

SAW Resonator 418.0MHz
Part No: MP11179

Model: TC0393A
Rev No: 1

A. MAXIMUM RATING:

Electrostatic Sensitive Device

1. Input Power Level: 0dBm
2. DC voltage: 12V
3. Operating Temperature: -40°C to +85°C
4. Storage Temperature: -40°C to +85°C
5. Moisture Sensitivity Level: Level 1 (MSL1)

B. ELECTRICAL CHARACTERISTICS:

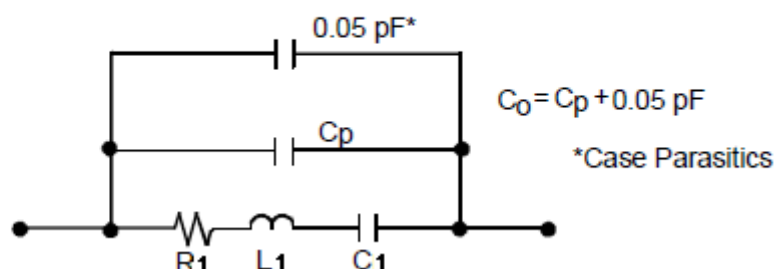
Characteristic	Unit	Min	Typ	Max
Center frequency	MHz	417.925	418	418.75
Insertion Loss	dB		1.3	2.0
Unloaded Q Factor	-		10400	
Motional Capacitance C1	fF		2.2	
Motional Inductance L1	μH		64.8	120
Motional Resistance R1	Ω		16.7	25
Parallel Capacitance Co	pF	2.2	2.4	2.8
Frequency Temperature coefficient (TCf)	ppm/°C ²		0.032	
Turnover To	°C	10	25	40
Package size	mm	3.8 x 3.8		

*Frequency defined by Yr (real) peak at room temperature.

