Wave solder only)

Pletronics Inc. certifies this device is in accordance with the RoHS (exemption 7a) 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

Product Weight: 12g

Environmental / ESD Ratings

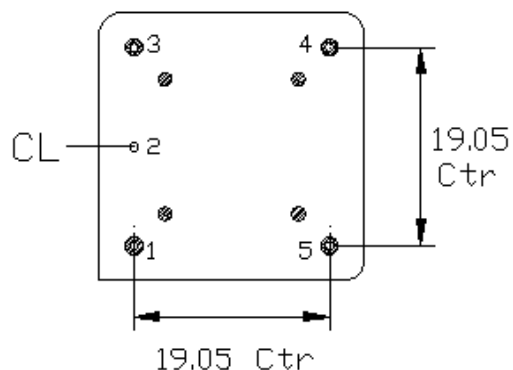
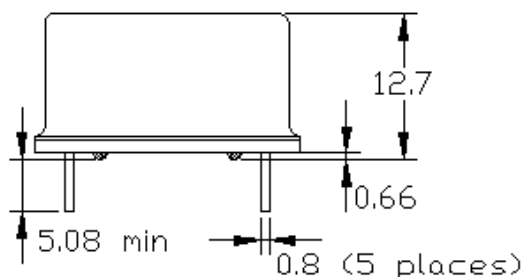
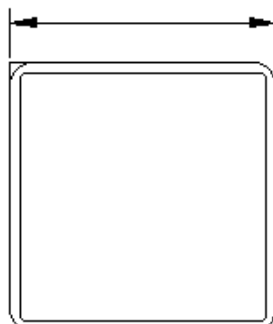
Reliability: Environmental

Parameter	Ref Standard	Condition
Solderability	MIL-STD-202, Method 208	
Mechanical Shock	MIL-STD-202, Method 213 Test Cond J	30g, 11ms, half-sine
Vibration	MIL-STD-202, Method 201	1.52mm p-p Total, 10 to 55 Hz
Thermal Shock	MIL-STD-202, Method 107 Test Cond B	5 cycles -65 to +125°C

Model	Min Voltage
Human Body Model	2000V
Machine Model	200V

Mechanical Dimensions

25.78 SQ max



Pin#'s for reference only, not
stamped on part
Dimensions in mm

PIN CONNECTIONS

PIN	FUNCTION
1	Output
2	Ground/Case
3	Vc Input
4	Not Connected
5	Vcc

Termination coating: Sn plated

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

Pletronics Incorporated (PLE) reserves the right to make corrections, improvements, modifications and other changes to this product at anytime. PLE reserves the right to discontinue any product or service without notice. Customers are responsible for obtaining the latest relevant information before placing orders and should verify that such information is current and complete. All products are sold subject to PLE's terms and conditions of sale supplied at the time of order acknowledgment.

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