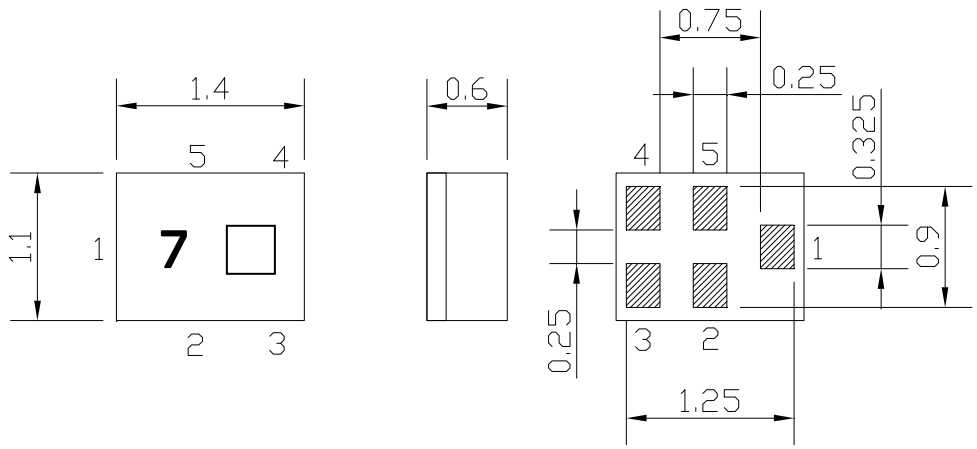
SAW Bandpass Filter F1G5P

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 : Al_2O_3 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	℃	-40	25	110
Storage Temperature Range	℃	-45	25	125
Power Handling Capability	dBm	-	-	13

Electrostatics Sensitive Device (**ESD**)

Specifications (GPS + Glonass)

Fc = 1583.5 MHz

	Minimum	Typical	Maximum	Unit
Center Frequency (Fc)	-	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				dB
0.3 ~ 824 MHz	20	25	-	
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 :

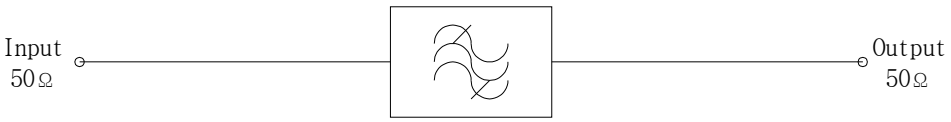
1) All specifications are based on the matching schematic shown below, measured by Agilent Network analyzer and full 2 port calibration.

2) Electrical margin has been built into the design to account for the variations due to temperature drift and manufacturing tolerances

SAW Bandpass Filter F1G5P

Matching Schematic

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



Marking Configuration

7 [1] □ [2]

1) Series Number

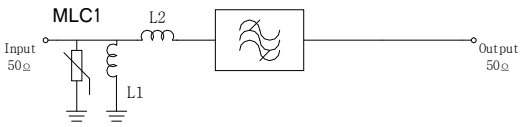
2) Date Code

* Ink or Laser Marking available

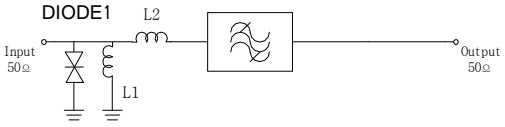
ESD protection of SAW filters

1. SAW filers are weak to Electric Static Discharge

2. Generally, to overcome damages of ESD, recommend suitable matching structure. (Depending input impedance)

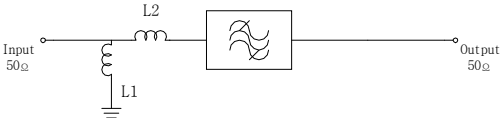


(Case A : MLC varistor used ESD matching structure)

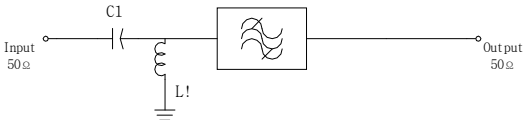


(Case B : Diode used ESD matching structure)

