PLETRONICS OSI5 Series OCXO Oscillator

OSI5 Series
36.3 x 27.2 x 12.7 mm
5 Pin Metal Package

Features

- Ovenized Quartz Crystal High Precision Square Wave Generator
- LVTTL Output
- 5.0V nominal Supply Voltage
- 5.0MHz - 40MHz Frequency Range
- Voltage control option available

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	
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}	4.75	5.0	5.25	V	3.3V input voltage available
Current	-	-	850	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	
Storage Temperature Range	-55	-	+125	°C	
Vcontrol Range	0	2.5	5.0	V	
Pullability	±0.5	-	-	ppm	Slope positive
Input Impedance	100	-	-	kΩ	

HCMOS

Parameter	Min	Typ	Max	Unit	Condition
Output Waveform		LVTTL			Sinewave output is available
"1" Level	2.4	-	-	V	
"0" Level	-	-	0.4	V	
Load	-	15	-	pF	
Duty Cycle	45	50	55	%	@+1.4V

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

Device Marking

PLE
OSI5*xxx*
*xx.xx*M
YMDz
S/N: *xxx*

PLE = Pletronics
OSI5*xxx* = Model number/Part number*
*xx.xx*M = 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 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)

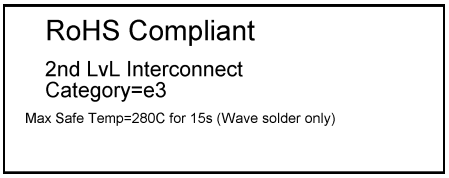
Code	3	4	5	6	7	Code	A	B	C	D	E	F	G	H	J	K	L	M
Year	2023	2024	2025	2026	2027	Month	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC

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

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 (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

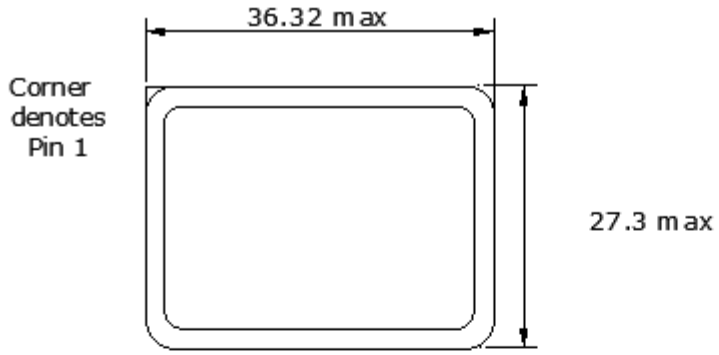
Environmental / ESD Ratings

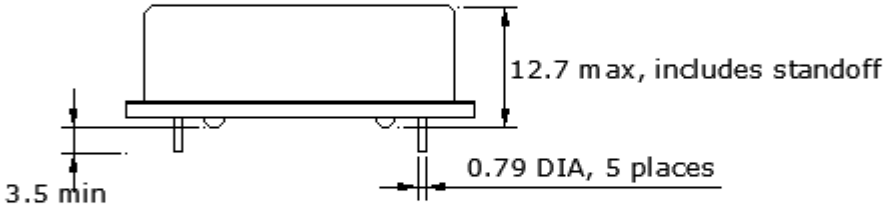
Reliability: Environmental

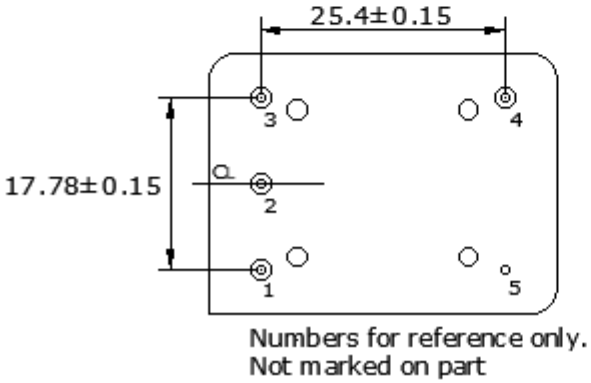
Parameter	Ref Standard	Condition
Solderability	MIL-STD-202, Method 208	
Mechanical Shock	MIL-STD-202, Method 213 Test Cond J	30g, 11ms, half-sine
Vibration	MIL-STD-202, Method 201	0.06" Total p-p, 10 to 55 Hz
Thermal Shock	MIL-STD=202, Method 107 Test Cond B	5 cycles –65 to +125 Deg C

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

Mechanical Dimensions







PIN CONNECTIONS

Pin	Function
1*	Vc input or N.C.
2*	Ref Voltage or N.C.
3	Vcc
4	Output
5	Ground/Case

* If not specified in parameters then 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

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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Pletronics:

OSI5003-10.0M OSI5004-10.0M OSI5005-10.0M OSI5006-10.0M OSI5007-10.0M OSI5008-10.0M OSI5009-10.0M