

Monolithic Crystal Filters – Surface Mount
Model “21.7MQ15A”, 2 pole, 21.7 MHz, 5x7x1.3 mm



MERCURY
 Since 1973

- Thin and light weight; excellent shock and vibration resistance
- Suitable for automatic pick and place; Solder reflow capable
- Specifically designed for mobile, wireless communications, pagers, cellular and cordless phones.



SPECIFICATIONS

Model	21.7MQ15A
Package ②	“Q” package, 5x7x1.3 mm Ceramic SMD
Number of Poles ⑤	2 Poles
Center Frequency ①:	21.7 MHz
Pass Bandwidth④	± 7.5 kHz min. at 3 dB
Stop Bandwidth	±25 KHz max. at 18 dB
Guaranteed Attenuation	70 dB min. at -910 KHz ± 10 KHz
Ripple	1.0 dB max.
Insertion Loss	1.5 dB max.
Spurious	15 dB min.
Terminating Impedance	1500 Ω // 2.5 pF
Operating Temperature	-20°C to +70°C
Aging	± 2 ppm / year max.
Storage Temperature	-40°C to +85°C
Packaging	180 mm reel; 16 mm tape; 8 mm pitch; 1000 pcs per reel.

HOW TO ORDER:

Part Number: Please specify 21.7MQ15A				
21.7	M	Q	15	A
①	②	③	④	⑤
①: Center Frequency Code “21.7” for 21.7 MHz		②: MCF Series		
③: Package code “Q” for 5x7x1.3 mm		④: 3dB bandwidth: “15” for ± 7.5 kHz (total 15 KHz).		
⑤: “A” for 2 poles				

MERCURY www.mercury-crystal.com

Taiwan: TEL (886)-2-2406-2779, FAX (886)-2-2496-0769, e-mail: sales-tw@mercury-crystal.com
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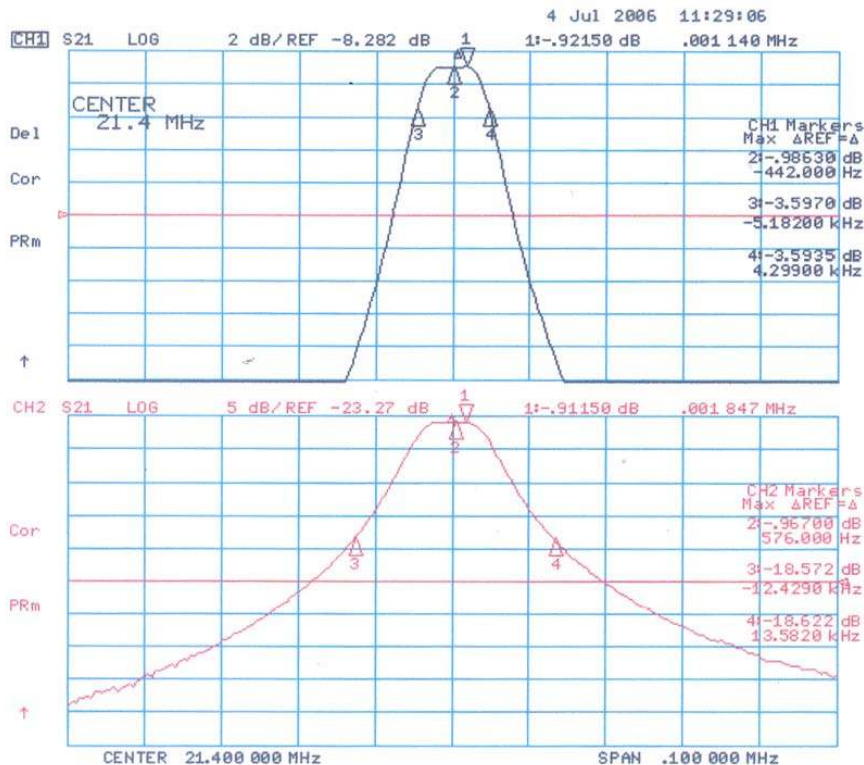