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

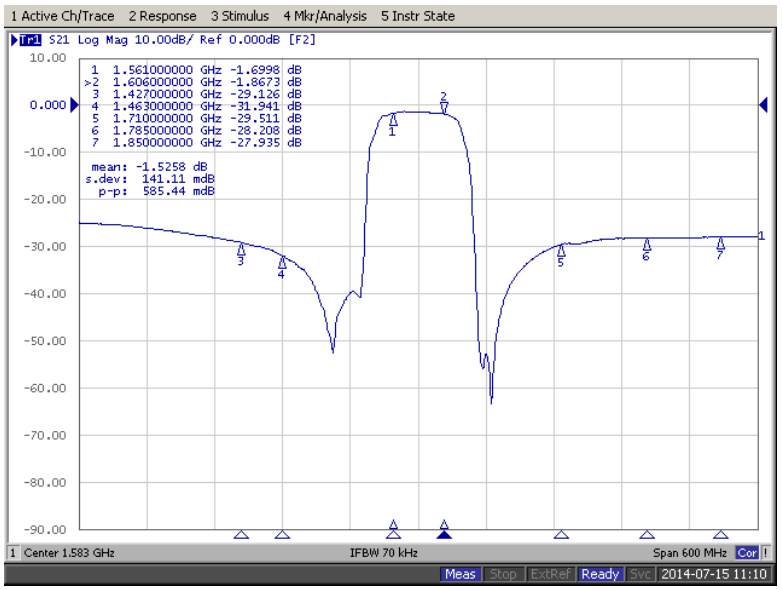


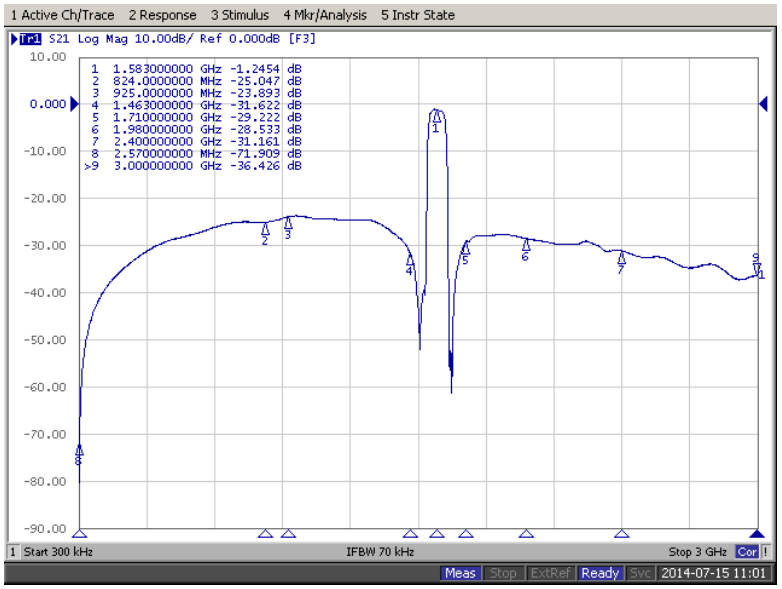
(Case C : Shunt L // Series L matching structure)



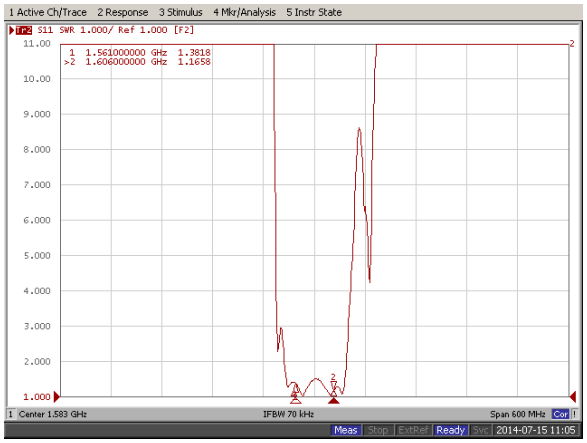
(Case D : Series C // Shunt L matching structure)

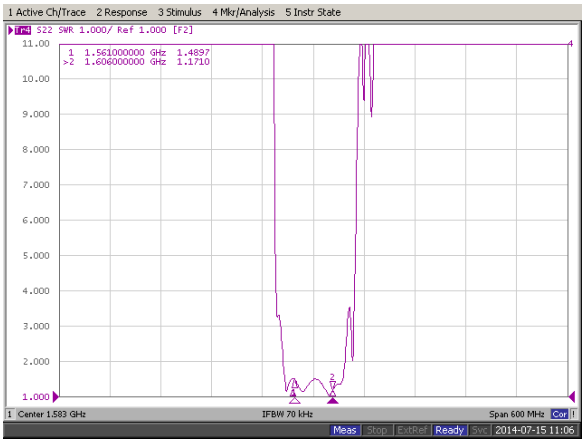
Typical Performance (at 25℃)



