

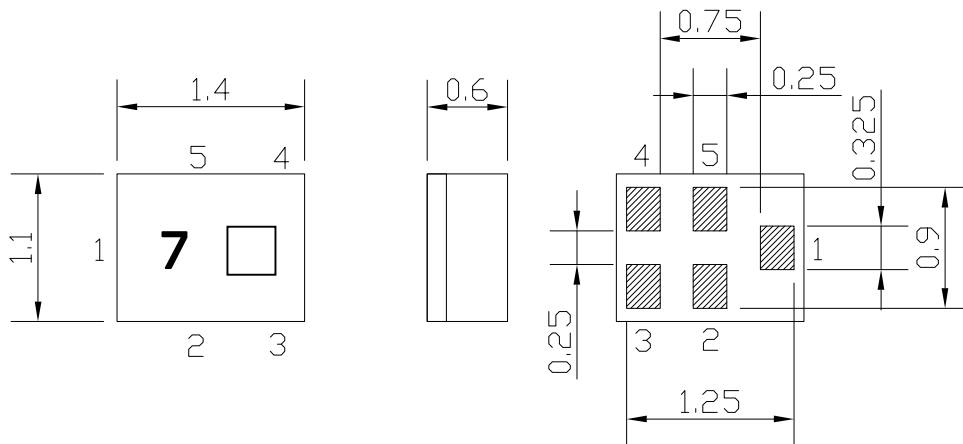
SAW Bandpass Filter F1G5P



Features

- RF bandpass filter
- No matching 50Ω single-ended operation
- Ceramic Surface Mounted Device Package (1.4 mm × 1.1 mm)
- RoHS Compliant
- This part is compliant with AEC-Q200

Package Dimensions



Dimensions shown are nominal in millimeters

Body : Al₂O₃ Ceramic

Lid : Kovar, Ni Plated

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

Pin Configuration	
1	Input
4	Output
2, 3, 5	Ground

Maximum Ratings

Parameter	Unit	Minimum	Typical	Maximum
Operating Temperature Range	°C	-40	25	105
Storage Temperature Range	°C	-45	25	125
Power Handling Capability	dBm	-	-	13

Electrostatics Sensitive Device (ESD)

	I T F Co., Ltd. 102-901, Bucheon Technopark 364, Samjeong-Dong, Ojeong-Gu, Bucheon-City, Gyeonggi-Do, Korea 421-809	Part No.	F1G5P	
		Rev. Date	2017-1-31	
		Rev.	AS03	1/8

SAW Bandpass Filter F1G5P




Specifications (GPS + Glonass)

$F_c = 1583.5 \text{ MHz}$

	Minimum	Typical	Maximum	Unit
Center Frequency (F_c)	-	1583.5	-	MHz
Insertion Loss (1561 ~ 1606 MHz)	-	1.5	2.1	dB
Amplitude Ripple (1561 ~ 1606 MHz)	-	0.5	0.8	dB p-p
VSWR (1561 ~ 1606 MHz)	-	1.5	1.9	
Attenuation				
0.3 ~ 824 MHz	20	25	-	dB
824 ~ 925 MHz	20	25	-	
1427 ~ 1463 MHz	25	30	-	
1710 ~ 1785 MHz	25	30	-	
1850 ~ 1980 MHz	25	30	-	
2400 ~ 2570 MHz	27	32	-	
2570 ~ 3000 MHz	30	35	-	
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

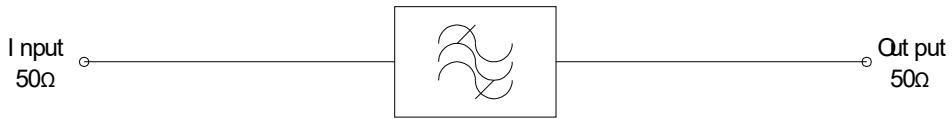
	I T F Co., Ltd. 102-901, Bucheon Technopark 364, Samjeong-Dong, Ojeong-Gu, Bucheon-City, Gyeonggi-Do, Korea 421-809	Part No.	F1G5P	
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Matching Schematic

