

## MtronPTI 4-Pole 4133SMD Series Crystal Front-End-Filter

### I. General & Electrical Requirements:

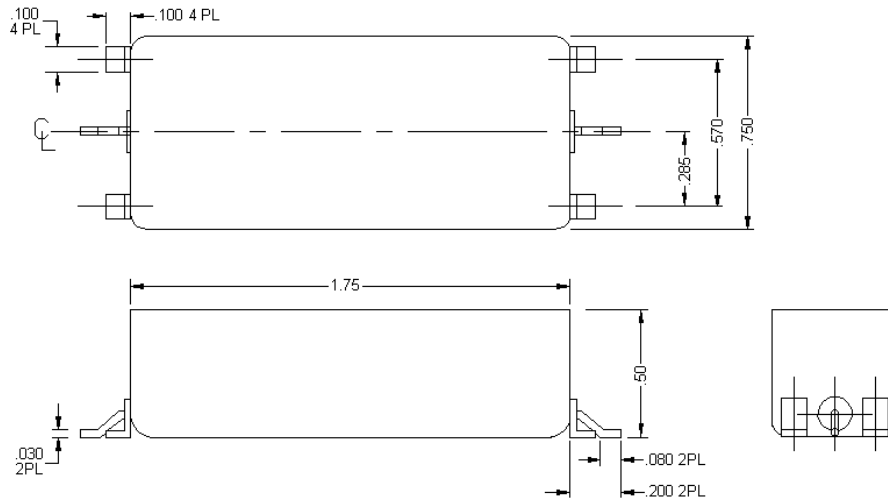
1. Center Frequency ( $F_{ON}$ ): 25MHz to 200MHz
2. Passband @ 3dB:  $F_{ON} \pm 6.75\text{kHz}$
3. Insertion Loss (@ peak of transmission within the 3dB passband):
  - For  $F_{ON}$  of 25.00MHz thru 35.99MHz:  $\leq 5.0\text{dB}$
  - For  $F_{ON}$  of 36.00MHz thru 137.99MHz:  $\leq 6.0\text{dB}$
  - For  $F_{ON}$  of 138.00MHz thru 200.00MHz:  $\leq 7.0\text{dB}$
4. Stopband Attenuation
  - 20dB minimum
  - For  $F_{ON}$  of 25.00MHz thru 89.99MHz:  $F_{ON} \pm 26.0\text{kHz}$
  - For  $F_{ON}$  of 90.00MHz thru 200.00MHz:  $F_{ON} \pm 30.0\text{kHz}$
  - 40dB minimum for  $F_{ON}$  of 25.00MHz thru 200.00MHz:  $F_{ON} \pm 50.0\text{kHz}$
5. Input Signal: 0dBm maximum
6. 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 (-20°C to +70°C) unless otherwise noted.*

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

1. Temperature Range
  - Operating: -20°C to +70°C
  - Storage: -40°C to +85°C
2. Solderability: Per EIAJ-STD-002 *See Note 2*
3. Package: SMD (ref Figure 1) *See Note 2*

*Note 2: Although the 4133SMD Series are SMD devices, they are not reflowable assembly compatible devices. Therefore, they must be hand assembled to the PCB with a maximum land temperature of +260°C for < 3seconds.*



**Figure 1 – Filter Package Outline Drawing**

*Note 3: The order code example for a 102.175MHz 4133SMD would be as follows: 4133SMD @ 102.175MHz.*