

# SX2050 Surface Mount Crystals

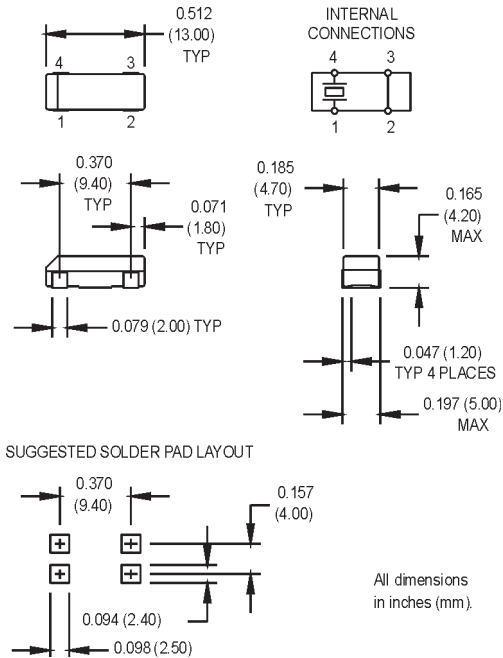


**THIS PRODUCT IS NOT RECOMMENDED FOR NEW DESIGNS.**



**\*SX2050-R 00.0000 MHz** (customer specified)  
 -R signifies RoHS compliant part  
 M1011Sxxx - Contact factory for datasheet

Equivalent Series Resistance (ESR), Max.	Sx2050
Fundamental (AT-cut)	
3.579 to 3.999 MHz	200 Ω
4.000 to 4.499 MHz	150 Ω
4.500 to 4.999 MHz	120 Ω
5.000 to 6.999 MHz	100 Ω
7.000 to 8.999 MHz	80 Ω
9.000 to 9.999 MHz	60 Ω
10.000 to 12.999 MHz	50 Ω
13.000 to 18.999 MHz	35 Ω
19.999 to 30.000 MHz	25 Ω
Fundamental (BT-cut)	
30.000 to 40.000 MHz	30 Ω
Third Overtones (AT-cut)	
36.000 to 60.000 MHz	80 Ω



	PARAMETER	Symbol	Min.	Typ.	Max.	Units	Condition/Notes	
Electrical Specification	Frequency Range	F	3.579545		60	MHz		
	Frequency Tolerance	F/F			±50	ppm		
	Frequency Stability	ΔF/F			±100	ppm	See Note 1	
	Operating Temperature	T <sub>A</sub>	-20		+70	°C		
	Storage Temperature	T <sub>S</sub>	-55		+125	°C		
	Aging 1 <sup>st</sup> Year				+3	ppm	Up to 3 <sup>rd</sup> year	
	Thereafter (per year)				+5	ppm		
	Load Capacitance	C <sub>L</sub>		18		pF	See Note 2	
	Shunt Capacitance	C <sub>0</sub>			5	pF		
	ESR		See ESR Table					
	Drive Level	D <sub>L</sub>	25	50	100	μW		
	Insulation Resistance	I <sub>R</sub>	500			MΩ		
Environmental	Mechanical Shock	MIL-STD-202, Method 213, C (100 g's)						
	Vibration	MIL-STD-202, Method 201 & 204 (10 g's from 10-2000 Hz)						
	Thermal Cycle	MIL-STD-883, Method 1010, B (-55°C to 125°C, 15 min dwell, 10 cycles)						
	Hermeticity	MIL-STD-202, Method 112 (must meet 1 x 10 <sup>-8</sup> )						
	Solderability	Per EIAJ-STD-002						
Max Soldering Conditions	See solder profile, Figure 1							

