

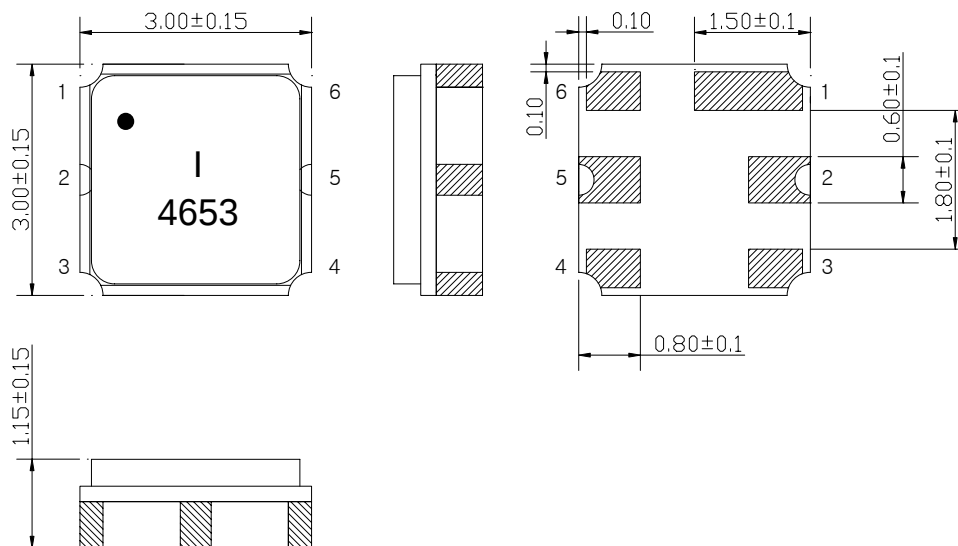
SAW Bandpass Filter F4653



Features

- RF bandpass filter for CDMA450 Rx. Part
- Usable bandwidth 5MHz(462.5 MHz ~ 467.5 MHz)
- High attenuation
- No matching single-balanced operation (single 50Ω / balance 100Ω)
- Ceramic Surface Mounted Device Package (3.0 mm × 3.0mm)
- RoHS Compliant

Package Dimensions



Dimensions shown are nominal in millimeters

Body : Al_2O_3 Ceramic

Lid : Kovar, Ni Plated

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

Pin Configurations

2	Input
4	Output (+)
6	Output (-)
1, 3, 5	Case ground

Maximum Ratings

Parameters	Unit	Minimum	Typical	Maximum
Operating Temperature Range	$^{\circ}\text{C}$	-30	25	85
Storage Temperature Range	$^{\circ}\text{C}$	-40	-	85
Power Handling Capability	dBm	-	-	20

Electrostatics Sensitive Device (ESD)

	ITF Co., Ltd. 102-901, Bucheon Technopark 364, Samjeong-Dong, Ojeong-Gu, Bucheon-City, Gyeonggi-Do, Korea 421-809	Part No.	F4653	
		Rev. Date	2006-04-05	
		Rev.	DR4010-PS11	1/8

SAW Bandpass Filter F4653**Preliminary Specifications**

	Minimum	Typical	Maximum	Unit
Center Frequency (Fc)	-	465.0	-	MHz
Insertion Loss (In Fc +/- 2.5 MHz)	-	2.5	3.0	dB
Amplitude Ripple (In Fc +/- 2.5 MHz)	-	0.5	1.0	dB
VSWR (In Fc +/- 2.5 MHz)	-	1.7	2.1	
Relative Attenuation 0.3 MHz ~ 450.0 MHz 452.5 MHz ~ 457.5 MHz 485.0 MHz ~ 495.0 MHz 495.0 MHz ~ 1200 MHz 1200 MHz ~ 1500 MHz 1500 MHz ~ 2000 MHz	45 30 20 45 40 30	50 35 30 - - -	- - - - - -	dB
Amplitude Imbalance S31/S21 (In Fc +/- 2.5 MHz)	-	± 0.15	± 0.30	dB
Phase Imbalance (∅ S31 - ∅ S21 + 180°) (In Fc +/- 2.5 MHz)	-	± 2.0	± 2.5	°
Temperature Range (Operational)	-30	25	85	°C
Input RF Power (In Fc +/- 2.5 MHz)			20	dBm
Input/Output Impedance	Single 50 / balance 100			Ohms

