

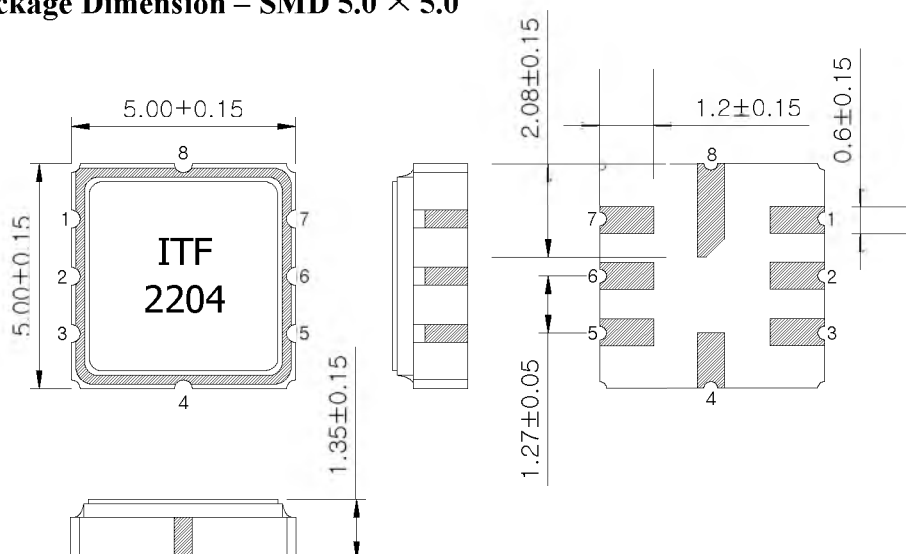
SAW Bandpass Filter F2204



Features

- RF bandpass filter
- High attenuation
- No matching 50Ω single-ended operation
- Ceramic Surface Mounted Device (SMD) Package (5.0 mm * 5.0 mm)
- RoHS Compliant

Package Dimension – SMD 5.0 × 5.0



Dimensions shown are nominal in millimeters

Body : Al₂O₃ Ceramic

Lid : Kovar, Ni Plated

Terminations : Au plating 0.3 ~ 1.0 μm, Over a 1.27 ~ 8.89 μm Ni Plating

Pin Configuration

2	Input
6	Output
1, 3, 4, 5, 7, 8	Case ground

Maximum Ratings

Parameter	Unit	Minimum	Typical	Maximum
Operating Temperature Range	℃	-40	25	85
Storage Temperature Range	℃	-40	25	85
Power Handling Capability	dBm	-	0	-

Electrostatics Sensitive Device (ESD)

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Specifications

$F_c = 220 \text{ MHz}$

Terminating source impedance : 50Ω

Terminating load impedance : 50Ω

	Minimum	Typical	Maximum	Unit
Center Frequency (F_c)	-	220	-	MHz
Insertion Loss (In $F_c \pm 1.5 \text{ MHz}$)	-	3.5	4.0	dB
Amplitude Ripple (In $F_c \pm 1.5 \text{ MHz}$)	-	1.2	2.0	dBp-p
VSWR (In $F_c \pm 1.5 \text{ MHz}$)	-	1.8	2.5	
Relative Attenuation 120.0 ~ 177.5 MHz 259.5 ~ 320.0 MHz	50 50	55 55	- -	dB
Temperature Range (Operational)	-40	25	85	$^{\circ}\text{C}$
Input/Output Impedance		50		Ohms

Notes :

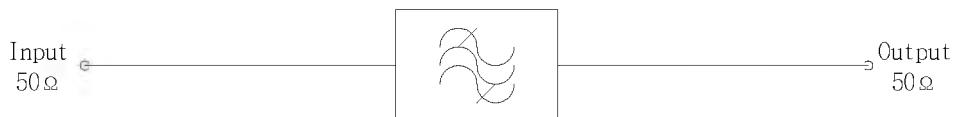
- 1) All specifications are based on the matching schematic shown below, measured by Agilent Network analyzer and full 2 port calibration.
- 2) Electrical margin has been built into the design to account for the variations due to temperature drift and manufacturing tolerances

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Matching Schematic

(Actual matching values may vary due to PCB layout and parasitics)



