

SPECIFICATION FOR 5x7mm CMOS SMT VCXO

MtronPTI P/N: M3027S005

Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Frequency of Operation	F _O	70.656000			MHz	
Frequency Stability						
Frequency Stability	ΔF/F	-20		+20		deviation vs. temperature, ref. to +25°C
Aging		-5		+5	ppm	1 st year
		-3		+3		Per year thereafter
RF Output						
Output Type		CMOS				
Output Load		15 pF CMOS load				
Symmetry (duty cycle)	T _{DC}	45		55	%	@ 50% Vdd
Logic “0” Level	V _{OL}			10% Vdd	V	
Logic “1” Level	V _{OH}	90% Vdd			V	
Rise/Fall Time	T _R /T _F			3.0	ns	10% to 90% Vdd
Start-up Time	T _{SU}			10	ms	T _{ambient} = +25°C
Tristate		Pin 2 high (70% Vdd min.) or NC				Clock signal output
		Pin 2 low (30% Vdd max.)				Output disabled to high Z
Frequency Adjustment						
Control Voltage		0.30	1.65	3.00	V	Pad 1
Absolute Pull Range	APR	-50		+50	ppm	Referenced to F _O , including tolerance at +25 °C, deviation over operating temperature, aging, shock, vibration, supply voltage
Modulation Bandwidth	f _m	10			kHz	-3 dB
Linearity				10	%	
Input Impedance	Z _{in}	100			kΩ	Pad 1
Supply Voltage & Power Consumption						
Operating Voltage	V _{CC}	3.000	3.300	3.600	V	
Supply Current	I _{CC}			30	mA	
Other Parameters						
Start-up Time	T _{SU}			10	ms	T _{ambient} = +25°C
Phase Noise			-126		dBc/Hz	1 kHz offset
			-146		dBc/Hz	10 kHz offset
			-157		dBc/Hz	100 kHz offset
			-160		dBc/Hz	1 MHz and greater offset

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Environmental & Packaging Requirements:

Operating Temperature	T _A	-40		+85	°C	
Storage Temperature	T _S	-55		+125	°C	
Mechanical Shock	Per MIL-STD-202, Method 213, Condition C (100 g's, 6 ms duration, ½ sinewave)					
Vibration	Per MIL-STD-202, Method 201 & 204 (10 g's from 10-2000 Hz)					
Thermal Cycle	Per MIL-STD-883, Method 1010, B (-55°C to 125°C, 15 min. dwell, 10 cycles)					
Hermeticity	Per MIL-STD-202, Method 112 (1 x 10 ⁻⁸ atm cc/s of Helium)					
Moisture Sensitivity Level	MSL1					
Solderability	Per EIAJ-STD-002, Method 208					
Max. Soldering Conditions	See solder profile, Figure 1					
Pad Termination	Gold, 1 µm maximum thickness					
Package Type	6-pad 5.0 X 7.0 mm leadless ceramic. RoHS compliant.					

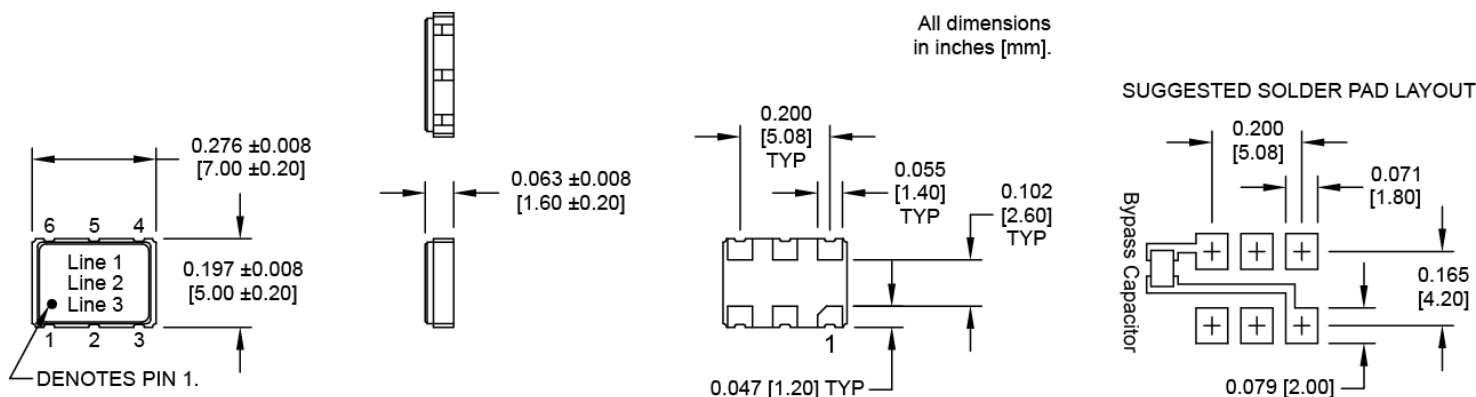
Marking and Pin Out:

Pad	Function
1	Control Voltage
2	Tristate Control
3	Ground
4	Output
5	N/C
6	+V _{CC}

Part Marking	
Line 1	M3027S005
Line 2	70M656
Line 3	M yy ww vv

Legend	
M	MtronPTI
yy	Year
ww	Work Week
vv	Factory code

Dimensions:



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Reflow Soldering Profile:

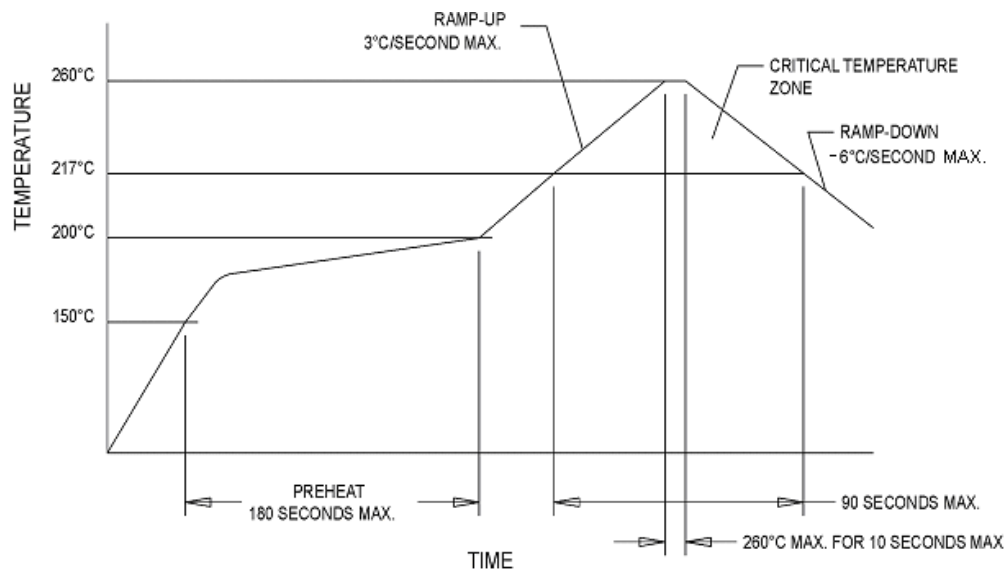


Figure 1

DATA SHEET REVISION TABLE:

Date	Rev.	Author	Details of Revision
09/18/17	0	DCO	Original release (RFQ)