

**SAW Resonator 500.0MHz**  
**Part No: MP09532**

**Model: TC0632A**  
**Rev No: 1**

**A. FEATURES:**

Electrostatic Sensitive Device

One - Port Resonator

**B. MAXIMUM RATING:**

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)

**C. ELECTRICAL CHARACTERISTICS:**

Reference Temperature  $T_A = 25^\circ\text{C}$

Characteristics	Units	Min.	Typ.	Max.
Center frequency $F_c$	MHz	499.965	500	500.035
Insertion Loss IL	dB	-	1.3	2.0
Unload quality factor QU		-	14000	-
Motional capacitance C1	fF	-	1.68	-
Motional inductance L1	$\mu\text{H}$	-	60.24	-
Motional resistance R1	Ohm	-	13.58	-
Parallel capacitance Co	pF	-	2.96	-
Frequency Temperature coefficient (TCf)	ppm/c*2	-	0.032	-
Turnover $T_o$	deg. C	25	40	55
Package size	SMD 5.0 X 3.5 X 1.5mm			

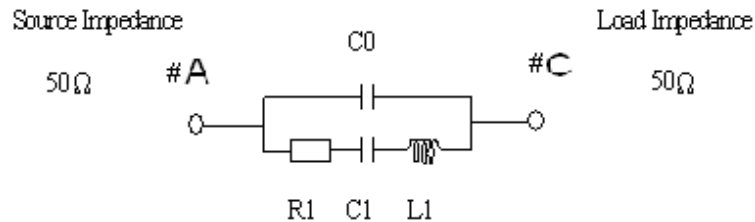
Temperature dependence of  $F_c$ :  $F_c(T_A) = F_c(T_O) (1 + TC_f(T_A - T_O)^2)$

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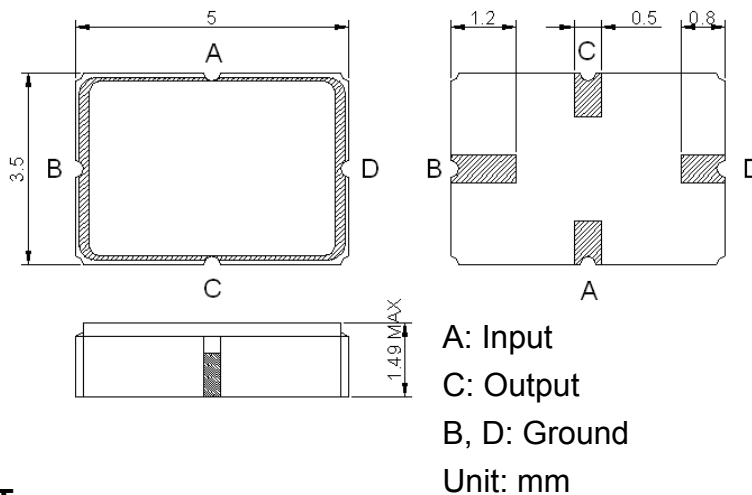
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**D. EQUIVALENT CIRCUIT:**

One-Port Resonator:

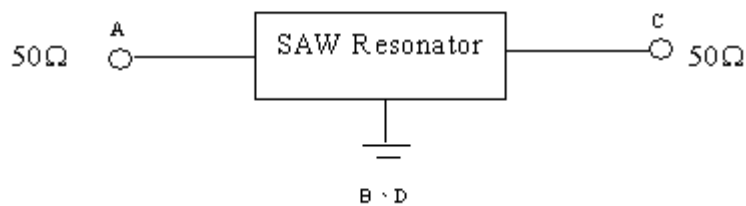


**E. OUTLINE DRAWING:**

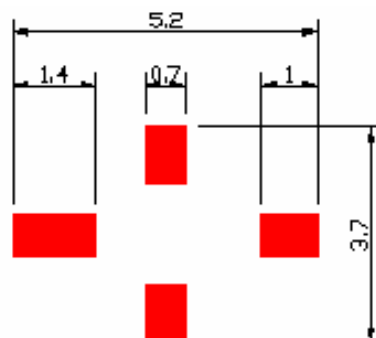


**F. TEST CIRCUIT:**

Network analyzer



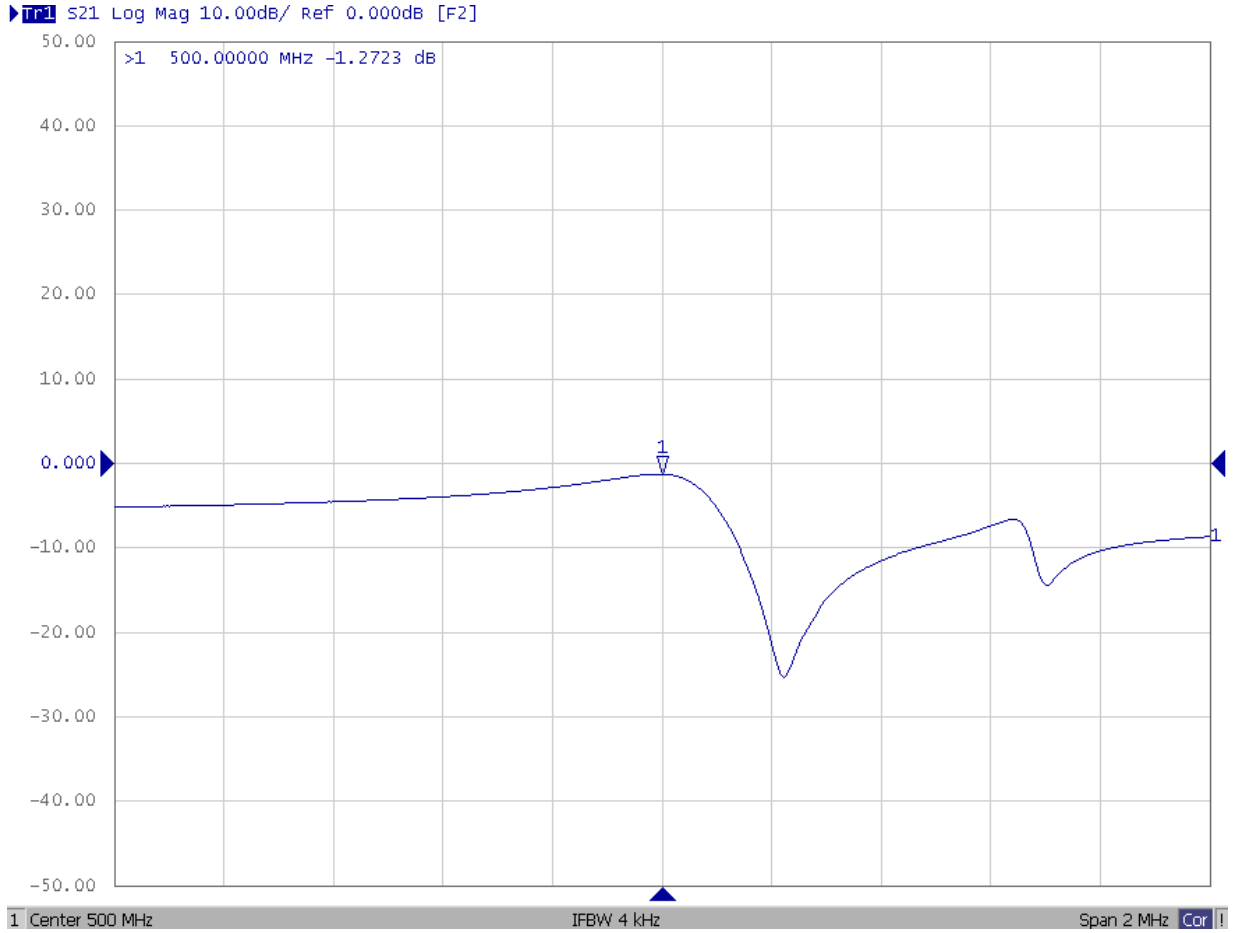
**G. PCB FOOTPRINT:**



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**H. FREQUENCY CHARACTERISTICS:**

