# TF0111 Varactor Tunable Preselector Filter
118MHz – 137MHz – typical performance

...when timing matters

## I. General & Electrical Requirements

1. Tuned Center Frequency Range:
   $F_{MIN}$ = 118MHz to $F_{MAX}$ = 137MHz
2. Passband @ 1dB: Reference Table 1
3. Passband Insertion Loss: Reference Table 1
4. I/O VSWR at Nominal Tune Frequency ((F1dBL+F1dBH)/2): < 1.50:1
5. Absolute Stop Band Attenuation: Reference Table 1
6. In-Band IIP3: +30dBm minimum
7. In Band RF Power Handling: ≤ +20dBm (Peak, No Damage)
8. $Z_{IN}/Z_{OUT}$: 50Ω nominal
9. Tuning Method: Voltage Control ($V_{TUNE}$): +1.0$V_{DC}$ to +10.0$V_{DC}$


## II. Environmental & Physical Requirements

1. Temperature Range:
   Operating: -40°C to +85°C
   Storage: -45°C to +90°C
2. Solderability: Per EIAJ-STD-002
3. Package:
   Size: 1.25" (L) x 0.5" (W) x 0.350" (Max., H)
   Type: SMD (See Figure 1)
   Reflow Profile: See Figure 2
   Tape & Reel: 100-unit minimum

| Dash # (Order Code) | Minimum 1dB Bandwidth ($F_{SIG}$ %) | Insertion Loss (dB, Max) | Attenuations @ $F_{SIG}$ ±10% (dB, Min) | Attenuations @ $F_{SIG}$ ±20% (dB, Min) |
|---|---|---|---|---|
| TF0111-001 | 1 | 5.5 | 18 | 28 |
| TF0111-002 | 2 | 4.5 | 16.5 | 26.5 |
| TF0111-003 | 3 | 3.5 | 15 | 25 |
| TF0111-004 | 4 | 3 | 13.5 | 23.5 |
| TF0111-005 | 5 | 2.5 | 12 | 22 |

Table 1: Standard Configurations
(Consult Factory for Custom Requirements)

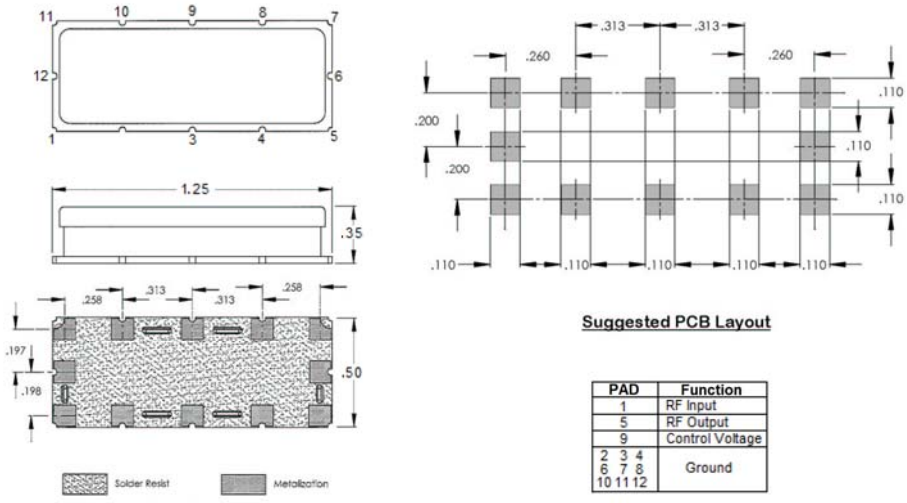


**Figure 1: TF0111 Outline & PAD Layout Drawing**

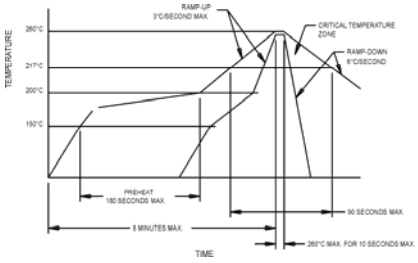


**Figure 2: Reflow Profile**

## III. Data Sheet Revision:

| Date | Rev. | Author | Details of Revision |
|---|---|---|---|
| 08/28/14 | C | BRM | Updated specifications and added standard configuration Table 1. |
| 9/11/13 | B | MFE | Adjusted the Stop Band, VSWR, and voltage range specification points and added a Max. notation for package height.. |
| 07/09/13 | A | BRM | Updated the Figure 1 drawing to include a suggested PAD Layout. |
| 06/28/13 | - | BRM | Original Draft. |



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