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ENVIRONMENTAL AND MECHANICAL SPECIFICATIONS

Green Requirement	RoHS compliant and Pb (lead free)
Gross Leak	60 sec min at +125°C in D.I. water or fluorocarbon fluid
Fine Leak	< 2 x10 ⁻⁸ atm cc /sec by helium leak check
Shock	Half sine wave acceleration of 100G peak amplitude for 11 m. sec. duration, 3 cycles each plane.
Vibration	±5 ppm max. Frequency:10 to 55 Hz, amplitude: 1.5 mm or 10 Gs rms. Duration: 6 hours.
Drop Test	Free drop onto hard wood board at 75 cm, 3 radon drops.
Solderability	MIL-STD-883, Method 2003
Humidity	After 48 hours at 85°C, 85% relative humidity non-condensing
Thermal Shock	Temperature cycling: Exposed at -40°C for 30 minutes then to +85°C for 30 minutes for duration of 5 days
Marking Permanency	MIL-STD-202, Method 215. Laser engraved.

Typical Frequency Response

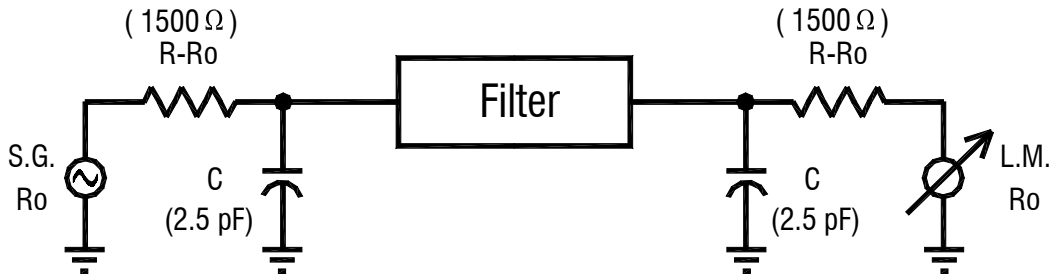


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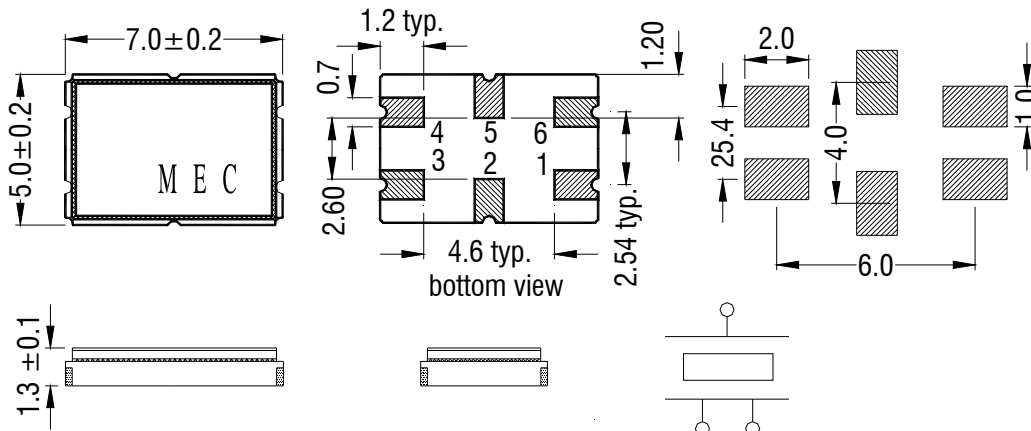
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21.7MQ15A TEST CIRCUIT:



PACKAGE DIMENSIONS AND SUGGESTED PAD LAYOUT

Unit: mm



Pad 3 and 6: MCF in / out Pad 1,2,4,5 and metal lid: Ground

RECOMMENDED SOLDER REFLOW PROFILE:

Topside temperature of board to be 260°C min. and 270°C max.

Peak Temperature: 260°C max. and 10 sec. max.

Time within 5°C of actual peak: 20 to 40 sec. max.