Marking Configuration

ITF ¹⁾

2204 ²⁾

1) Manufacturer name

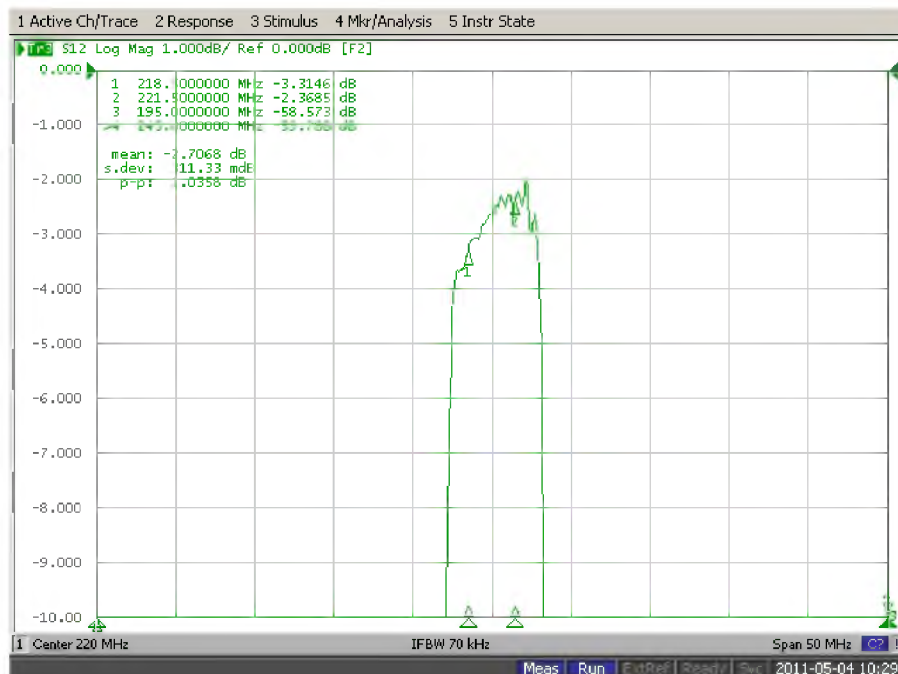
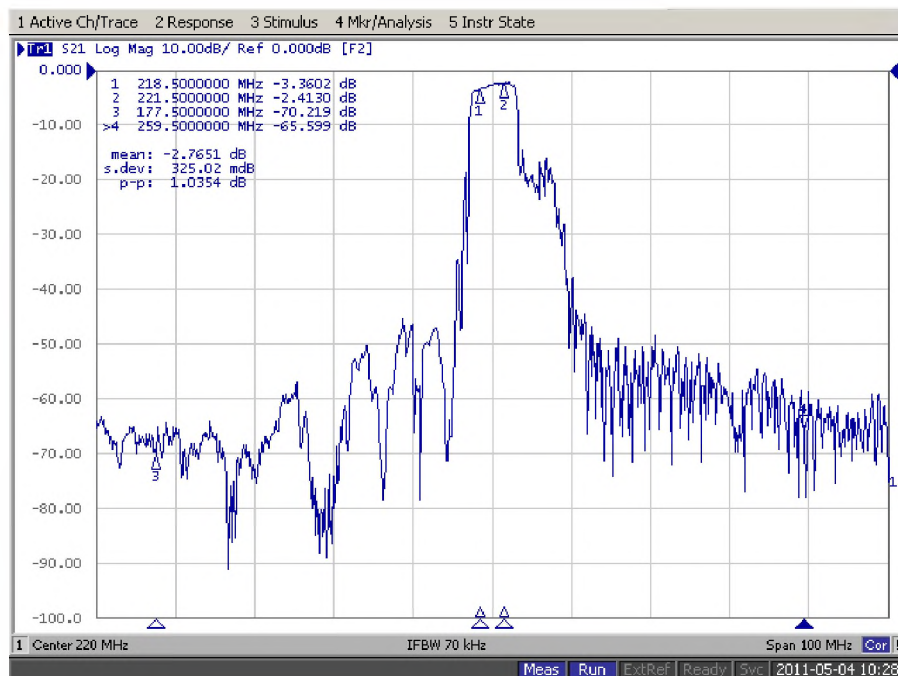
2) Marking Number