Temperature dependence of fc: $f_c(T_A) = f_c(T_O)(1 - TC_f(T_A - T_O)^2)$

C. EQUIVALENT CIRCUIT:

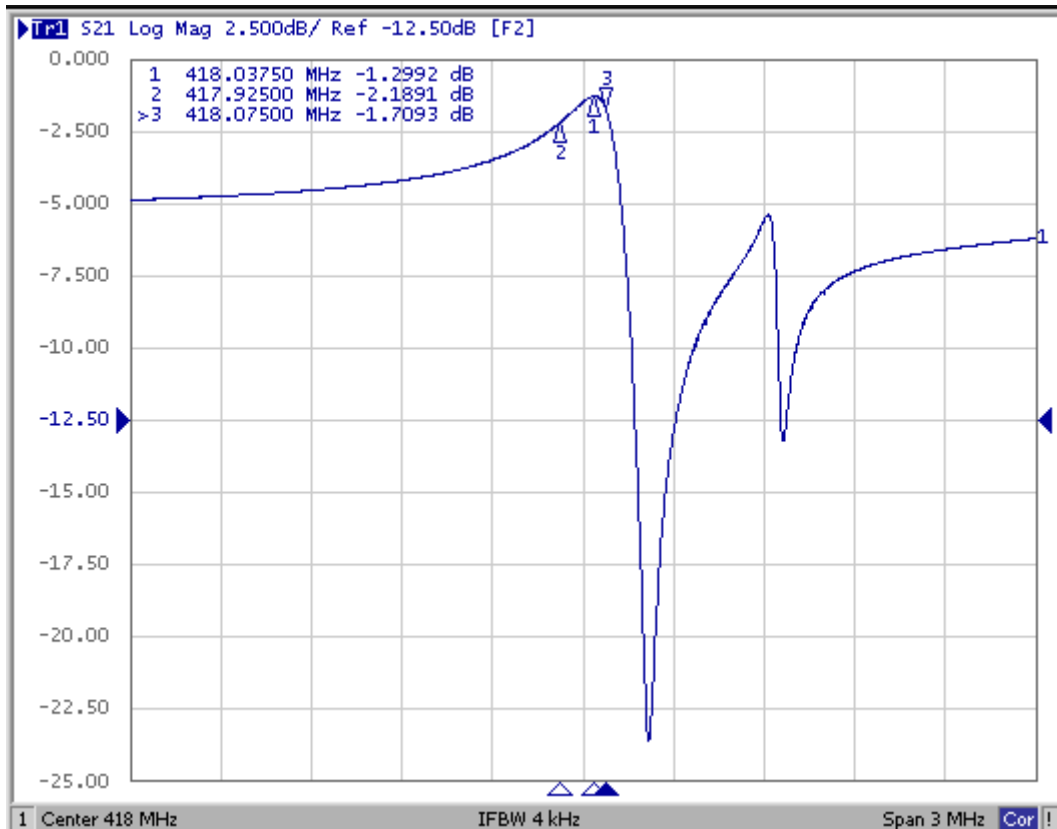
Equivalent RLC Model



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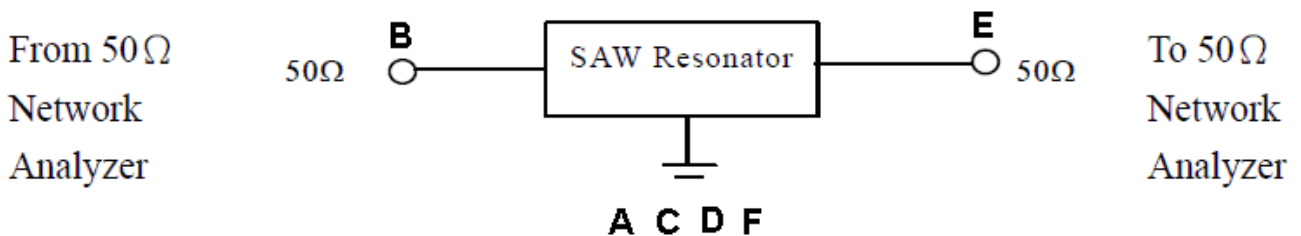
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D. FREQUENCY CHARACTERISTICS:



E. TEST CIRCUIT:

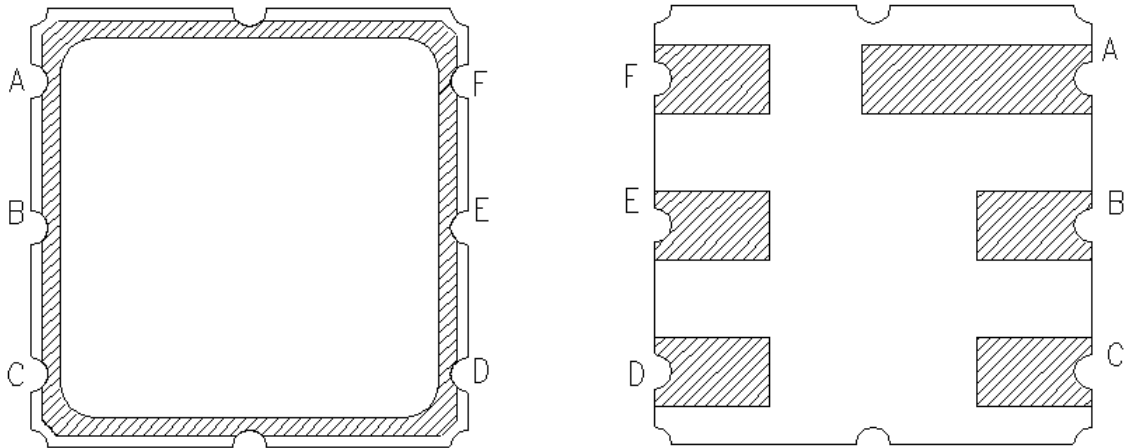
Network analyzer



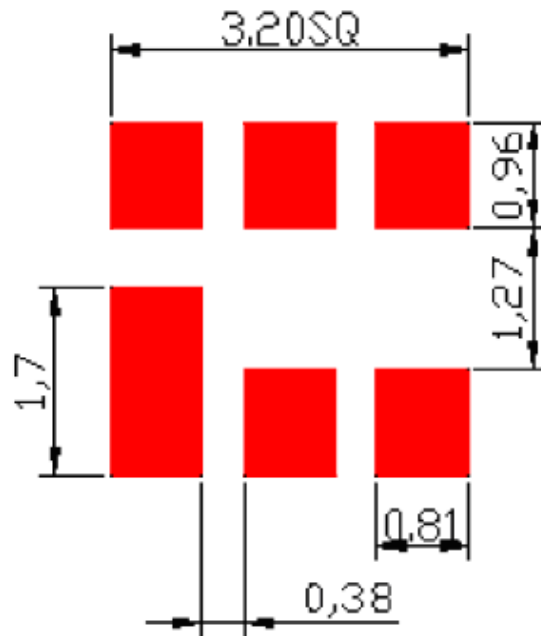
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F. MECHANICAL DIMENSIONS:



