



Specification for an SMD Crystal Filter MtronPTI P/N: XF9321-001

I. General & Electrical Requirements @ 25°C

1. Center Frequency (F_0): 110.2MHz
2. Passband Bandwidth:
 - @ 1dB: $\geq F_0 \pm 7.5\text{kHz}$
 - @ 3dB: $\geq F_0 \pm 10.0\text{kHz}$
3. Insertion Loss (@ F_0): $\leq 4.5\text{dB}$
4. Passband Ripple (peak-valley): $\leq 0.7\text{dB}$
5. Group Delay Variation
Within $F_0 \pm 7.5\text{kHz}$: $\leq 15\mu\text{sec}$
6. Stopband Attenuation:
 - $> 45\text{dB}$: $F_0 \pm 45.0\text{kHz}$ (absolute)
 - $> 70\text{dB}$: $F_0 \pm 910.0\text{kHz}$
7. Input 3rd Order Intercept Point: $> +30\text{dBm}$
Input Frequency: $F_0 \pm 50\text{kHz}$, $F_0 \pm 100\text{kHz}$
Input Level: -10dBm to -20dBm
8. Input Signal Power:
 - Working: $\leq +5\text{dBm}$
 - Peak (no damage): $+15\text{dBm}$
9. Z_S/Z_L : 50Ω nominal

II. General & Electrical Requirements -30°C to +75°C

1. Center Frequency (F_0): 110.2MHz
2. Passband Bandwidth:
 - @ 1dB: $\geq F_0 \pm 6.0\text{kHz}$
 - @ 3dB: $\geq F_0 \pm 8.0\text{kHz}$
3. Insertion Loss (@ F_0): $\leq 5.0\text{dB}$
4. Passband Ripple (peak-valley): $\leq 1\text{dB}$
5. Group Delay Variation
Within $F_0 \pm 7.5\text{kHz}$: $\leq 17\mu\text{sec}$
6. Stopband Attenuation:
 - $> 45\text{dB}$: $F_0 \pm 48.0\text{kHz}$ (absolute)
 - $> 70\text{dB}$: $F_0 \pm 910.0\text{kHz}$
7. Input 3rd Order Intercept Point: $> +30\text{dBm}$
Input Frequency: $F_0 \pm 50\text{kHz}$, $F_0 \pm 100\text{kHz}$
Input Level: -10dBm to -20dBm
8. Input Signal Power:
 - Working: $\leq +5\text{dBm}$
 - Peak (no damage): $+15\text{dBm}$
9. Z_S/Z_L : 50Ω nominal

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III. Environmental & Physical Requirements:

1. Temperature Range
 - Operating: -30°C to +75°C
 - Storage: -45°C to +85°C
2. Package: SMD (ref drawing Figure 2)
3. RoHS: Full RoHS Compliance

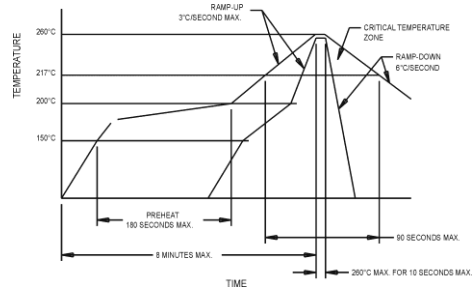


Figure 1: Maximum Solder Reflow Profile

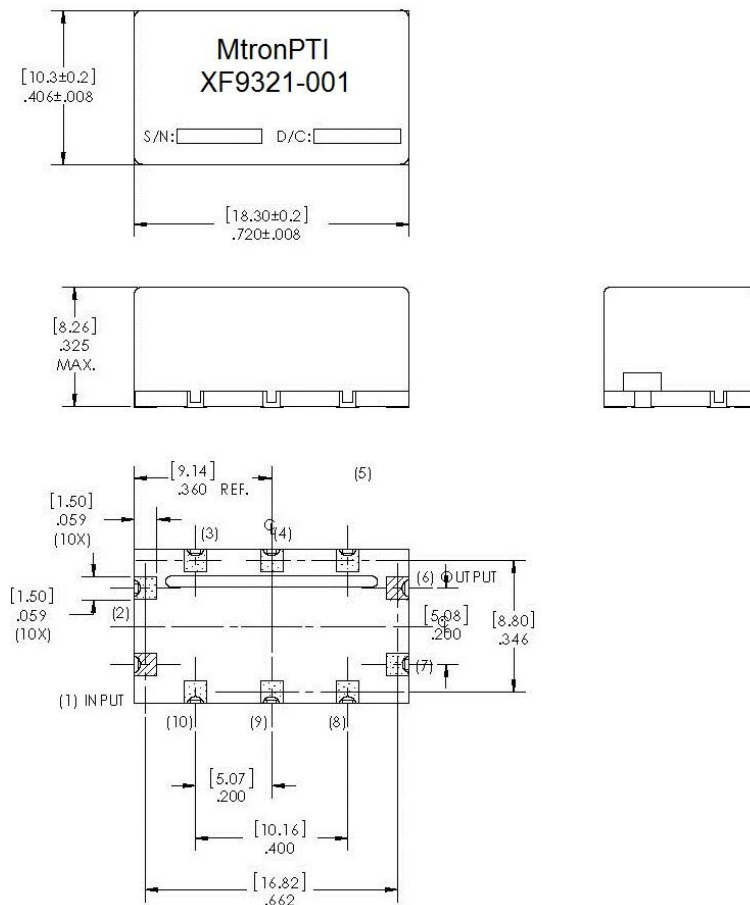


Figure 2: Package Outline Drawing