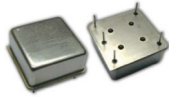




# PLETRONICS OSP5xxx-xx.xxM OCXO Oscillator



OSP5 Series  
20.6 x 20.6 x 11.0 mm  
5 Pin Metal Package

## Features

- Pletronics' OSP5 Series Ovenized Quartz Crystal High Precision Square Wave Generator
- 5.0V 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, 16.384, 19.2, 20, and 25MHz
Frequency Stability vs Temperature	±10	-	±20	ppb	±5ppb available over temp range 0 to 70°C
Frequency Stability vs Supply	-0.5	-	+0.5	ppb	±5% voltage change
Warm-up	-50	-	+50	ppb	In 3 minutes @ +25°C, referenced to 1 hour
Aging	-0.5	-	+0.5	ppb	per day at time of shipment
	-50	-	+50	ppb	per year
	-0.3	-	+0.3	ppm	10 years
Operating Temperature Range	-40	-	+85	°C	
Supply Voltage <sup>1</sup> V <sub>CC</sub>	4.75	5.0	5.25	V	3.3V input voltage available
Current	-	-	500	mA	@turn on
Steady State	-	-	1.0	W	@ 25°C
Spurious	-	-	-60	dBc	
Phase Noise					
10 Hz		-115			
100 Hz		-135			
1 kHz	-	-145	-	dBc/Hz	
10 kHz		-150			
Storage Temperature Range	-55	-	+125	°C	
V <sub>control</sub> Range	0	2	4	V	
Pullability	±0.5	-	-	ppm	Slope positive
Input Impedance	100	-	-	kΩ	
Reference Voltage	3.8	4.0	4.2	V	
Load	9	-	-	kΩ	

## HCMOS

Parameter	Min	Typ	Max	Unit	Condition
Output Waveform	HCMOS				Sinewave output is not available
"1" Level	3.5	-	-	V	
"0" Level	-	-	0.5	V	
Load	-	15	-	pF	
Duty Cycle	45	50	55	%	@+2.0V

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



# PLETRONICS OSP5xxx-xx.xxM OCXO Oscillator

## Device Marking

PLE  
OSP5xxx  
xx.xxM  
YMDz  
S/N: xxx

PLE = Pletronics  
OSP5xxx = Model number/Part number\*  
xx.xxM = Frequency (M = MHz)  
YMD = Date code (Year-Month-Day: See Table below)  
z = Internal Factory 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)

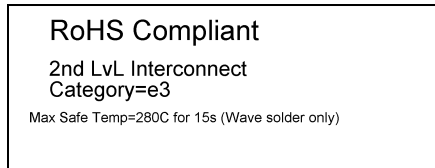
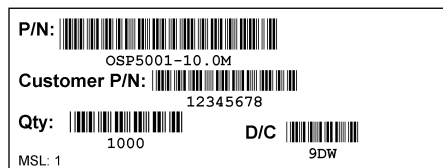
Code	9	0	1	2	3	Code	A	B	C	D	E	F	G	H	J	K	L	M
Year	2019	2020	2021	2022	2023	Month	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC

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 2 (2011/65/EU) and WEEE (2002/96/EC) directives.**  
Pletronics Inc. guarantees the device does not contain the following: Cadmium, Hexavalent Chromium, Lead, Mercury, PBB's, PBDE's  
Moisture Sensitivity Level: 1 As defined in J-STD-020D  
Second Level Interconnect code: e3

## Environmental / ESD Ratings

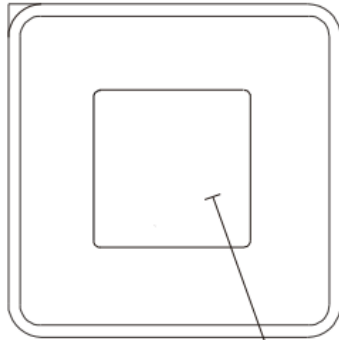
Reliability: Environmental Compliance

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	0.06" Total p-p, 10 to 55 Hz
Thermal Shock	MIL-STD=202, Method 107 Test Cond B	5 cycles -65 to +125 Deg C

