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**SURFACE ACOUSTIC WAVE FILTER**

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1. APPLICATION: TV IF FILTER

2. SYSTEM: M/N

3. MODEL: VTF4503D

4. ELECTRICAL CHARACTERISTICS

4-1 Insertion Loss:		STD 2 dB
4-2 Attenuation ( ref. : 44 MHz):		
fp - 4.5	41.25 MHz	-11.3 2.0 dB
fp - 3.58	42.17 MHz	0.3 2.0 dB
fp	45.75 MHz	-5.8 2.0 dB
fp - 6	39.75 MHz	-41 dB Max.
fp + 1.5	47.25 MHz	-41 dB Max.
4-3 Amplitude ripple within passband:		0.5 dB Max.
4-4 Outband Rejection:		
35.00 to 39.75 MHz		-36.0 dB Max.
47.25 to 55.00 MHz		-36.0 dB Max.
4-5 Temperature Coefficient Of Center Frequency:		-75 ppm/ Max.
4-6 Maximum DC Voltage:		10V DC.
4-7 Operating Temperature Range:		-10 to +70
4-8 Storage Temperature Range:		-20 to +80

5. RELIABILITY TEST

5-1 Mechanical Shock

The components shall remain within the electrical specifications after 1000 shocks, acceleration  $392 \text{ m/s}^2$ , duration 6 milliseconds.

5-2 Vibration Fatigue

The components shall remain within the electrical specifications after loaded vibration of 600 rpm to 3300 rpm, amplitude 1.5 mm, x, y, z, direction for 2 hours.

5-3 Terminal Strength

The components shall remain within the electrical specifications after pulled 2 kgs weight for 10 seconds towards an axis of each terminal.

5-4 High Temperature Storage

The components shall remain within the electrical specifications after being Kept at the  
85 ambient temperature for 96 hours, then kept at room temperature for 2 hours.

5-5 Low Temperature Storage

The components shall remain within the electrical specifications after being kept at the  
-25 for 96 hours, then kept at room temperature for 2 hours.

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## 5-6 Humidity Test

The components shall remain within the electrical specifications after being kept at the condition of ambient temperature 40 °C, and 90 to 95% RH for 96 hours, then kept at room temperature and normal humidity for 2 hours.

## 5-7 Thermal Shock

The components shall remain within the electrical specifications after 10 cycles of Heat-Cycles-Testing (one cycle: -25 °C for 20 minutes, then 85 °C for 20 minutes), then kept at room temperature for 2 hours.

## 5-8 Solder-heat Resistance

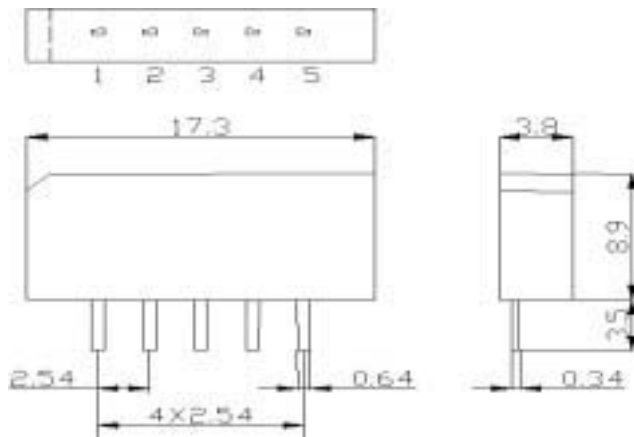
The components shall remain within the electrical specifications after dipped in the solder at 260 °C for 10 ± 1 seconds, then kept at room temperature for 2 hours. (Terminal must be dipped leaving 1.5 mm from the case.)

## 5-9 Solder ability

Solder ability of terminals shall be kept at more than 90% after dipped in the solder flux at 235 ± 5 °C for 2 ± 0.5 seconds.

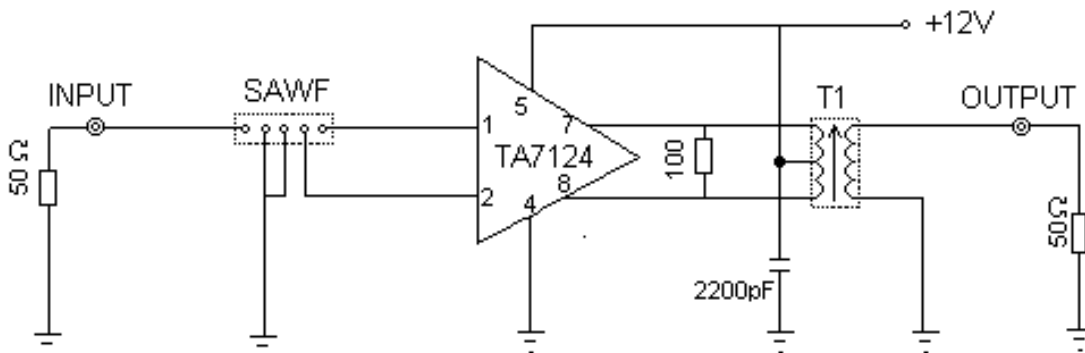
## 6. PACKAGE DIMENSION

unit:mm

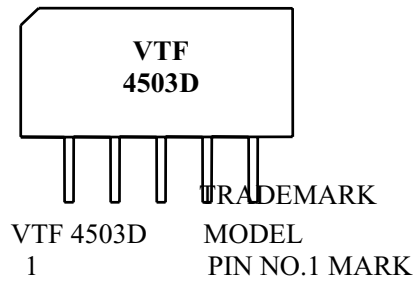


1. INPUT
2. INPUT
3. GROUND
4. OUTPUT
5. OUTPUT

## 7. MEASUREMENT CIRCUIT



## 8. MARKING



## 9. FREQUENCY RESPONSE

