



LP490068-3.6864M Low Profile Crystal

June 2017

- The Pletronics' LP49 Series is a low profile thru-hole crystal
- Bulk packaging
- Insulator
- 3.6864 MHz
- HC-49/US
- AT Cut Fundamental Mode Crystal
LP49 0.140 (3.56mm) high

Pletronics Inc. certifies this device is in accordance with the RoHS (2011/65/EC) and WEEE (2002/96/EC) directives.

Pletronics Inc. guarantees the device does not contain the following:

Cadmium, Hexavalent Chromium, Lead (<1000 ppm), Mercury, PBB's, PBDE's

Weight of the Device: 0.62 grams

Moisture Sensitivity Level: 1 As defined in J-STD-020C

Second Level Interconnect code: e1, e2 or e3

Electrical Specification with insulator:

Item	Min	Typical	Max	Unit	Condition
Frequency	-	3.6864	-	MHz	AT cut
Calibration Frequency Tolerance	-50	-	+50	ppm	at +25°C ± 3°C
Frequency Stability over OTR	-50	-	+50	ppm	
Load Capacitance	-	20	-	pF	
Equivalent Series Resistance (ESR)	-	-	130	Ohms	Fundamental Mode
Drive Level	-	-	100	µW	use 10 µW for testing
Shunt Capacitance (C0)	-	-	7	pF	Pin to Pin capacitance
Operating Temperature Range	-20	-	+70	°C	
Storage Temperature Range	-55	-	+125	°C	

Reliability: Environmental Compliance

Parameter	Condition
Mechanical Shock	MIL-STD-883 Method 2002, Condition B
Vibration	MIL-STD-883 Method 2007, Condition A
Solderability	MIL-STD-883 Method 2003
Thermal Shock	MIL-STD-883 Method 1011, Condition A

Package Labeling

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

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

P/N:  LP490068-3.6864M Customer P/N:  12345678 Qty:  1000 D/C  6GX-WY MSL: 1
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RoHS Compliant 2nd LvL Interconnect Category=e1 Max Safe Temp=260C for 10s 2X Max

RoHS Compliant 2nd LvL Interconnect Category=e3 Max Safe Temp=260C for 10s 2X Max

RoHS Compliant 2nd LvL Interconnect Category=e2 Max Safe Temp=260C for 10s 2X Max

Part Marking:

2G03686Pymdz

Legend:

- 2 = Model code for LP49
- G = 20 pF Capacitance load
- 03686 = 3.6864 MHz Frequency
- P = Pletronics
- ymd = Date of Manufacture (year, month and day)
- All other marking is internal factory codes

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

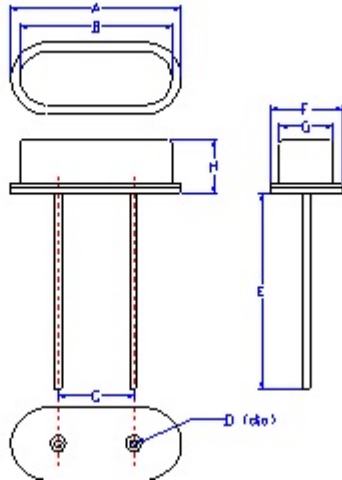
Codes for Date Code YMD

Code	3	4	5	6	7	8	9
Year	2013	2014	2015	2016	2017	2018	2019

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

Mechanical:



	Inches	mm
A	0.425 max	10.80 max
B	0.404	10.26
C	0.192	4.88
D	0.017 dia	0.43 dia
E	0.500 min	12.7 min
F	0.176 max	4.47 max
G	0.145	3.68
H	0.140 max	3.56 max

Contacts (3 types of lead plating used):

Matte Tin (Sn)

Tin over Copper (SnCu)

SAC (SnAgCu)

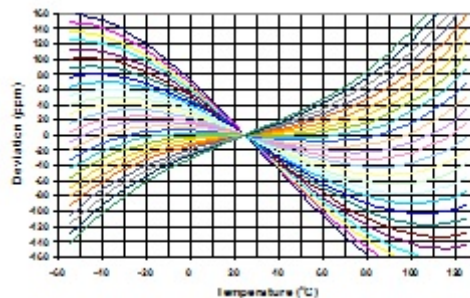
Not to Scale

¹ Typical dimensions

Layout and application information

- Trace lengths to the crystal should be kept as short as possible.
- The crystal connections are sensitive to noise.
- The package should be grounded for optimum performance.

AT Cut Crystal Frequency versus Temperature Typical Performance:



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