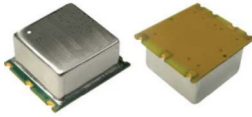




PLETRONICS OSJ7xxx-xx.xxM OCXO Oscillator



OSJ7 Series
25.4 x 22.1 x 11.0 mm
7 Pad SMD Package

Features

- Pletronics' OSJ7 Series 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, 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	-10	-	+10	ppb	In 2 minutes @ +25°C, referenced to 1 hour
Aging	-0.5	-	+0.5	ppb	per day at time of shipment
	-50	-	+50	ppb	per year
	-0.4	-	+0.4	ppm	10 years
Operating Temperature Range	-40	-	+85	°C	
Supply Voltage ¹ V _{CC}	3.135	3.30	3.465	V	5.0V input voltage available
Current	-	-	1000	mA	@turn on
Steady State	-	-	1.2	W	@ 25°C
Spurious	-	-	-60	dBc	
Phase Noise					
10 Hz		-115			
100 Hz		-130			
1 kHz	-	-140	-	dBc/Hz	
10 kHz		-150			
Storage Temperature Range	-55	-	+125	°C	
V _{control} Range	0	1.4	2.8	V	
Pullability	±0.5	-	-	ppm	Slope positive
Input Impedance	100	-	-	kΩ	
Reference Voltage	2.7	2.8	2.9	V	
Load	9	-	-	kΩ	

HCMOS

Parameter	Min	Typ	Max	Unit	Condition
Output Waveform	HCMOS				Sinewave output is available
"1" Level	2.4	3.3	-	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



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Device Marking

PLE
OSJ7xxx
xx.xxM
YMDz
S/N: xxx

PLE = Pletronics
OSJ7xxx = 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)

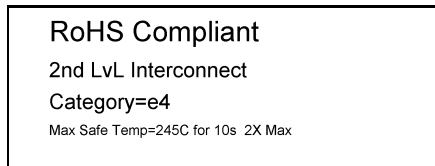
Code	9	0	1	2	3	Code	A	B	C	D	E	F	G	H	J	K	L	M
Year	2019	2020	2021	2022	2023	Month	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC

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

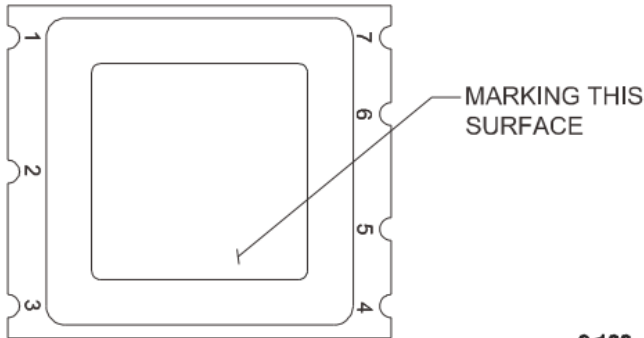
Reliability: Environmental Compliance

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

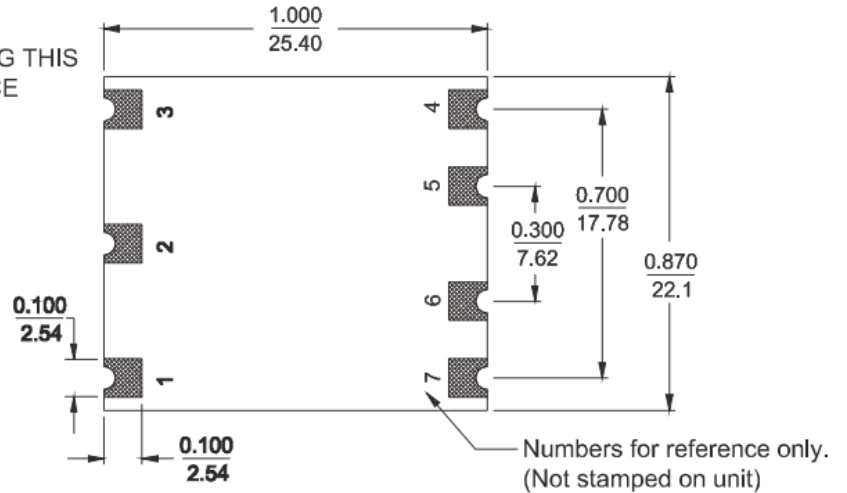
[TOP VIEW]



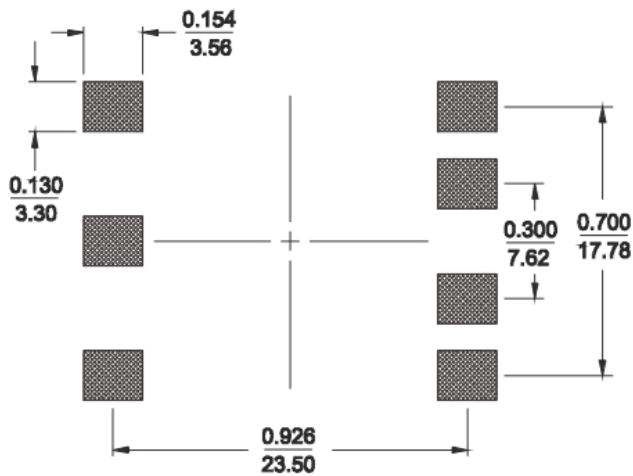
SIDE VIEW



[BOTTOM VIEW]



[RECOMMENDED SOLDER PAD LAYOUT]



PIN CONNECTIONS	
PIN	FUNCTION
1 (See Note 1)	VCO INPUT or NOT CONNECTED
2 (See Note 1)	REFERENCE VOLTAGE or NOT CONNECTED
3	+VDC
4	R. F. OUTPUT
5 (See Note 1)	OVEN MONITOR or NOT CONNECTED
6	NOT CONNECTED
7	0 VOLTS & CASE

Note :

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

TOLERANCES

UNLESS OTHERWISE SPECIFIED:

ANGLES: ±1 DEGREE

FRACTIONS: ±1/32 INCH

DECIMALS: .XX±.015, .XXX±.010 INCH

$\frac{\text{INCH}}{\text{mm}}$ (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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Contacting Pletronics Inc.

Pletronics, Inc.
19013 36th Ave. West
Lynnwood, WA 98036-5761

Tel: 425.776.1880
Fax: 425.776.2760
email: ple-sales@pletronics.com