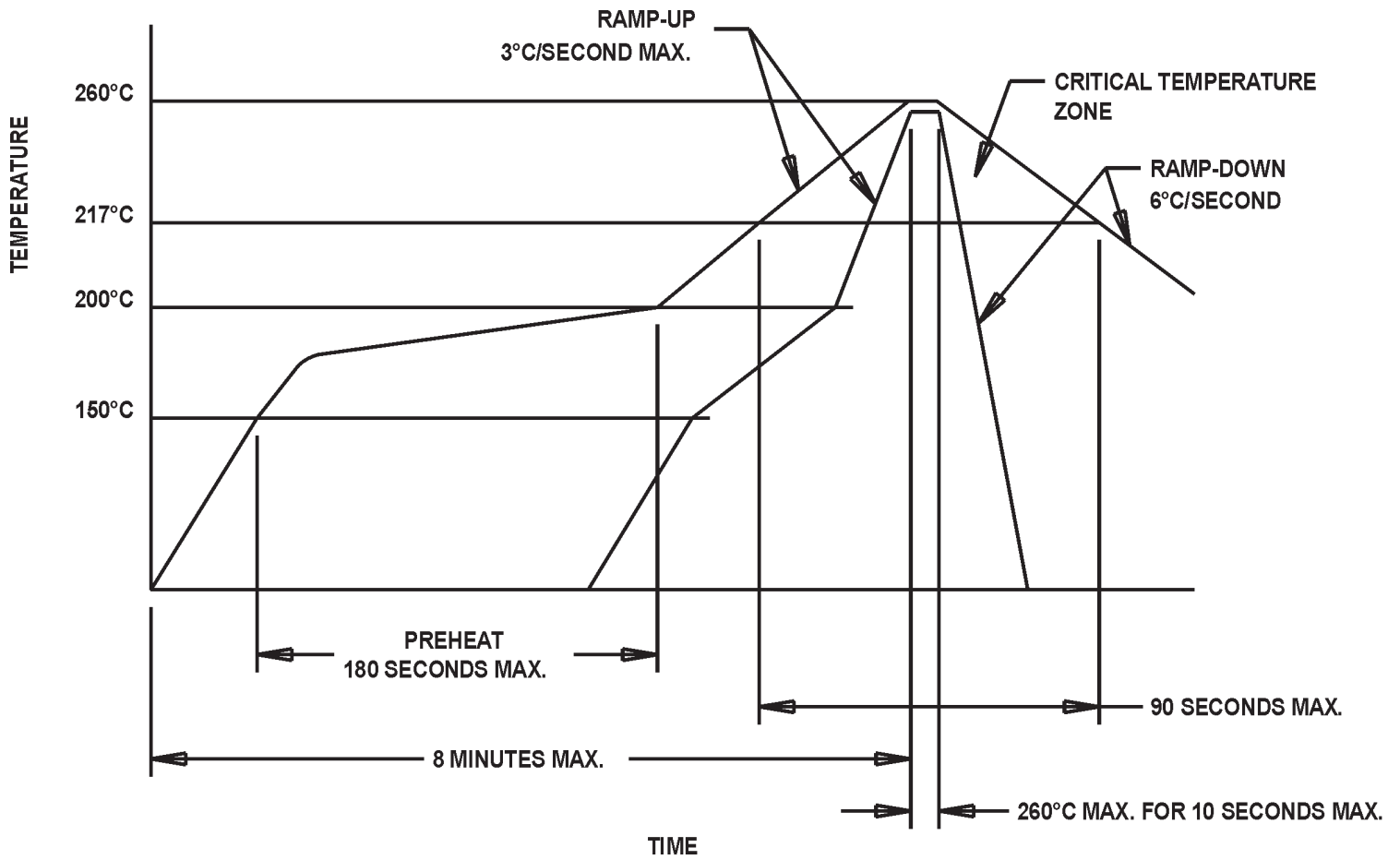
Note 1: BT Cut fundamentals from 24.000 to 40.000 MHz have a stability of ±100 ppm

Note 2: Series resonant designated by "SR" prefix (ie., SRSX2050)

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Please see [www.mtronpti.com](http://www.mtronpti.com) for our complete offering and detailed datasheets. Contact us for your application specific requirements: MtronPTI 1-800-762-8800.

# MtronPTI Lead Free Solder Profile



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