* Ink or Laser Marking available

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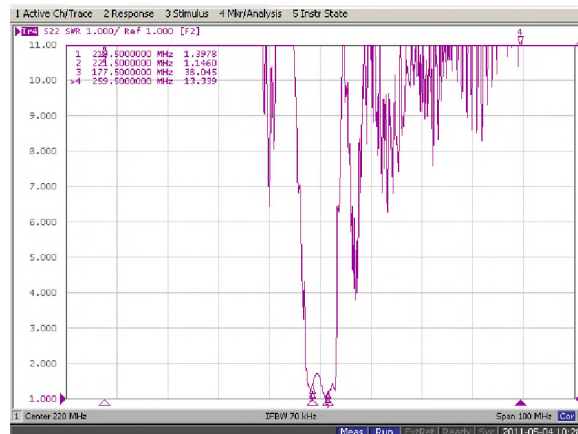
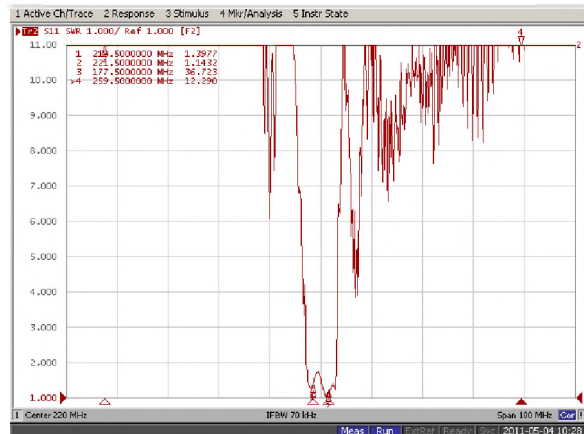
Typical Performance (at 25°C)



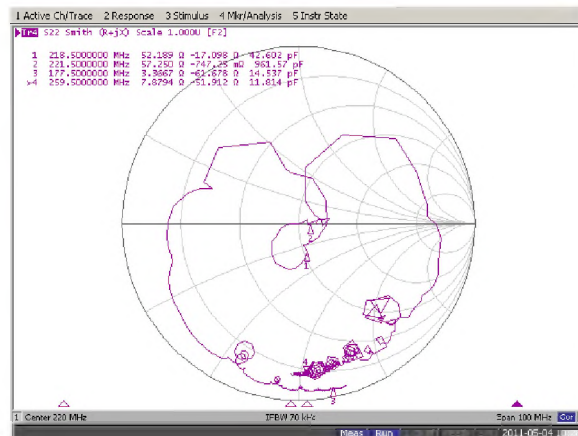
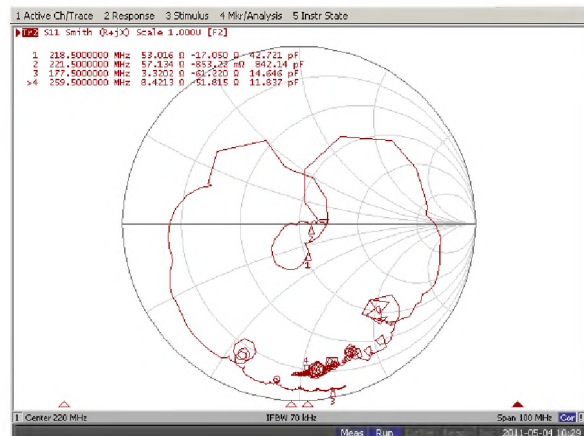
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Input / Output VSWR Charts



