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**SAW Resonator 433.920MHz**  
**Part No: MA06435**

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**Model: TC433E1**  
**REV. NO.: 2**

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**A. FEATURES:**

1. 1-Port Resonator.

**B. MAXIMUM RATING:**

1. Power Dissipation: 0 dBm.
2. DC voltage: 12 V.
3. Storage Temperature: -40°C to 85°C.
4. Operating Temperature:-20°C to 85°C
5. Turnover Temperature: 35°C Typ.
6. Frequency Temperature Coefficient: 0.032 ppm/°C<sup>2</sup>

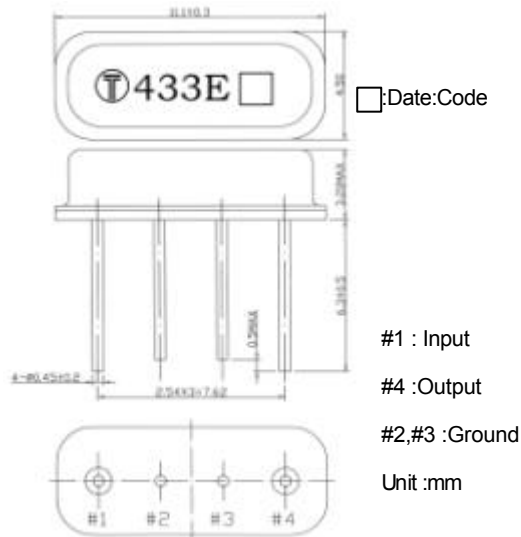
**C. ELECTRICAL CHARACTERISTICS:**

Characteristic	Units	Minimum	Typical	Maximum
Center frequency Fr	MHz	433.845	-	433.995
Insertion Loss IL	dB	-	1.3	2
Equivalent Circuit Elements				
Parallel capacitance C <sub>0</sub>	pF	-	3.9	-
Motional resistance R <sub>1</sub>	Ohm	-	14	25
Motional inductance L <sub>1</sub>	μH	-	32	-
Motional capacitance C <sub>1</sub>	fF	-	4.2	-

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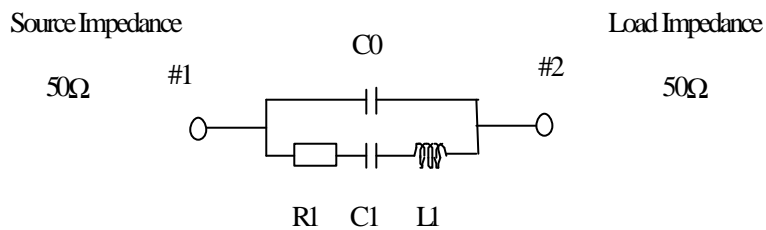
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**D. OUTLINE DRAWING:**



**E. EQUIVALENT CIRCUIT:**

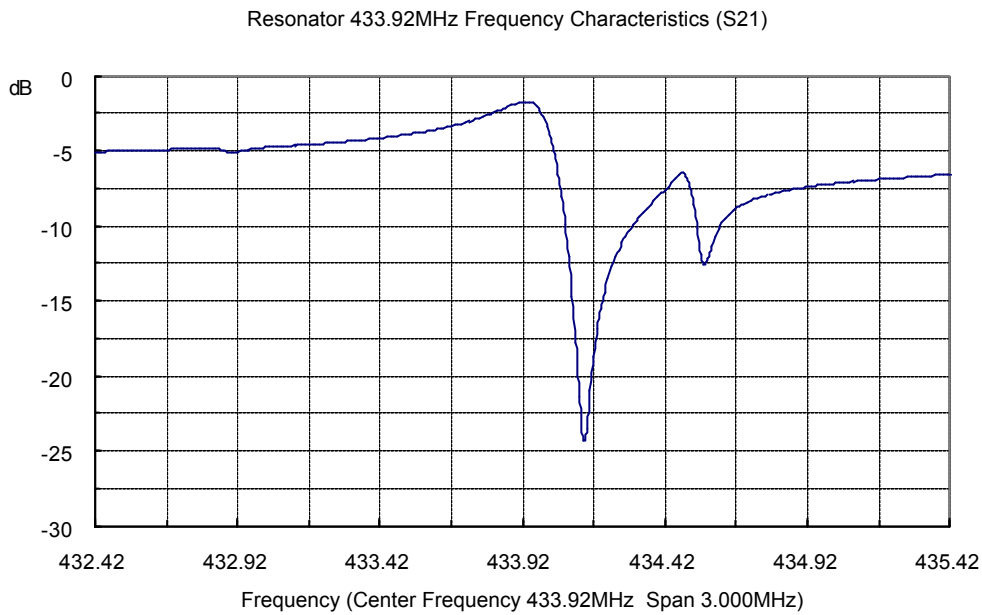
One-Port Resonator:



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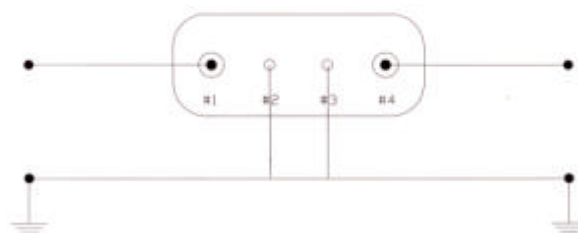
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**F. FREQUENCY CHARACTERISTICS:**



**G. TEST CIRCUIT:**

From 50Ω  
Network  
Analyzer



To 50Ω  
Network  
Analyzer

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**G. MECHANICAL & ENVIRONMENTAL CHARACTERISTICS:**

Test Item	Condition of Test	Requirements
Shock ( Drop test )	random free drops 3 times from height of 1 meter onto concrete floor.	
Vibration	Total peak amplitude : 1.5mm Vibration frequency : 10 to 55 Hz Sweep period : 1.0 minute Vibration directions : 3 mutually perpendicular Duration : 2 hr / direc.	The specimens shall meet the electrical specifications
Solderability ( solder heat )	immersed pad in soldering bath at 245±5°C for 5±0.5 seconds.	75% or more of the immersed surface shall be covered with solder
Temperature Characteristics	Specimens shall be measured within -20°C to +85°C temperature range	
Dry heat ( Aging test )	Temperature : 125 ± 2°C Duration : 250 hours	The specimens shall meet the electrical specifications
Cold resistance	Temperature : -40 ± 3°C Duration : 96 hours	
Thermal Shock	Heat cycle conditions -55 C 25 C 85 C (30 min) (5 min) (30 min) Cycle time : 5 times	