Model	Min Voltage
Human Body Model	2000V
Charged Device Model	500V
Machine Model	200V

## Mechanical Dimensions

[TOP VIEW]

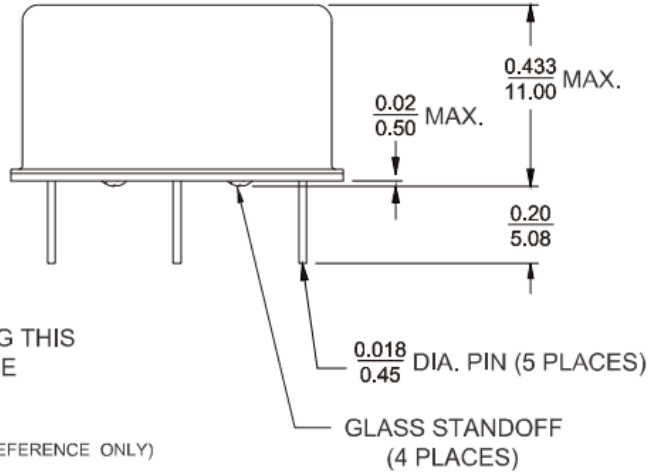


MARKING THIS SURFACE

TOLERANCES  
UNLESS OTHERWISE SPECIFIED:  
ANGLES:  $\pm 1$  DEGREE  
FRACTIONS:  $\pm 1/32$  INCH  
DECIMALS:  $.XX \pm 0.015, .XXX \pm 0.010$  INCH

$\frac{\text{INCH}}{\text{mm}}$  (REFERENCE ONLY)

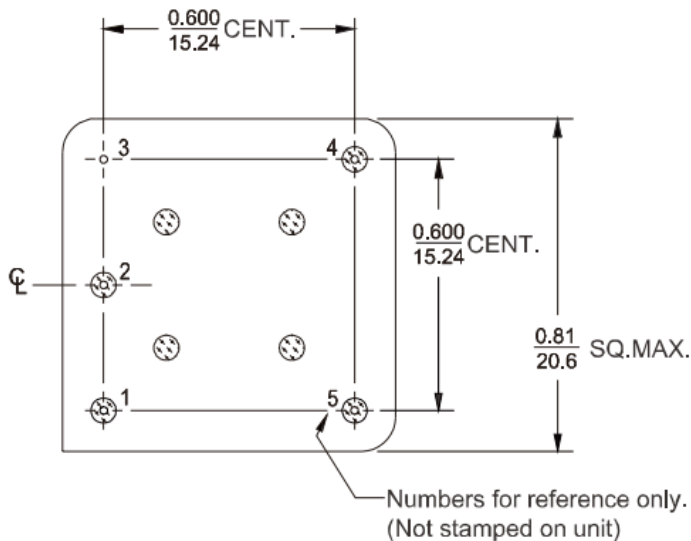
[SIDE VIEW]



0.018  
0.45 DIA. PIN (5 PLACES)

GLASS STANDOFF  
(4 PLACES)

[BOTTOM VIEW]



Numbers for reference only.  
(Not stamped on unit)

PIN CONNECTIONS		PIN CONNECTIONS	
PIN	FUNCTION	PIN	FUNCTION
1 (See Note 1)	VCO INPUT or NOT CONNECTED	1	+VDC
2 (See Note 1)	REFERENCE VOLTAGE or NOT CONNECTED	2	R. F. OUTPUT
3	0 VOLTS & CASE	3	0 VOLTS & CASE
4	R. F. OUTPUT	4 (See Note 1)	VCO INPUT or NOT CONNECTED or R.F.ENABLE
5	+VDC	5 (See Note 1)	REFERENCE VOLTAGE or NOT CONNECTED or OVEN MONITOR

Note:

1. If the specification does not specify parameters for either PIN1 or PIN2 (PIN4 or PIN5) then that respective PIN is NOT internally CONNECTED.

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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