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



Marking Configuration

7¹⁾ □²⁾

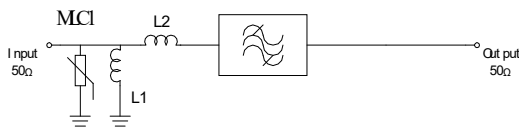
1) Series Number

2) Date Code

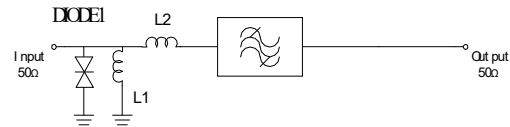
* Ink or Laser Marking available

ESD protection of SAW filters

- SAW filters are weak to Electric Static Discharge
- Generally, to overcome damages of ESD, recommend suitable matching structure. (Depending input impedance)

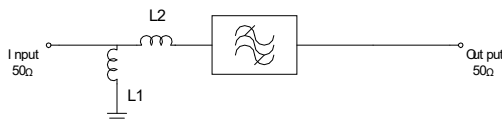


(Case A : MLC varistor used ESD matching structure)

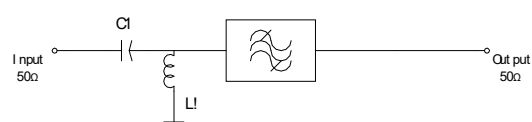


(Case B : Diode used ESD matching structure)

- In case weak ESD used simple L-C component matching structure. (Depending input impedance)



(Case C : Shunt L // Series L matching structure)



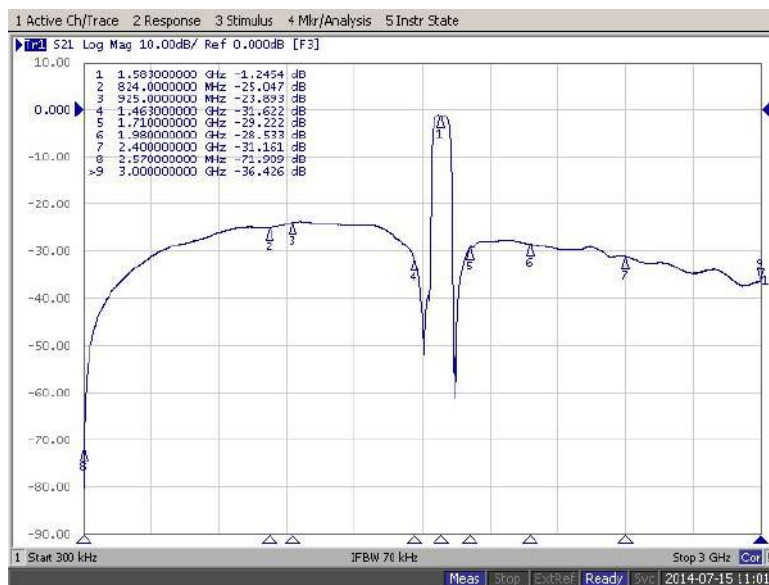
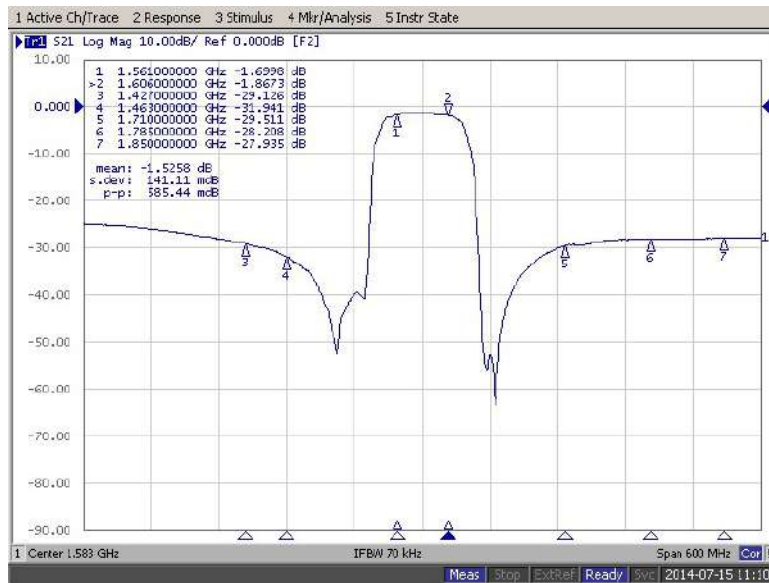
(Case D : Series C // Shunt L matching structure)