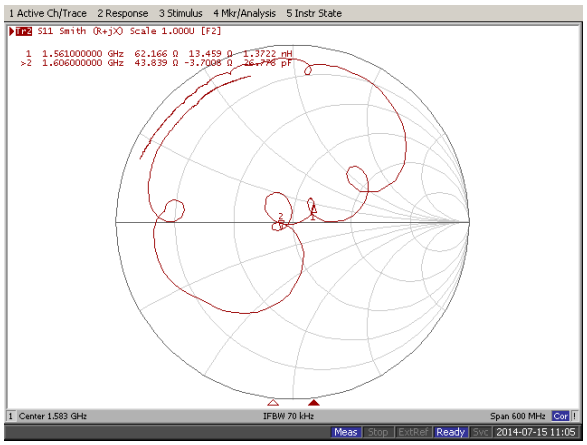


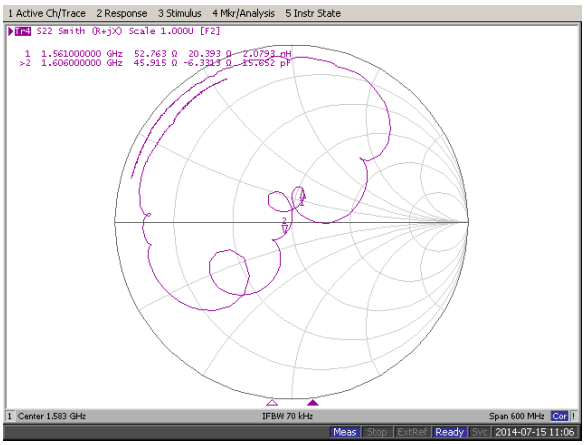
Input / Output VSWR Charts





Input / Output Smith Charts





Specifications (GPS + Glonass + Beidou)

Fc = 1588 MHz

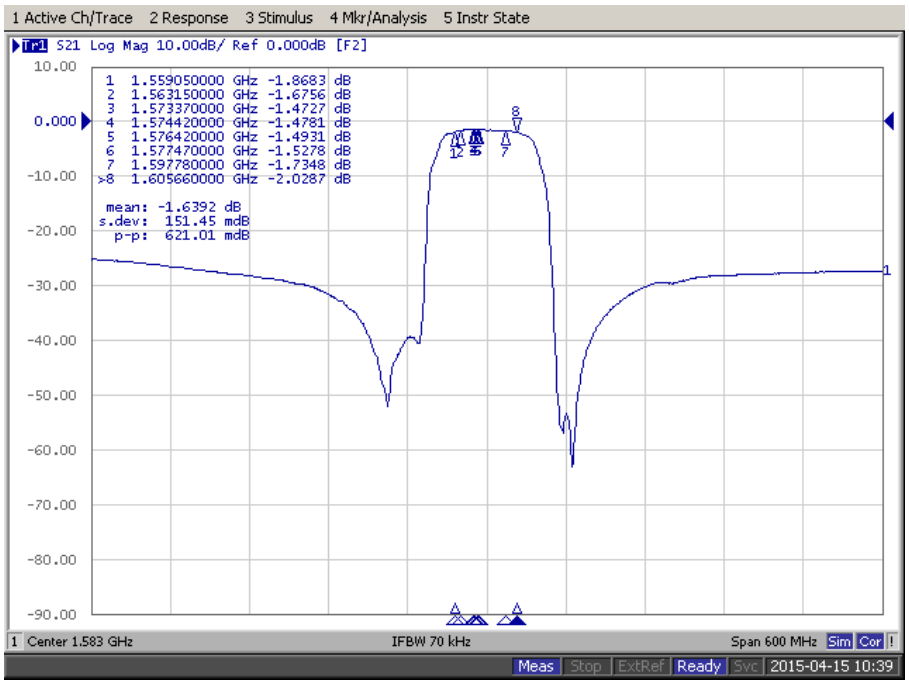
	Minimum	Typical	Maximum	Unit
Center Frequency (Fc)	-	1588	-	MHz
Insertion Loss (1574.42 ~ 1576.42 MHz) (1559.05 ~ 1563.15 MHz) (1573.37 ~ 1577.47 MHz) (1597.78 ~ 1605.66 MHz)	-	1.5 1.9 1.6 2.0	1.8 2.2 1.9 2.3	dB
Amplitude Ripple (1574.42 ~ 1576.42 MHz) (1559.05 ~ 1563.15 MHz) (1573.37 ~ 1577.47 MHz) (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

