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Specification for a 4-Pole 3rd Overtone Mode SMD Crystal Filter MtronPTI P/N: XF9347R

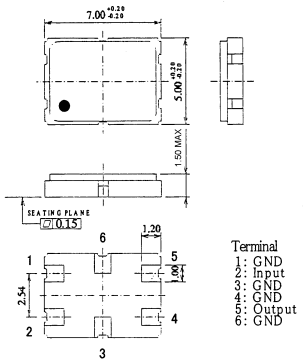
I. GENERAL & ELECTRICAL REQUIREMENTS

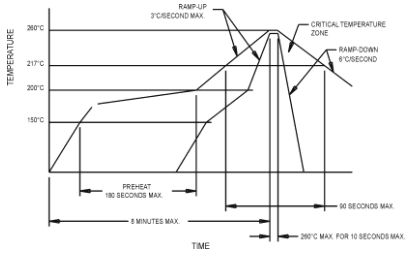
1. Center Frequency (F_{ON}): 70.2MHz
2. 3dB Passband:
   @ 25°C ± 2°C: ≥ F_{ON} ±6.0kHz & ≤ F_{ON} ±9.0kHz
   -30°C to +75°C: ≤ F_{ON} ±5.5kHz & ≤ F_{ON} ±10.0kHz
3. Insertion Loss (@ peak of transmission within the 3dB passband): ≤ 4.0dB
4. Passband Ripple (peak-valley, F_{ON} ±3.5kHz): ≤ 0.5dB
5. Coupling Capacitance: T.B.D. (***Vendor to Advise After Prototype Build***)
6. Group Delay Distortion (peak-peak over F_{ON} ±3.0kHz)
   @ 25°C ± 2°C: ≤ 20*µsec*
   -30°C to +75°C: ≤ 30*µsec*
   The group delay distortion value shall be the difference between the maximum and minimum values over the specified frequency range.
7. Rejection (Minimum, Relative to Insertion Loss):
   35dB: F_{ON} ±25kHz to F_{ON} ±500kHz
   80dB: F_{ON} -910kHz
8. 3rd Order Input Intercept Point (IIP3):+26dBm
   The IIP3 shall be first tested with tones at fc -50kHz and -100kHz
   and then tested with tones at fc +50 kHz and +100kHz, , the tone level shall be -20dBm/tone at the filter input.
9. Input Signal Level: ≤ 0dBm
10. Z_{IN}/Z_{OUT}: T.B.D. (Ω // *pF*) nominal (***Vendor to Advise After Prototype Build***)

Note 1: All electrical performance specifications, unless otherwise noted, are over the full operating temperature range.
Note 2: All performance parameters are to be validated at the prototype build stage and are subject to adjustment.

II. ENVIRONMENTAL & PHYSICAL REQUIREMENTS:

1. Temperature Range
   Operating: -30°C to +75°C
   Storage: -40°C to +85°C
2. Solderability: Per EIAJ-STD-002
3. Package: 5x7mm Matched Pair Tandem Set SMD (ref drawing Figure 1)
4. Full RoHS Compliance



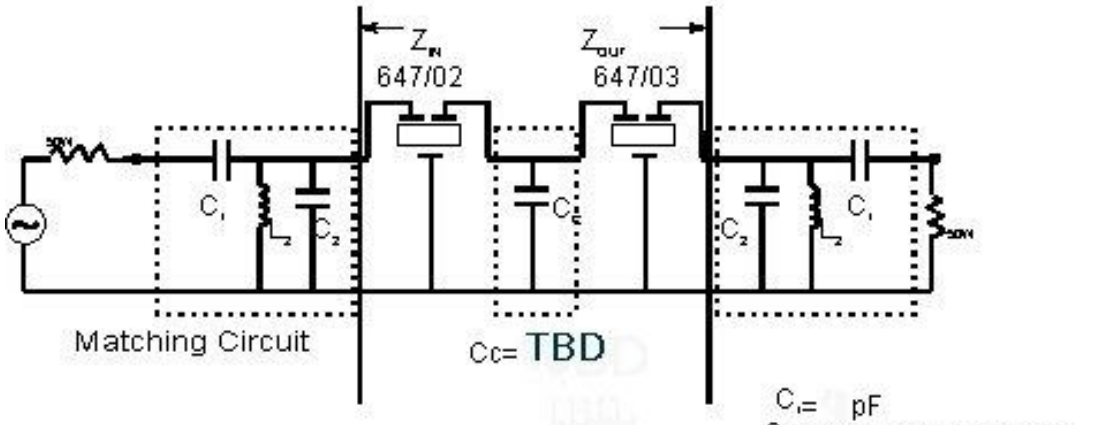


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Test Circuit:



*C_c value does not include parasitics.

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