



Specification for an SMD Stratum 3 TCXO M6071 Series

MtronPTI introduces the Stratum 3 M6071 series TCXO targeting SATCOM, TELECOM, and MILCOM applications. The M6071 series offers industry leading stability as low as $\pm 0.1\text{ppm}$ over temperature ranges as wide as -40°C to $+105^{\circ}\text{C}$.

Features: Superior Phase Noise

-97dBc/Hz @10Hz offset, measured at 38.88MHz

Applications: SATCOM, TELECOM, MILCOM,

Test & Measurement

Representative Performance Characteristics:

Frequency Range: 10 to 40 MHz

Frequency Tolerance: $\pm 4.6\text{ppm}$ max.

Stability vs. Temperature: $\pm 0.1\text{ppm}^*$

RF Output: CMOS or Clipped Sinewave

Rise/Fall Time: 6.5ns

Operating Voltage: 3.3V

Operating Current: 10mA

General Specifications:

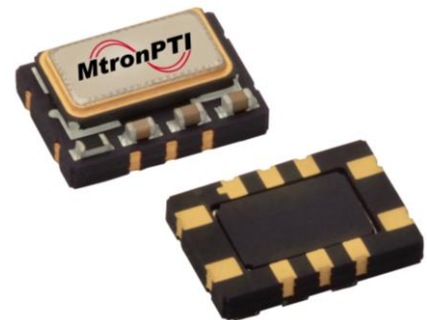
Operating Temperature: -55°C to $+105^{\circ}\text{C}^*$

Storage Temperature: -55°C to $+125^{\circ}\text{C}$

Size: 5.0 x 7.0 x 2.0mm, 10 Pad

RoHS Compliant

Hermetic Seal



*See ordering Table for additional stabilities & operating temperatures



Specification for an SMD Stratum 3 TCXO M6071 Series

Ordering Information

Product Series	Temperature Range		Stability		Output Type		Package/Lead Configuration		Frequency MHz
	Code	Value	Code	Value	Code	Value	Code	Value	Value
M6071	D	-10°C to +70°C	N	±0.10ppm	C	CMOS	N	10 Pad Leadless	10MHz to 40MHz
	2	-40°C to +85°C	S	±0.28ppm	S	Clipped Sinewave			
	3	-40°C to +105°C	G	±0.50ppm					
Sample Part No. M60712SCN 38.8800MHz	2		S		C		N		38.8800MHz

Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions	
Nominal Frequency	F_O	10		40	MHz		
Frequency Stabilities							
Frequency Tolerance				±4.6	ppm	Inclusive of initial tolerance, frequency vs. temperature, vs. supply voltage, vs. load, and aging	
vs. Temperature	$\Delta F_T/F_O$	See Ordering Information					
RF Output							
Output Type	CMOS or Clipped Sinewave						
Output Load	15pF 10kΩ//10pF					CMOS Output Clipped Sinewave Output	
Symmetry (duty cycle)	T_{DC}	40		60	%	Ref. to ½ V_{DD} CMOS Only	
Output Level	VOL	80		20	% V_{DD}	CMOS Output Clipped Sinewave	
	VOH	0.8			V_{PK-PK}		
Rise/Fall Time				6.5	ns	Ref. 20% to 80%. CMOS	
Enable		70% V_{CC}			V		
Disable				30% V_{CC}	V		
Temperature and Supply Voltage							
Operating Temperature	T_A	-40		+105	°C		
Storage Temperature	T_S	-55		+125	°C		
Operating Voltage	V_{DD}	3.135	3.3	3.465	V		
Operating Current				10	mA		

