

P.O. Box 630 100 Douglas Ave. Yankton, SD 57078 USA Phone: 800-762-8800 or 605-665-9321 Fax: 605-665-1709 Website: www.mtronpti.com

Proposed Specification for a Crystal Filter MtronPTI P/N: XF8572-002

- I. General & Electrical Requirements:
 - 1. Passband Center Frequency (F_{ON}): 140.400MHz
 - 2. 3dB Passband (ref. to Center Frequency) : 140.380MHz to 140.420MHz, minimum
 - 3. Insertion Loss (@ Center Frequency) : ≤ 4.5 dB
 - 4. Passband Ripple (peak-peak) : ≤ 1.0 dB
 - 5. Input/Output Return Loss (140.395MHz to 140.405MHz): -10dB minimum
 - 6. Absolute Group Delay (within the 40kHz bandwidth): $\leq 30 \mu sec$
 - 7. Stopband Attenuation (Relative to Insertion Loss) : 60dB minimum over a maximum bandwidth of 160kHz
 - 8. Ultimate Attenuation : 60dB minimum, \leq 140.320MHz to \geq 140.480MHz
 - 9. Spurious Attenuation: 50dB minimum, \leq 140.340MHz to \geq 140.460MHz
 - 10. Group Delay:

Absolute Delay: $\leq 40 \mu sec$ from 140.380MHz to ≥ 140.420 MHz

Differential Delay: $\leq 12 \mu sec$, from 140.385MHz to ≥ 140.415 MHz

Delay Slope: $\leq 5\mu sec$ for any 5kHz increment over the frequency range 140.390MHz to ≥ 140.410 MHz

11. Intermodulation Distortion:

 3^{rd} order IMD products shall be 40dB down from either of two (2) -8dBm Input Tones at F₁ = 140.405MHz and F₂ = 140.395MHz as referenced to the Input

- 12. Input Power Level: -120dBm minimum, +15dBm maximum
- 13. Z_S/Z_L : 50 Ω nominal
- 14. DC Blocking: No

II. Environmental & Physical Requirements:

- 1. Temperature Range Operating: -40°C to +85°C Storage: -45°C to +105°C
- 2. Shock: Per MIL-STD-202, Method 213, Test Condition A
- Solderability: Per MIL-STD-202, Method 208, With the following Exceptions The Steam Aging Requirement is Reduced to 2-hours The Minimum Coverage is Reduced to 85%
- 4. Package:

Type: True SMD

Coplanarity: The Device shall be coplanar to ≤ 0.004 " as measured by 6C5-1400

Dimensions: 2.000" (L) x .500" (W) x 0.375" (H) (excluding grounding finger stock on filter top surface) Reference Drawing Figure 1

Materials:

Construction & Finish: No Pure Tin Components or Termination Finishes Shall be Utilized in the Construction of This Filter Termination Finish: Tin/Lead Solder Upper Housing: Silver Plated Brass Per ASTM B700, Type 1, Grade A

5. Packaging: Tape & Reel, Per EIA-481-A

Rev. - 10/04/11 Page 1 of 2 Proprietary Document Information contained herein is proprietary to MtronPTI and is submitted in confidence. Information may not be copied or divulged without written permission from MtronPTI.



P.O. Box 630 100 Douglas Ave. Yankton, SD 57078 USA Phone: 800-762-8800 or 605-665-9321 Fax: 605-665-1709 Website: www.mtronpti.com

Proposed Specification for a Crystal Filter MtronPTI P/N: XF8572-002



Figure 1 – Filter Package Outline Drawing

III. Maximum Solder Reflow Profile:



Rev. - 10/04/11 Page 2 of 2 Proprietary Document Information contained herein is proprietary to MtronPTI and is submitted in confidence. Information may not be copied or divulged without written permission from MtronPTI.