

# TF0112 Varactor Tunable Preselector Filter

## 108MHz – 118MHz – typical performance



### I. General & Electrical Requirements

- Tuned Center Frequency Range:  
 $F_{MIN} = 108\text{MHz}$  to  $F_{MAX} = 118\text{MHz}$
- Passband @ 1dB: Reference Table 1
- Passband Insertion Loss: Reference Table 1
- I/O VSWR at Nominal Tune Frequency ( $(F1\text{dBL}+F1\text{dBH})/2$ ):  $< 1.50:1$
- Absolute Stop Band Attenuation: Reference Table 1
- In Band IP3 ( $V_{TUNE} = +1\text{V}$ ): +30dBm minimum
- In Band RF Power Handling:  $\leq +20\text{dBm}$  (Peak, No Damage)
- $Z_{IN}/Z_{OUT}$ : 50Ω nominal
- Tuning Method: Voltage Control ( $V_{TUNE}$ ): +1.0V<sub>DC</sub> to +10.0V<sub>DC</sub>



### II. Environmental & Physical Requirements

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

Dash # (Order Code)	Minimum 1dB Bandwidth (F <sub>SIG</sub> %)	Insertion Loss (dB, Max)	Attenuations @ F <sub>SIG</sub> ±10% (dB, Min)	Attenuations @ F <sub>SIG</sub> ±20% (dB, Min)
TF0112-001	1	7	18	28
TF0112-002	2	6	16.5	26.5
TF0112-003	3	5	15	25
TF0112-004	4	4	13.5	23.5
TF0112-005	5	3	12	22

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

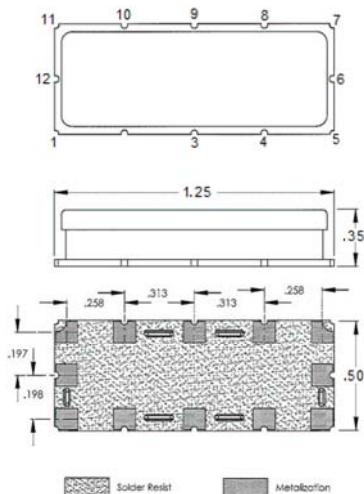
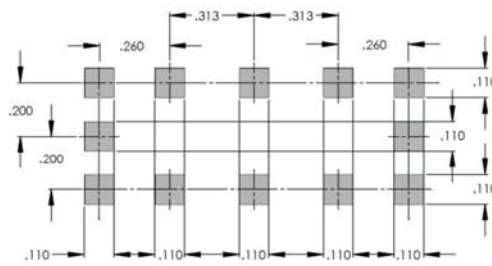


Figure 1: TF0112 Outline & PAD Layout Drawing



Suggested PCB Layout

PAD	Function
1	RF Input
5	RF Output
9	Control Voltage
2 3 4 6 7 8 10 11 12	Ground

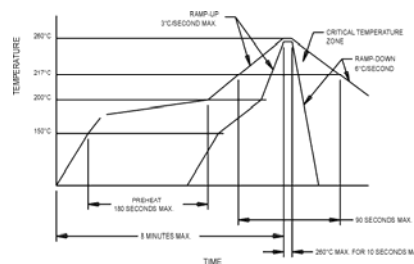


Figure 2: Reflow Profile

### III. Data Sheet Revision:

Date	Rev.	Author	Details of Revision
08/28/14	B	BRM	Updated specifications and added standard configuration Table 1.
07/10/13	A	BRM	Updated the IP3 Specification point to clarify that this is the In Band IP3.
07/09/13	-	BRM	Original Draft.