Notes :

- 1) All specifications are based on the matching schematic shown below, measured by Agilent Network analyzer and full 3 port calibration.
- 2) Electrical margin has been built into the design to account for the variations due to temperature drift and manufacturing tolerances

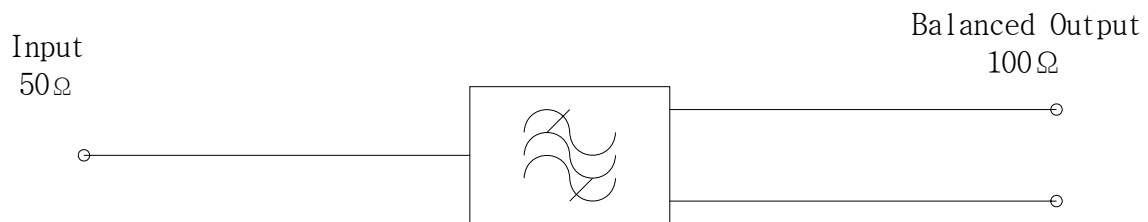
	ITF Co., Ltd. 102-901, Bucheon Technopark 364, Samjeong-Dong, Ojeong-Gu, Bucheon-City, Gyeonggi-Do, Korea 421-809	Part No.	F4653	
		Rev. Date	2006-04-05	
		Rev.	DR4010-PS11	2/8