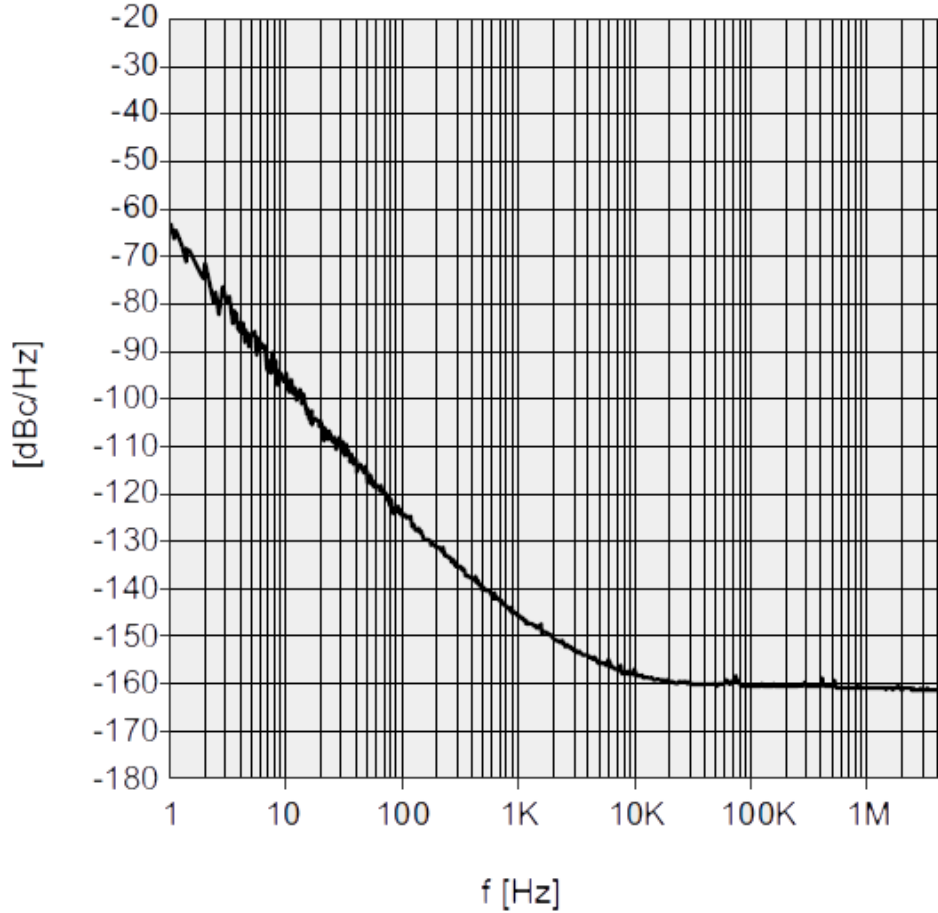
Environmental Conditions:

RoHS	RoHS Compliance
Seal	Hermetic



Specification for an SMD Stratum 3 TCXO M6071 Series

Phase Noise Plot at 38.88MHz



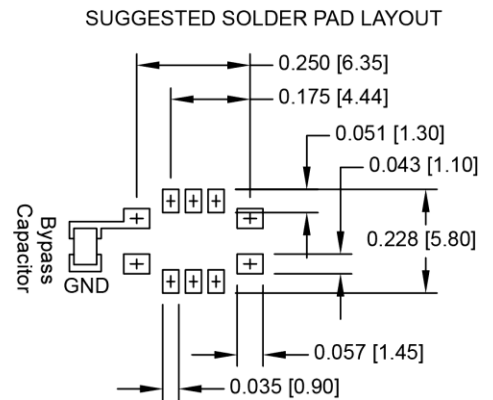
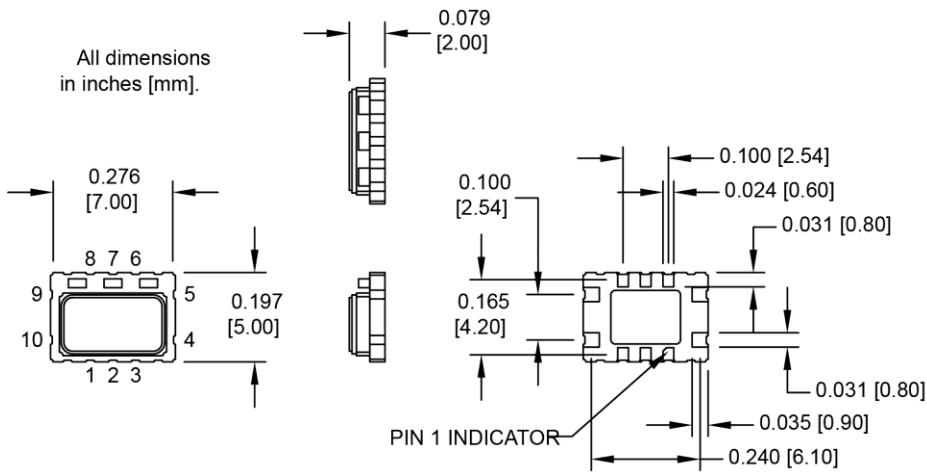


Specification for an SMD Stratum 3 TCXO M6071 Series

Mechanical, Marking and Layout Information:

Dimensions: 5.0 x 7.0 x 2.0mm

Pin	Function
1,6	Do not connect
2,3,7	N/C
4	GND
5	Output
8	Enable/Disable
9*	V _{CC}
10	V _{CONT}



*0.01μF Bypass Capacitor should be connected near the V_{CC} terminal

Date	Rev.	Author	Details of Revision
03-24-20	A	BRR	Original Release