G. PCB FOOTPRINT:

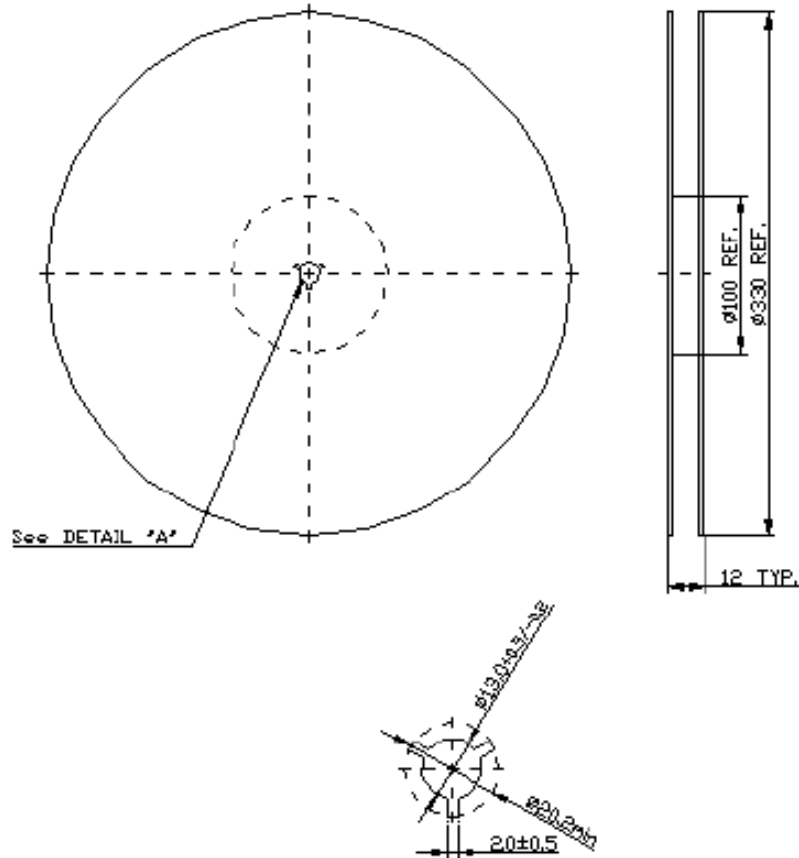


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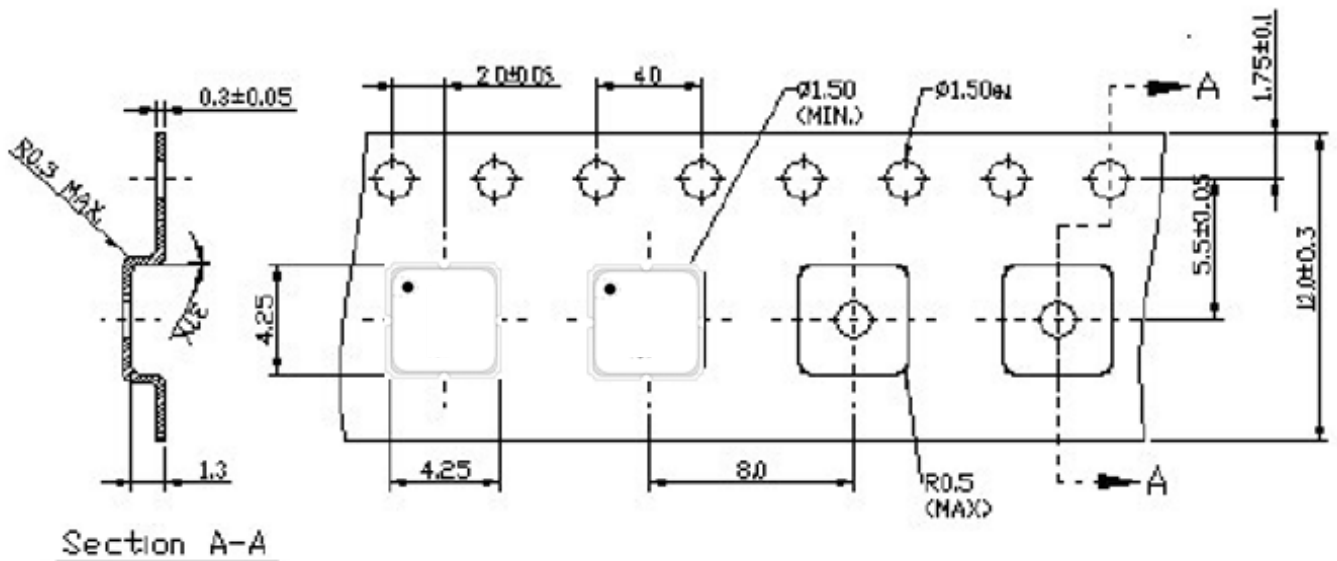
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H. PACKING:

1. REEL DIMENSION (Please refer to FR-75D10 for packing quantity)



2. Tape Dimensions



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I. RECOMMENDED REFLOW PROFILE:

1. Preheating shall be fixed at 150~180°C for 60~90 seconds.
2. Ascending time to preheating temperature 150°C shall be 30 seconds min.
3. Heating shall be fixed at 220°C for 50~80 seconds and at 260°C+0/-5°C peak (20~40 sec).
4. Time: 2 times.