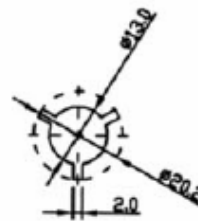
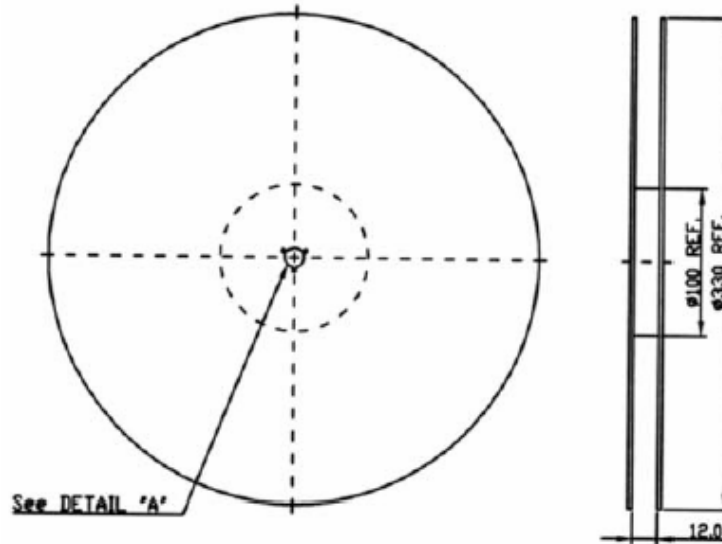


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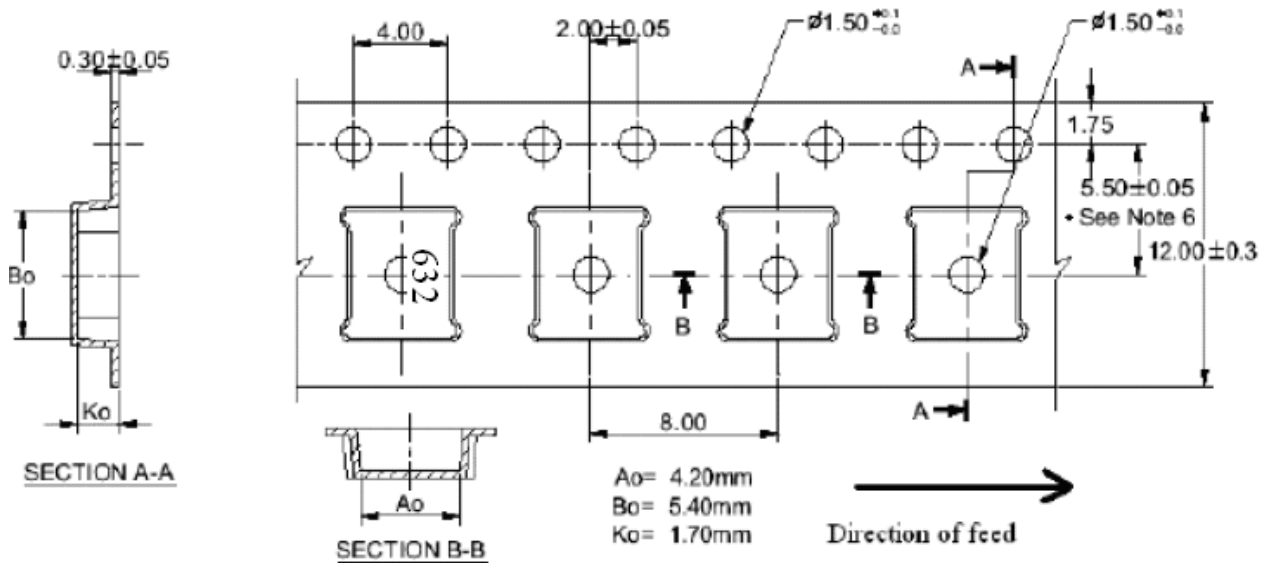
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**I. PACKING:**

1. Reel Dimension



2. Tape Dimension



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**J. 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.

