

## Specification for a Monolithic SMD Crystal Filter

### MtronPTI P/N: XF9430R

#### I. General & Electrical Requirements:

1. Center Frequency ( $F_{ON}$ ): 75.75MHz
2. Passband:
  - @ 1dB:  $\geq F_{ON} \pm 7.5\text{kHz}$
  - @ 3dB:  $\geq F_{ON} \pm 10.0\text{kHz}$
3. Insertion Loss (@ peak of transmission within the 3dB passband):  $\leq 4.0\text{dB}$
4. Passband Ripple (peak-valley):  $\leq 1.0\text{dB}$
5. Stopband Attenuation
  - $> 45\text{dB}$ :  $F_{ON} \pm 40.0\text{kHz}$  (absolute)
  - $> 70\text{dB}$ :  $F_{ON} \pm 910.0\text{kHz}$
6. Group Delay Variation (within  $F_{ON} \pm 7.5\text{kHz}$ ):  $15\mu\text{sec}$
7. Input 3<sup>rd</sup> Order Intercept Point:  $> +30\text{dBm}$   
 Input Frequency:  $F_{ON} \pm 50\text{kHz}$  and  $F_{ON} \pm 100\text{kHz}$   
 Input Signal Level:  $-10\text{dBm}$  to  $-20\text{dBm}$
8. Input Signal:
  - Operating (full specification compliance):  $-5\text{dBm}$  nominal
  - Peak (No Damage):  $+15\text{dBm}$
9. Input/Output Terminating Impedance ( $Z_{IN}/Z_{OUT}$ ):  $50\Omega$  nominal

*Note 1: All electrical performance specifications are valid over the full Operating Temperature Range ( $-30^\circ\text{C}$  to  $+75^\circ\text{C}$ ) unless otherwise noted.*  
*Note 2: All electrical performance specifications are to be validated and adjusted at the prototype build stage.*

#### II. Environmental, Physical & Reflow Requirements:

1. Temperature Range
  - Operating:  $-30^\circ\text{C}$  to  $+75^\circ\text{C}$
  - Storage:  $-40^\circ\text{C}$  to  $+85^\circ\text{C}$
2. Solderability: Per EIAJ-STD-002
3. Package: SMD (ref Figure 1)
4. RoHS Compliant

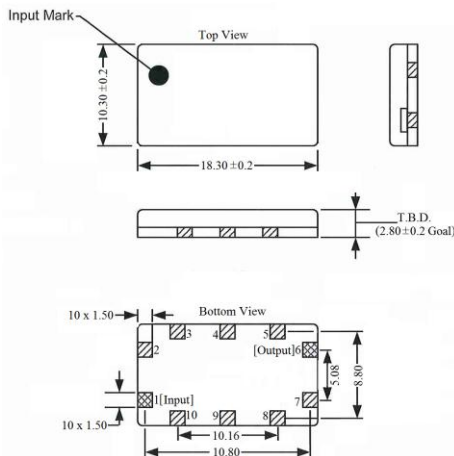


Figure 1 – Filter Package Outline Drawing

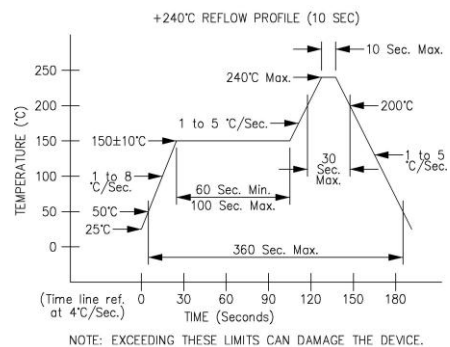


Figure 2 – Recommended Reflow Profile