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SAW Bandpass Filter F1G5P



Typical Performance (at 25°C)

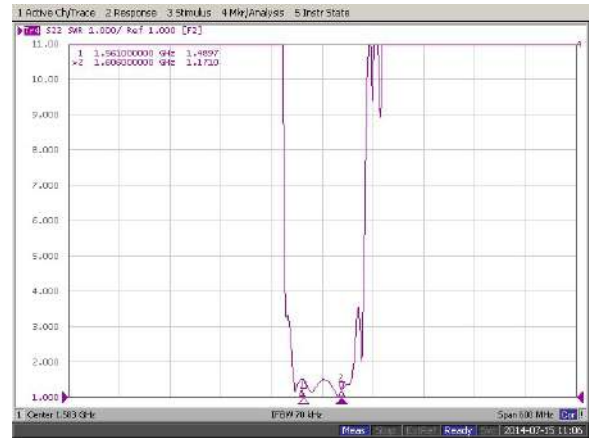
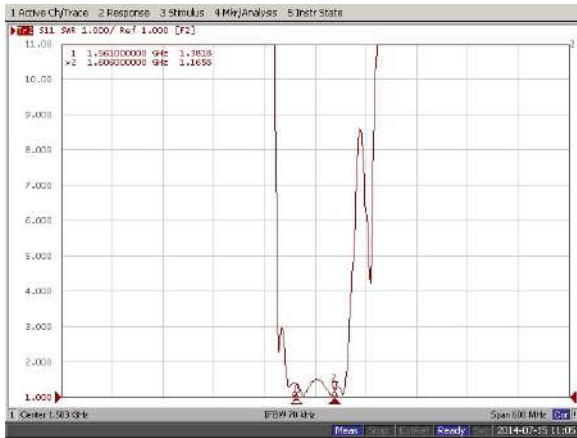


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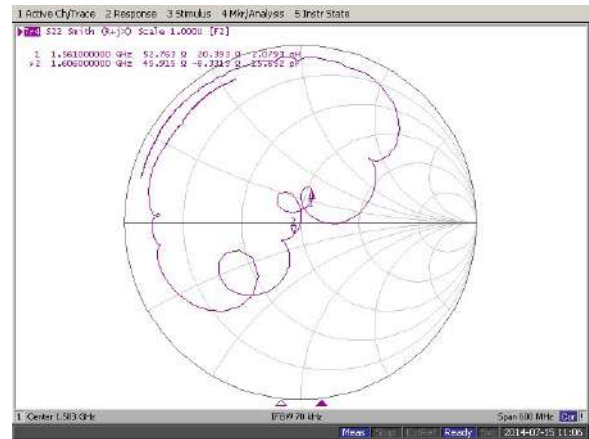
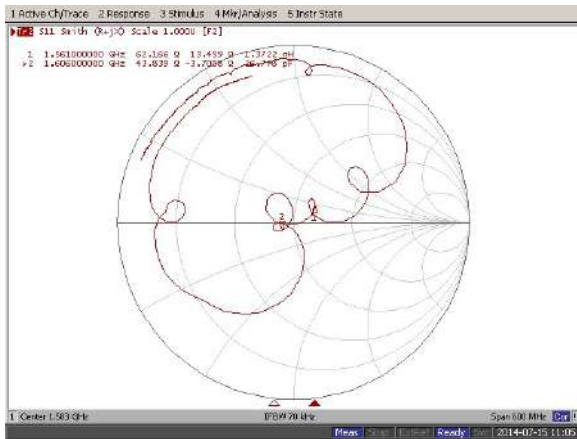
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Input / Output VSWR Charts



Input / Output Smith Charts



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

Part No.

F1G5P

Rev. Date

2017-1-31

Rev.

