



# SPECIFICATION FOR EXTENDED TEMPERATURE SMT OSCILLATOR MtronPTI P/N M2002T122

### **Electrical Specifications:**

Parameter	Symbol	Min.	Тур.	Max.	Units	Conditions
Frequency of Operation	Fo		30.000000		MHz	
Frequency Stability	ΔF/F	-100		+100	ppm	Inclusive of initial tolerance at +25°C, deviation over temperature, variations due to shock, vibration, load, voltage and 1 <sup>st</sup> year aging at +25°C.
Operating Temperature	TA	-55		+125	°C	
Storage Temperature	Ts	-55		+125	°C	
Aging		-5		+5	ppm	Per year
Operating Voltage	V <sub>dd</sub>	3.135	3.3	3.465	V	
Operating Current	l <sub>dd</sub>			20	mA	
Output Type		HCMOS/TTL Compatible				
Output Load				15/10	pF/TTL	
Symmetry		45		55	%	Ref. to 1/2 V <sub>dd</sub>
Logic "1" Level	Vон	90% V <sub>DD</sub>			V	
Logic "0" Level	V <sub>OL</sub>			10% V <sub>DD</sub>	V	
Output Current	Іон			-8	mA	
	IOL			+8	mA	
Rise/Fall Time				3	nS	10% to 90% Waveform
Tri-State Function		80% V <sub>DD</sub> or N/C			V	Pad 1: Output Enabled
				20% V <sub>DD</sub>	V	Pad 1: Output Disabled to high-Z
Start-Up Time				5	mS	
Random Jitter			5	12	pS	1-Sigma

#### **Environmental & Mechanical Requirements:**

Mechanical Shock	Per MIL-STD-202, Method 213, Condition C
Vibration	Per MIL-STD-202, Method 201 & 204
Hermeticity	Per MIL-STD-202, Method 112 (1 x 10-8 atm cc/s of Helium)
Thermal Cycle	Per MIL-STD-883, Method 1010, Condition B
Solderability	Per EIAJ-STD-002
Max. Soldering Conditions	See solder profile, Figure 1
Package Type	4-pad 5.0 X 7.0 X 1.9 mm leadless ceramic. RoHS compliant.





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## Dimensions, Marking, and Pin Out Information:

Pad	Function	Par	t Marking	] [	Legend
1	Tristate	Line 1	M2002T122	уу	Year
2	Ground	Line 2	30M0000	ww	Work week
3	Output	Line 3	M yy ww vv	vv	Factory code
4	+V <sub>DD</sub>				
	0.276 ±0.008 (7.00 ±0.20) Bad 1 Designator Dad 1 Designator Creminations (4 place Tungsten base metal uischer Pickel follow	047 (1.20) TYP	0.055 (1.40) 0.102 TYP (2.60) TYP .01 mFd	0.200 (5.08) (5.	DER PAD LAYOUT 1 - 0.071 (1.80) 1 - 0.165 (4.20) 2.00)
	260°C 217°C 200°C 150°C 150°C PREHE 180 SECOND	3°C/SECOND MAX.			DOWN COND MAX.
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#### DATA SHEET REVISION TABLE:

Date	Rev.	Author	Details of Revision	
5/16/12	0	LEO	Original release.	
7/31/12	А	MM	Updated symmetry, rise/fall time and startup time specifications.	

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