SAW Bandpass Filter F4653



Matching Schematic

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



Marking Configuration

1)
●
I²⁾
4653³⁾

1) Pad Number 1 Index

2) Manufacturer name

3) Marking Number

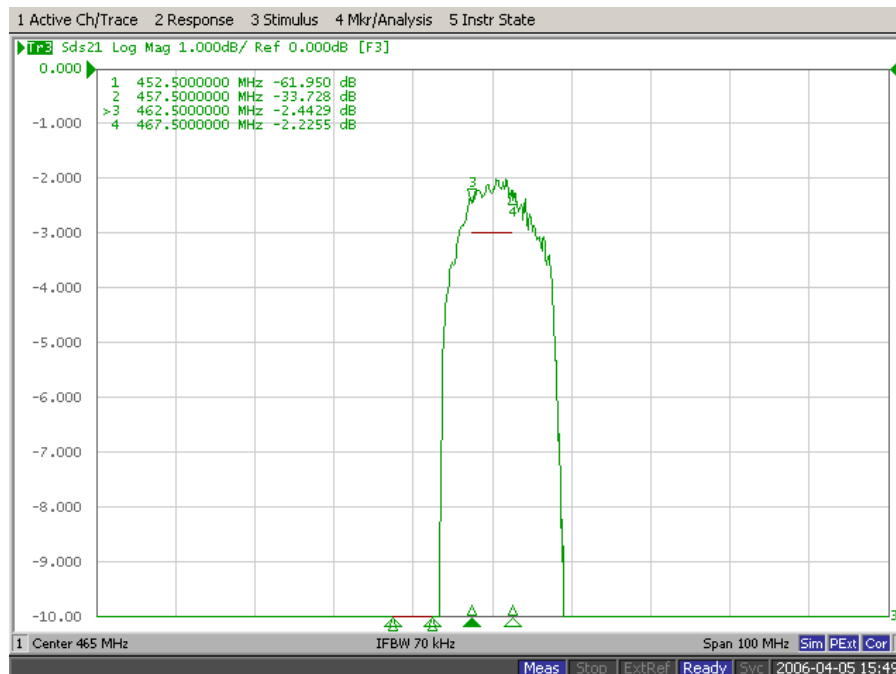
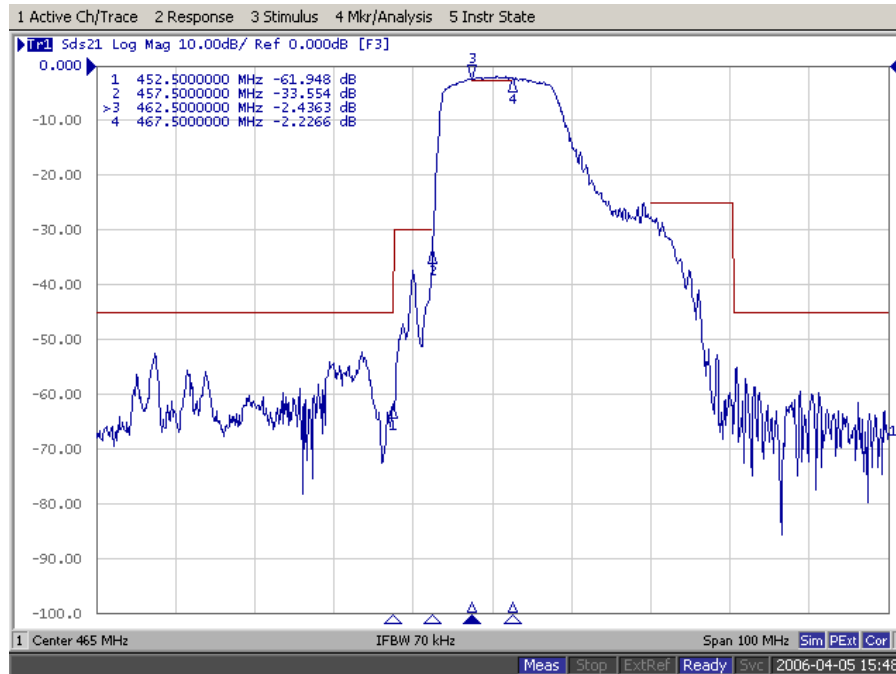
Ink or Laser Marking available

	ITF Co., Ltd. 102-901, Bucheon Technopark 364, Samjeong-Dong, Ojeong-Gu, Bucheon-City, Gyeonggi-Do, Korea 421-809	Part No.	F4653	
		Rev. Date	2006-04-05	
		Rev.	DR4010-PS11	3/8

SAW Bandpass Filter F4653



Typical Performance (at 25°C)



ITF Co., Ltd.

102-901, Bucheon Technopark 364,
Samjeong-Dong, Ojeong-Gu, Bucheon-City,
Gyeonggi-Do, Korea 421-809

Part No.

F4653

Rev. Date

2006-04-05

Rev.

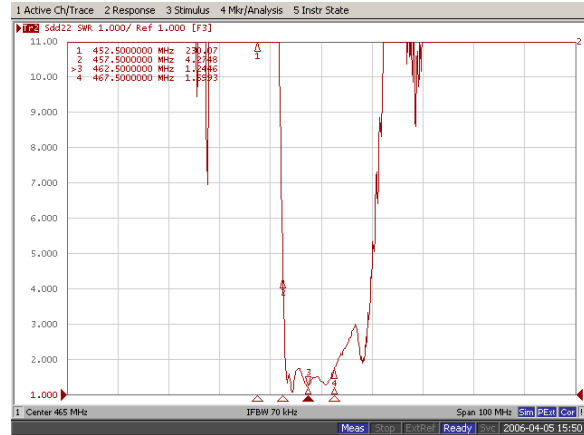
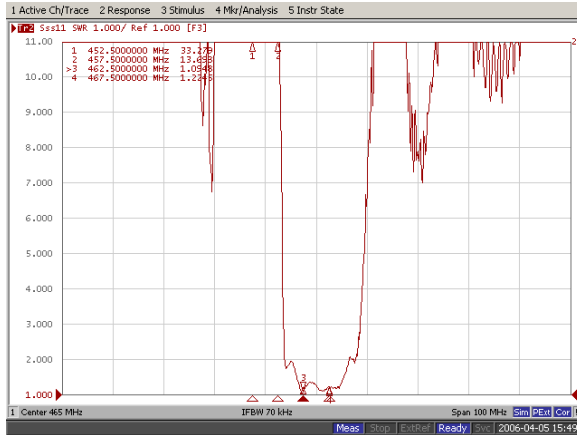
DR4010-PS11

