

SPECIFICATION OF CRYSTAL FILTER

1. SCOPE

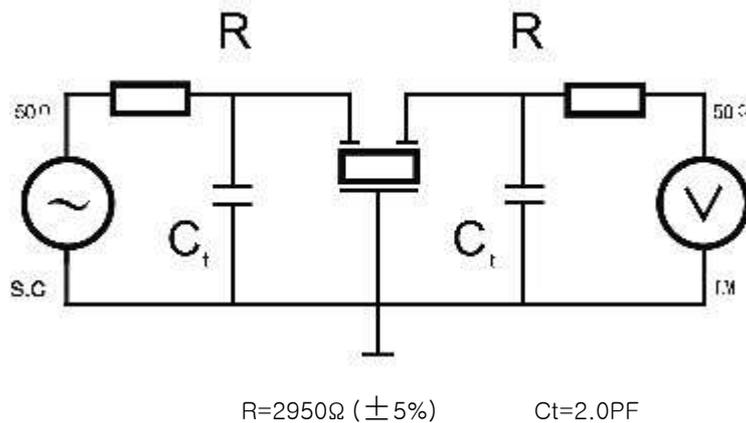
This specification shall cover the characteristics of crystal filter with

P/N: UM-5-10M15A

2. ELECTRICAL SPECIFICATION

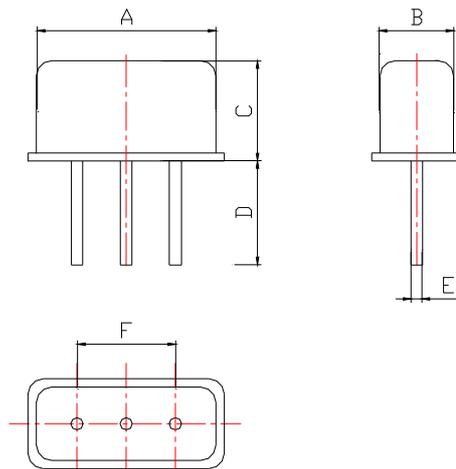
ITEM	SPECIFICATION
Holder type	UM-5-10M15A
Central Frequency	10.700MHz
Number of pole	2 poles
Pass Bandwidth	3dB/ ± 7.5 KHz min.
Stop Bandwidth	18dB/ ± 25.0 KHz max.
Guaranteed attenuation(1)	40dB min./Fo+300 to +1000KHz
Guaranteed attenuation(2)	45dB min./Fo-1000 to -300KHz
Ripple	0.5dB max.
Insertion Loss	1.5dB max.
Terminating Impedance	3000 Ω //2.0pF
INSULATION RESISTANCE	500M ohm DC 100
Operating temperature	-20~+70 °C
Storage Temperature range	-40~+85 °C
Aging in one year	3ppm/year
Test Equipment:	HP E5100A NETWORK ANALYZER

3. Test Circuit



Measurement shall be carried out at the reference temperature of $25 \pm 2^\circ\text{C}$ and $90 \pm 10\%$ RH. It shall be possibly done at $5 \sim 30^\circ\text{C}$ and $45 \sim 85\%$ RH unless the result is doubtful.

4. DIMENSION



	A	B	C	D	E	F
UM-5	7.8 ± 0.2	3.0 ± 0.2	6.0 ± 0.2	12.5 ± 1.0	$\Phi 0.32 \pm 0.05$	3.75 ± 0.2

5. MECHANICAL CHARACTERISTICS

1). Mechanical Shock

Drop the resonator randomly onto a concrete floor from the height of 30cm for 3 times. It shall fulfill the specification requirements.

2). Vibration

Subject the resonator to the vibration for 1 hour each in the X.Y. and Z-axes with the amplitude of 1.5 mm, 10 to 55 Hz. It shall fulfill the specification requirements.

3). Resistance To Solder Heat

Dip the resonator terminals no closer than 1.5mm into solder bath at $350 \pm 10^{\circ}\text{C}$ for $3 \pm 0.5\text{s}$ Or dip the resonator terminals no closer than 1.5mm into solder bath at $200 + 5^{\circ}\text{C}$ for $10 + 1\text{s}$, then leave the resonator into room condition for 1 hour. It shall meet the specification requirements.

4). Solderability

Dip the resonator terminals into the solder bath at $230 + 5^{\circ}\text{C}$ for $3 + 0.5\text{s}$. More than 95% of the terminal surface of the resonator shall be covered with fresh solder.

5). Pulling Test

Weight along with the direction of lead without any shock 1kg for 10sec. The resonator shall show no evidence of damage and shall satisfy all the initial electric characteristics.

6). Bending Test

Lead shall be subject to withstand against 90° bending at its stem. This operation shall be done toward both directions, and each operation shall take 3sec. The resonator shall show no evidence of damage and shall satisfy all the initial electric characteristics.