AS03

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SAW Bandpass Filter F1G5P




Specifications (GPS + Glonass + Beidou)

Fc = 1588 MHz

	Minimum	Typical	Maximum	Unit
Center Frequency (Fc)	-	1588	-	MHz
Insertion Loss (1574.42 ~ 1576.42 MHz) (1559.05 ~ 1563.15 MHz) (1573.37 ~ 1577.47 MHz) (1597.78 ~ 1605.66 MHz)	-	1.5 1.9 1.6 2.0	1.8 2.2 1.9 2.3	dB
Amplitude Ripple (1574.42 ~ 1576.42 MHz) (1559.05 ~ 1563.15 MHz) (1573.37 ~ 1577.47 MHz) (1597.78 ~ 1605.66 MHz)	-	0.1 0.4 0.2 0.3	0.4 0.7 0.5 0.6	dB p-p
VSWR (1574.42 ~ 1576.42 MHz) (1559.05 ~ 1563.15 MHz) (1573.37 ~ 1577.47 MHz) (1597.78 ~ 1605.66 MHz)	-	1.3 1.4 1.5 1.2	1.7 1.8 1.9 1.5	
Attenuation 0.3 ~ 824 MHz 824 ~ 925 MHz 1427 ~ 1463 MHz 1710 ~ 1785 MHz 1850 ~ 1980 MHz 2400 ~ 2570 MHz 2570 ~ 3000 MHz	20 20 25 25 25 27 30	25 25 30 30 30 32 35	- - - - - - -	dB
Input/Output Impedance		50		Ohms

Notes :

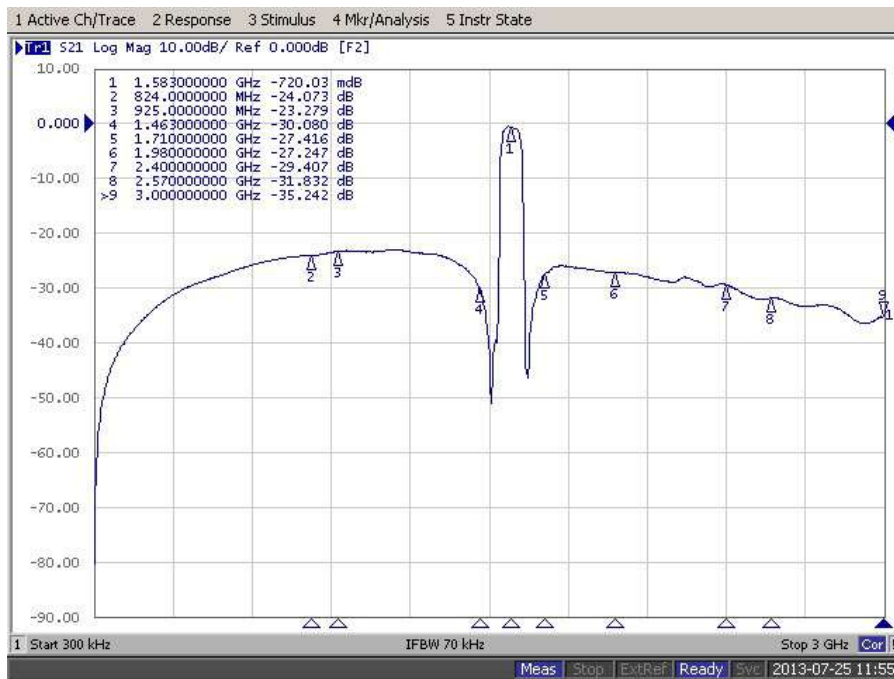
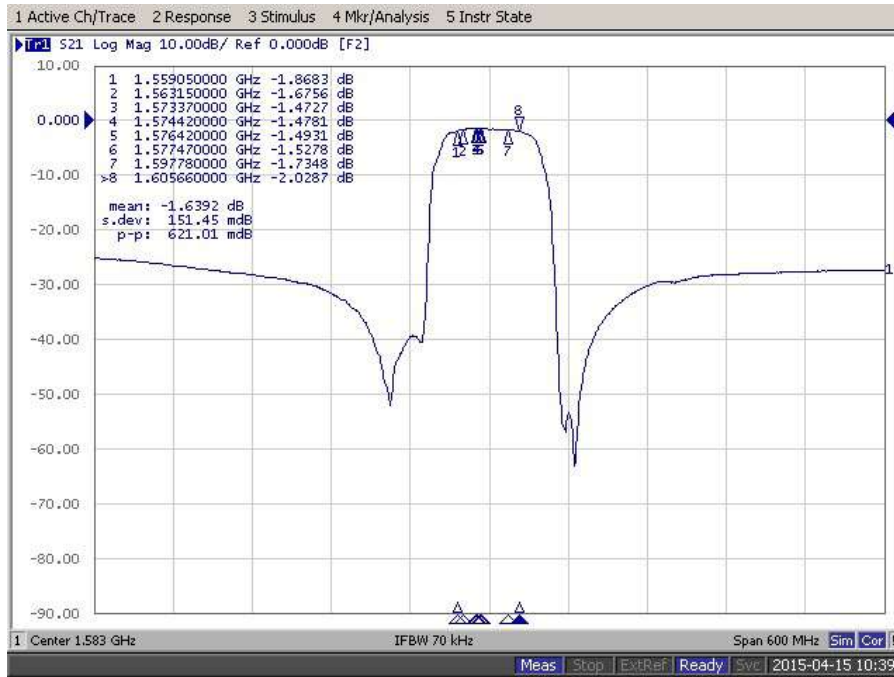
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Typical Performance (at 25°C)