4/8

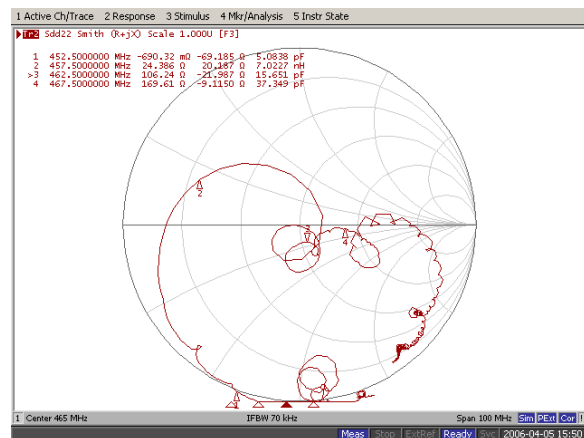
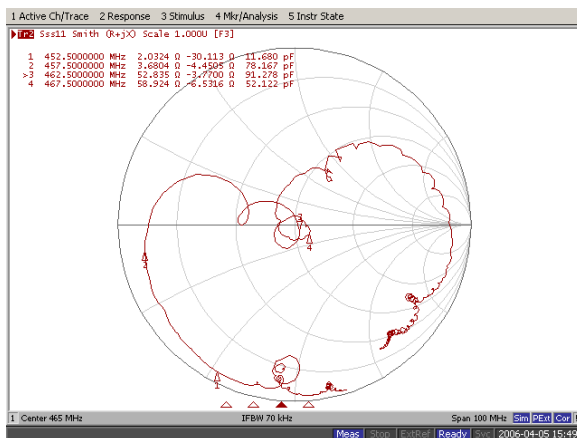
SAW Bandpass Filter F4653



Input / Output VSWR Charts



Input / Output Smith Charts



ITF Co., Ltd.
102-901, Bucheon Technopark 364,
Samjeong-Dong, Ojeong-Gu, Bucheon-City,
Gyeonggi-Do, Korea 421-809

Part No.

F4653

Rev. Date

2006-04-05

Rev.