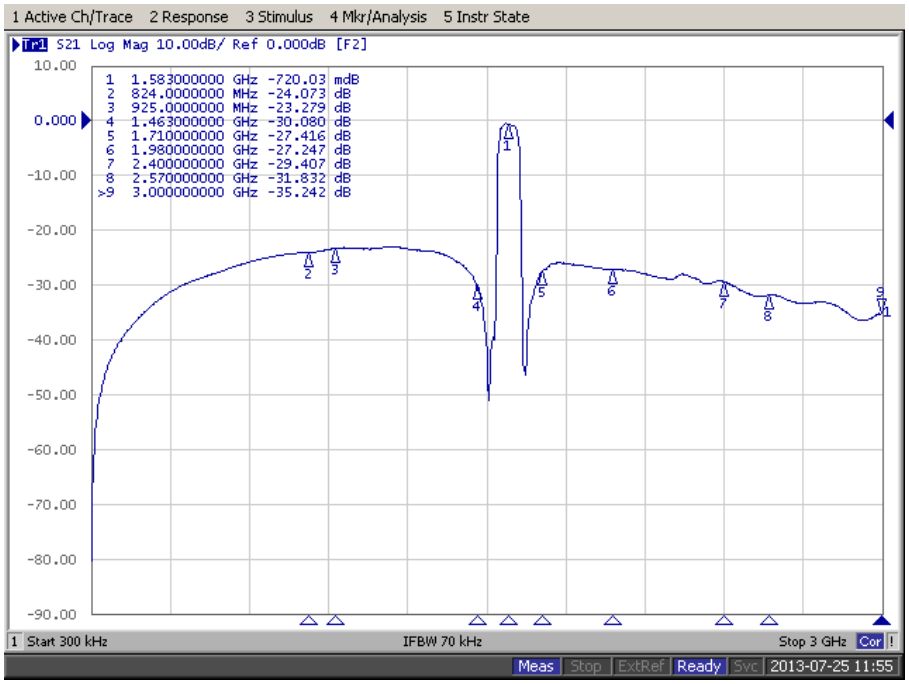
Notes :

1) All specifications are based on the matching schematic shown below, measured by Agilent Network analyzer and full 2 port calibration.

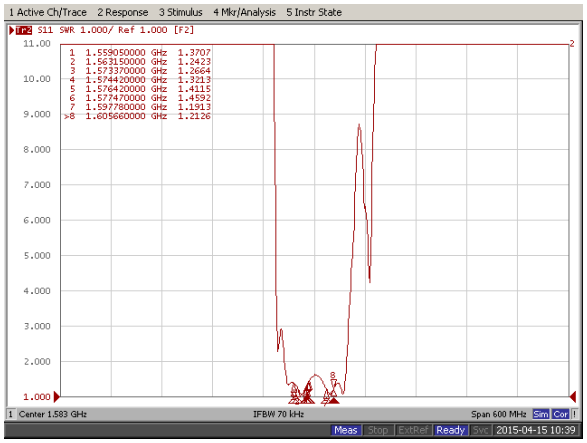
2) Electrical margin has been built into the design to account for the variations due to temperature drift and manufacturing tolerances

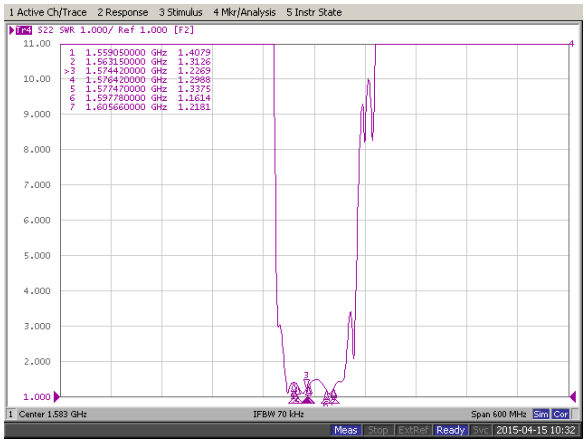
Typical Performance (at 25℃)





Input / Output VSWR Charts





Input / Output Smith Charts