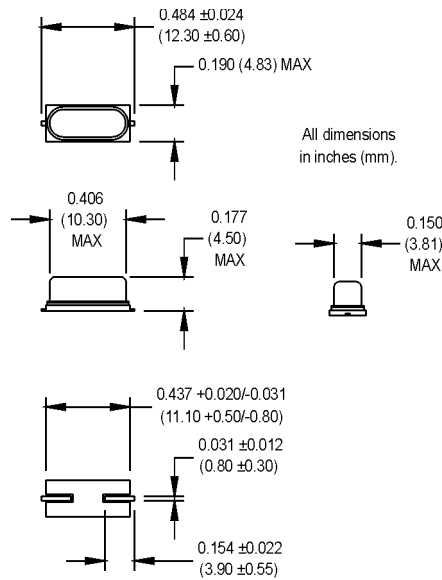


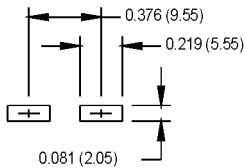
ATSM-49 and SX2050 Surface Mount Crystals



*ATSM-49-R 00.0000 MHz (customer specified) (-R signifies RoHS compliant part)



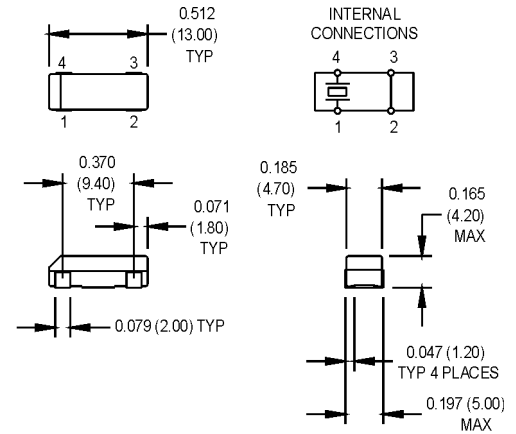
SUGGESTED SOLDER PAD LAYOUT



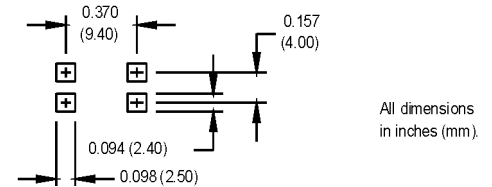
Equivalent Series Resistance (ESR), Max.

Fundamental (AT-cut)	
3.579 to 3.999 MHz	200 Ω
4.000 to 4.999 MHz	150 Ω
5.000 to 5.999 MHz	120 Ω
6.000 to 9.999 MHz	100 Ω
10.000 to 13.999 MHz	80 Ω
14.000 to 40.000 MHz	50 Ω
Fundamental (BT-cut)	
24.000 to 50.000 MHz	100 Ω
Third Overtones (AT-cut)	
25.000 to 39.999 MHz	100 Ω
40.000 to 72.000 MHz	80 Ω

*SX2050-R 00.0000 MHz (customer specified) (-R signifies RoHS compliant part)



SUGGESTED SOLDER PAD LAYOUT



PARAMETER	Symbol	Min.	Typ.	Max.	Units	Condition/Notes
Frequency Range	F	3.579545		72	MHz	ATSM-49
		3.579545		60	MHz	SX2050
Frequency Tolerance	F/F			±30	ppm	ATSM-49
				±50	ppm	SX2050
Frequency Stability	ΔF/F			±50	ppm	ATSM-49 (See Note 1)
				±100	ppm	SX2050 (See Note 1)
Operating Temperature	T _A	-10		+70	°C	ATSM-49
		-20		+70	°C	SX2050
Storage Temperature	T _S	-55		+125	°C	
Aging						
1st Year						
Thereafter (per year)						
Load Capacitance	C _L		18		pF	See Note 2
Shunt Capacitance	C ₀			7	pF	ATSM-49
				5	pF	SX2050
ESR		See ESR Tables				
Drive Level	D _L			500	μW	ATSM-49
				100	μW	SX2050
Insulation Resistance	I _R	500			MΩ	

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 (i.e., SRATSM-49 or SRSX2050)

MtronPTI Lead Free Solder Profile