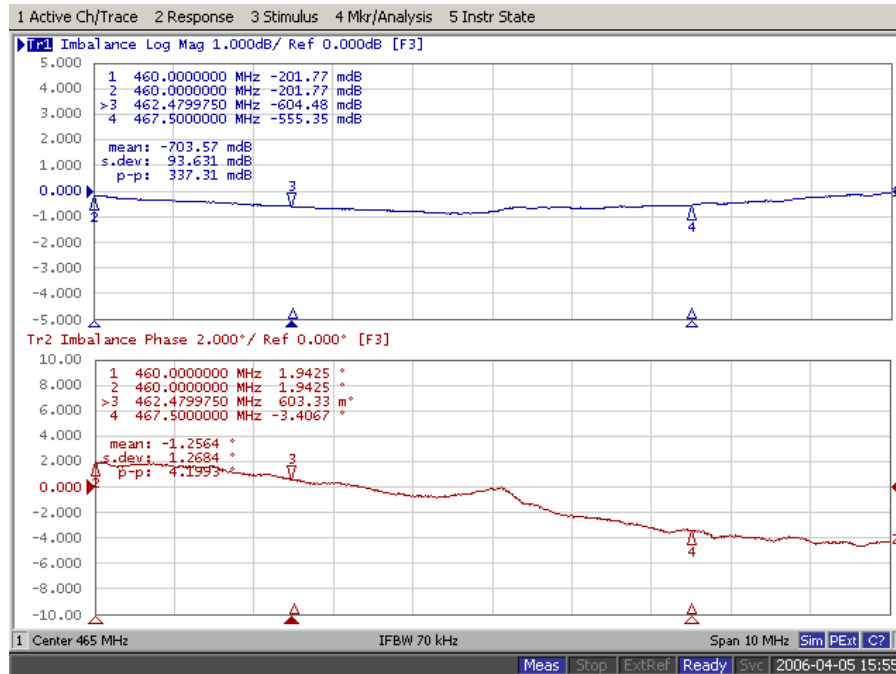
DR4010-PS11

5/8

SAW Bandpass Filter F4653



Amplitude/Phase Imbalance

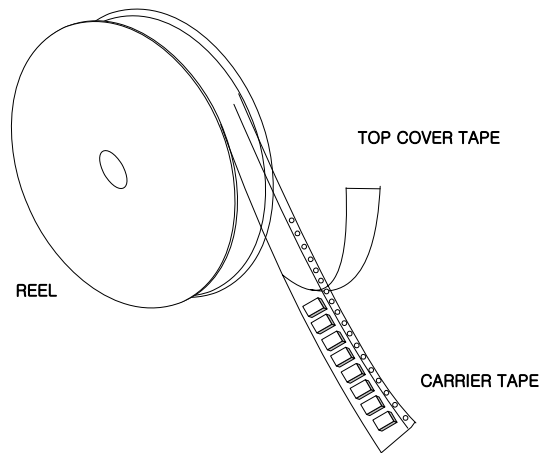


SAW Bandpass Filter F4653



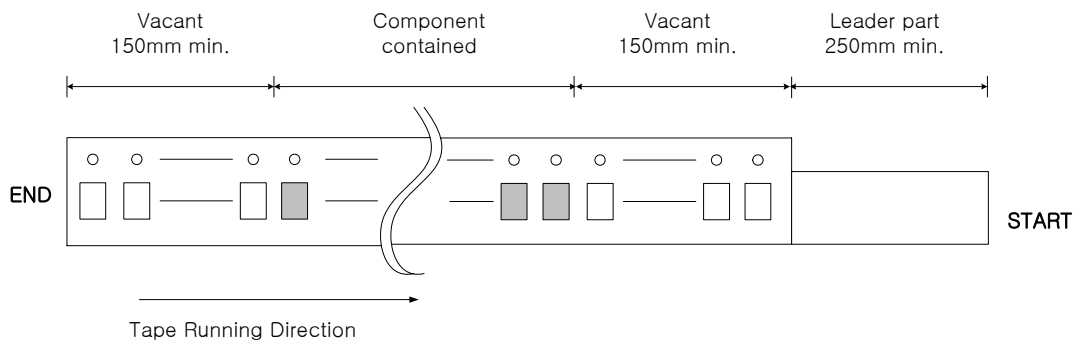
Packing Specification

1. Reeling Quantity : 3000 pcs / 13" reel (or 1000 pcs / 7" 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

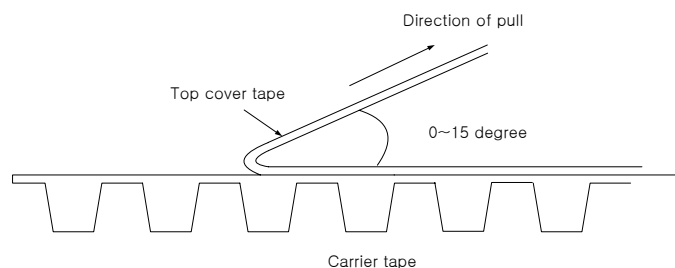


2. Tensile strength of carrier tape

4.4N/mm width

3. Top cover tape adhesion

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

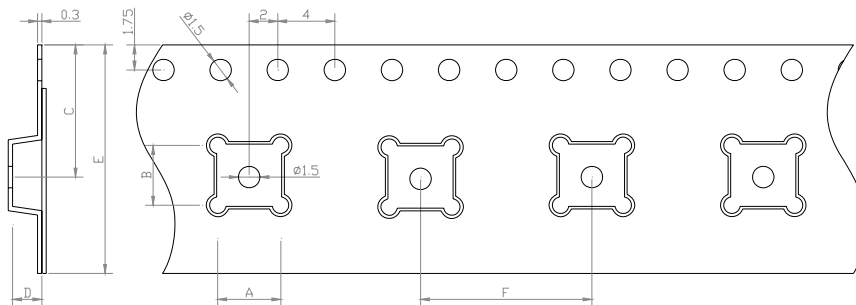


