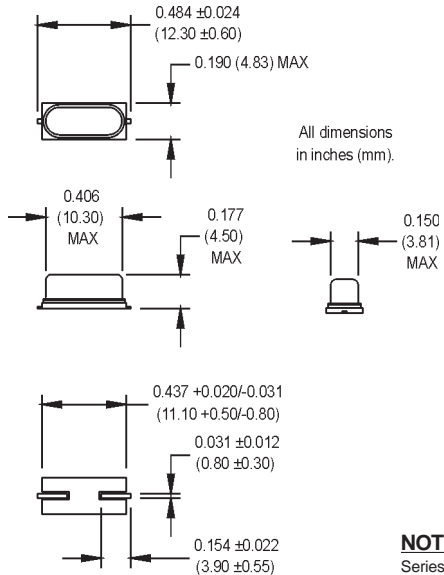


# ATSM-49 and SX2050 Surface Mount Crystals

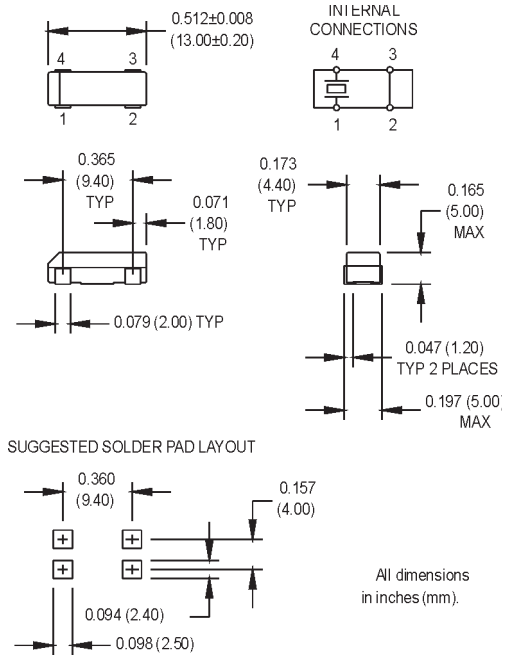


## \*ATSM-49 00.0000 MHz (customer specified)

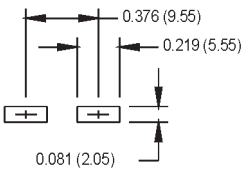


Equivalent Series Resistance (ESR), Max. Fundamental (AT-cut)	Sx2050
3.579 to 3.999 MHz	200 Ω
4.000 to 4.999 MHz	150 Ω
4.500 to 4.999 MHz	120 Ω
5.000 to 6.999 MHz	100 Ω
7.000 to 8.999 MHz	80 Ω
9.000 to 9.999 MHz	60 Ω
10.000 to 12.999 MHz	50 Ω
13.000 to 18.999 MHz	35 Ω
19.999 to 30.000 MHz	25 Ω
Fundamental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

## \*SX2050 00.0000 MHz (customer specified)



### SUGGESTED SOLDER PAD LAYOUT



### NOTES:

Series resonant designated by "SR" prefix (i.e., SRATSM-49 or SRSX2050).

Because this product is based on AT-strip technology, not all frequencies in the range stated are available. Contact the factory for availability of specific frequencies.

### ATSM-49

BT cut fundamentals from 24.000 to 40.000 MHz have a stability of ±100 ppm.

Equivalent Series Resistance (ESR), Max. Fundamental (AT-cut)	ATSM-49
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

Electrical Specifications	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
					±100	ppm	SX2050
	Operating Temperature	T <sub>A</sub>	-10		+70	°C	ATSM-49
			-20		+70	°C	SX2050
	Storage Temperature	T <sub>s</sub>				°C	
	Aging						
	1st Year						
	Thereafter (per year)						
	Load Capacitance	C <sub>L</sub>		18		pF	
	Shunt Capacitance	C <sub>0</sub>			7	pF	ATSM-49
				5	pF	SX2050	
ESR			See ESR Tables				
Drive Level	D <sub>L</sub>			500	μW	ATSM-49	
				100	μW	SX2050	
Insulation Resistance	I <sub>r</sub>	500			MΩ		

MtronPTI reserves the right to make changes to the product(s) and service(s) described herein without notice. No liability is assumed as a result of their use or application.

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.

Revision: 11/9/05