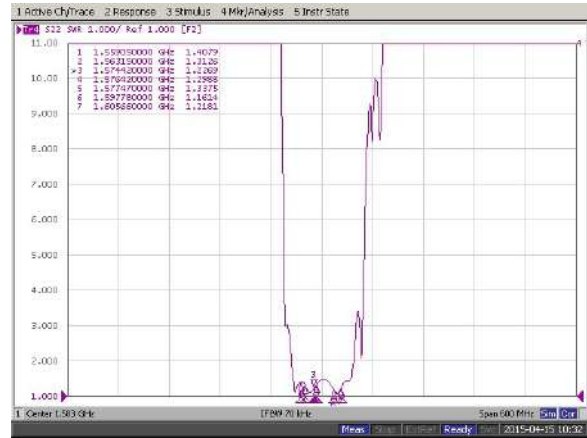
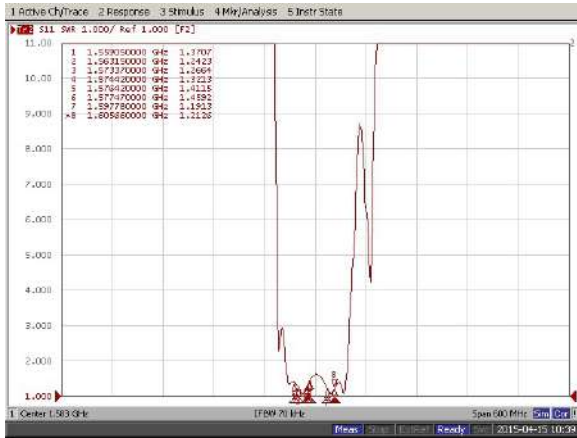
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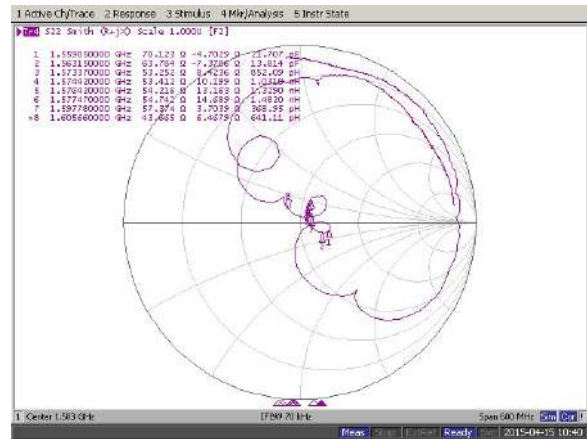
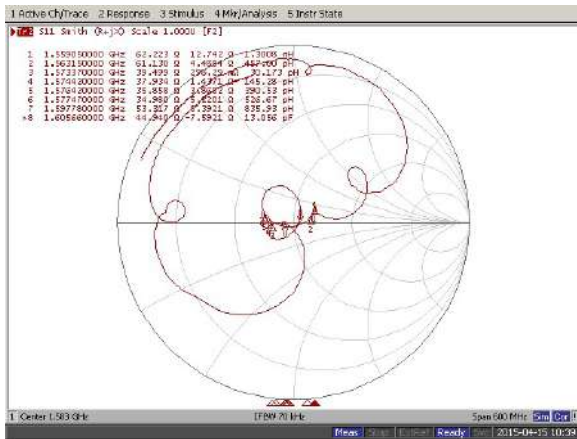
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Input / Output VSWR Charts



Input / Output Smith Charts



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