	ITF Co., Ltd. 102-901, Bucheon Technopark 364, Samjeong-Dong, Ojeong-Gu, Bucheon-City, Gyeonggi-Do, Korea 421-809	Part No.	F4653	
		Rev. Date	2006-04-05	
		Rev.	DR4010-PS11	7/8

SAW Bandpass Filter F4653

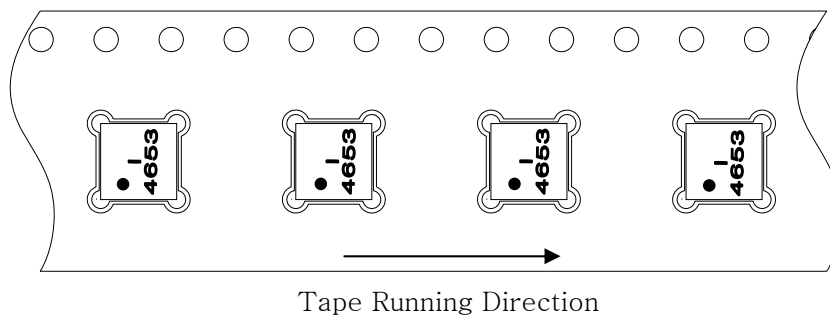


Carrier Tape Dimensions [unit : mm]

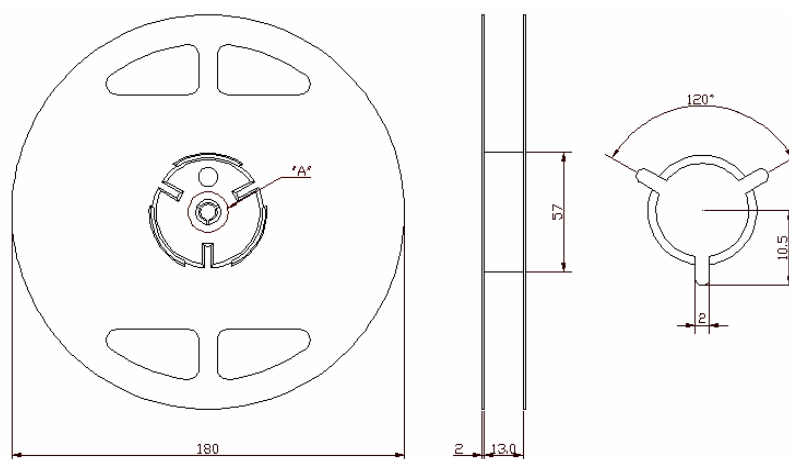


A	3.40 ± 0.1
B	3.40 ± 0.1
C	7.25 ± 0.1
D	1.70 ± 0.1
E	12.00 ± 0.1
F	8.00 ± 0.1

Part Direction



Reel Dimensions [unit : mm]



	ITF Co., Ltd. 102-901, Bucheon Technopark 364, Samjeong-Dong, Ojeong-Gu, Bucheon-City, Gyeonggi-Do, Korea 421-809	Part No.	F4653	
		Rev. Date	2006-04-05	
		Rev.	DR4010-PS11	8/8