Input / Output Smith Charts

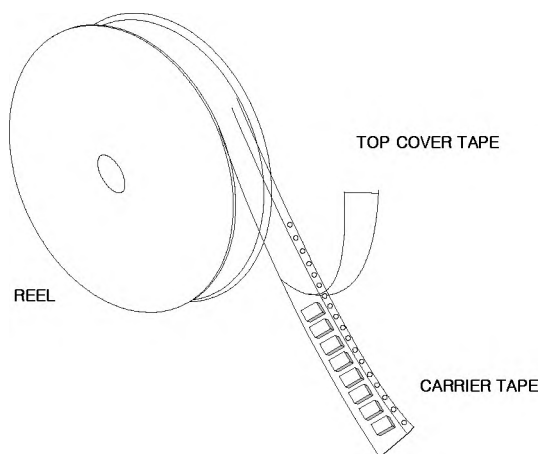


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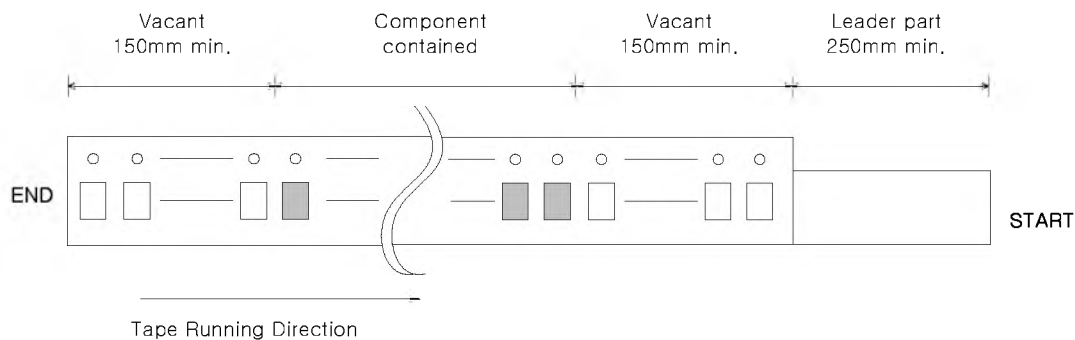
Packing Specification

1. Reeling Quantity : 1000 pcs / reel
2. Taping Structure : The tape shall be wound around the reel in the direction shown below.



Tape Specification

1. Leader part and vacant position specification

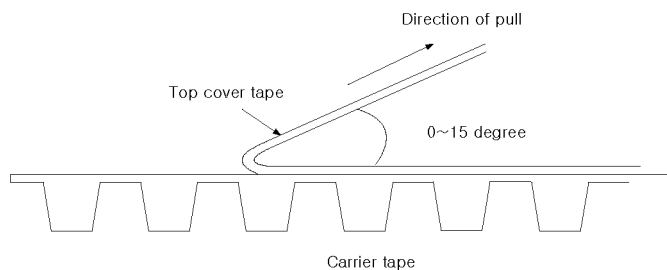


2. Tensile strength of carrier tape

4.4N/mm width

3. Top cover tape adhesion

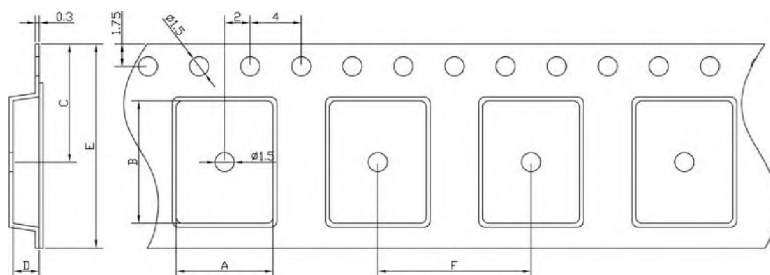
- 1) pull off angle : 0~15°
- 2) speed : 300mm/min
- 3) force : 20~70g



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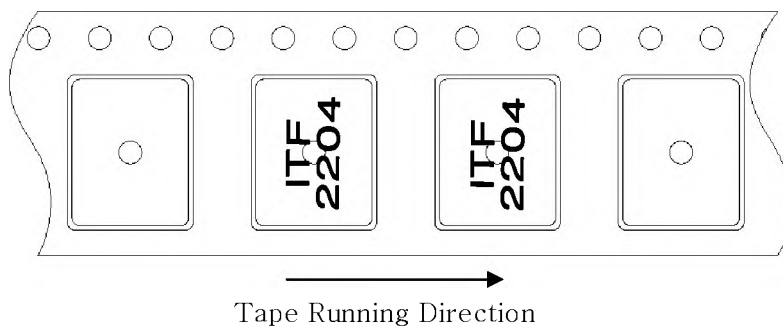


Carrier Tape Dimensions [unit : mm]



A	5.50 ± 0.1
B	5.50 ± 0.1
C	7.25 ± 0.1
D	1.95 ± 0.1
E	12.00 ± 0.1
F	8.00 ± 0.1

Part Direction



Reel Dimensions [unit : mm]

