

SAW Bandpass Filter F1H54

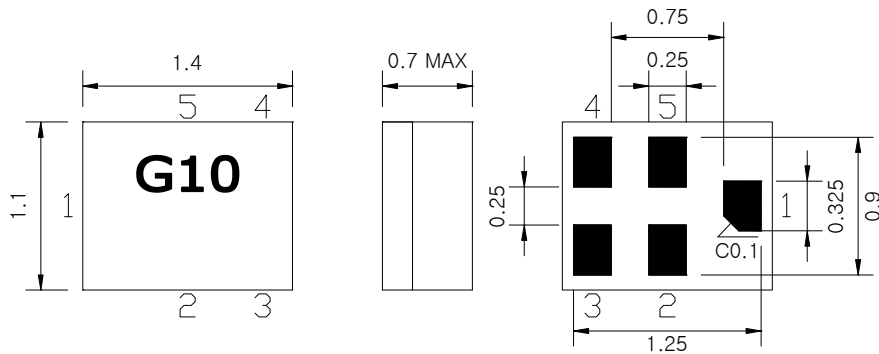
1580MHz – 46.8MHz



Features

- SAW filter for Beidou & GPS & GLONASS.
- No matching 50Ω single-ended operation
- Surface Mounted Device Package (1.4 mm × 1.1 mm × 0.7 mm)
- RoHS/RoHS2 (2015/863/EU) Compliant
- This part is compliant with AEC-Q200

Package Dimensions




** Dimensions shown are nominal in millimeters

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
DC Voltage	V	-	-	10

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.	F1H54	
		Rev. Date	2019-08-12	
		Rev.	AS02	1/5

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Specifications (GPS + Glonass + Beidou)

Fc = 1580 MHz

	Minimum	Typical	Maximum	Unit
Center Frequency (Fc)	-	1580	-	MHz
Insertion Loss (1559.09 ~ 1563.09 MHz) (1574.42 ~ 1576.42 MHz) (1597.55 ~ 1605.89 MHz)	-	1.8 1.3 1.8	2.1 1.6 2.1	dB
Ripple (1559.09 ~ 1563.09 MHz) (1574.42 ~ 1576.42 MHz) (1597.55 ~ 1605.89 MHz)	-	0.2 0.2 0.3	0.5 0.4 0.6	-
VSWR (1559.09 ~ 1563.09 MHz) (1574.42 ~ 1576.42 MHz) (1597.55 ~ 1605.89 MHz)	-	1.6 1.2 1.3	1.9 1.6 1.8	-
Attenuation				
DC ~ 925 MHz	45	50	-	dB
925 ~ 960 MHz	43	50	-	
1427 ~ 1453 MHz	41	47	-	
1453 ~ 1470 MHz	40	45	-	
1470 ~ 1530 MHz	30	35	-	
1635 ~ 1700MHz	33	37	-	
1710 ~ 1785 MHz	45	50	-	
1850 ~ 1910 MHz	43	48	-	
1920 ~ 1980 MHz	42	48	-	
2110 ~ 2170 MHz	40	45	-	
2300 ~ 2400 MHz	40	44	-	
2400 ~ 2500 MHz	39	43	-	
2500 ~ 2570 MHz	38	42	-	
2600 ~ 3000 MHz	33	39	-	
Input/Output Impedance		50		

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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Marking Configuration

G10¹⁾

** 2)

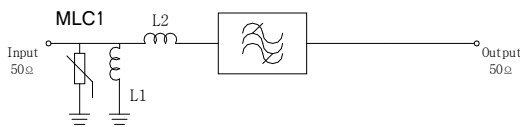
1) Series Number

2) Date Code

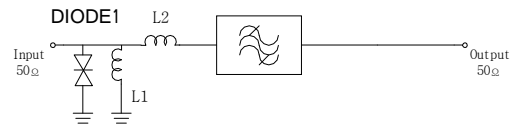
* Ink or Laser Marking available

ESD protection of SAW filters

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

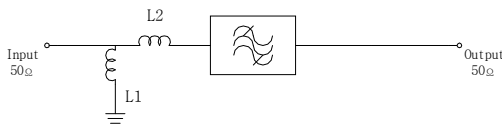


(Case A : MLC varistor used ESD matching structure)

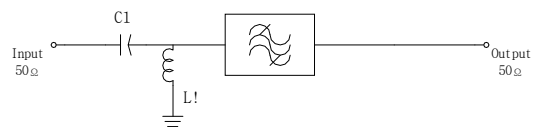


(Case B : Diode used ESD matching structure)


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)

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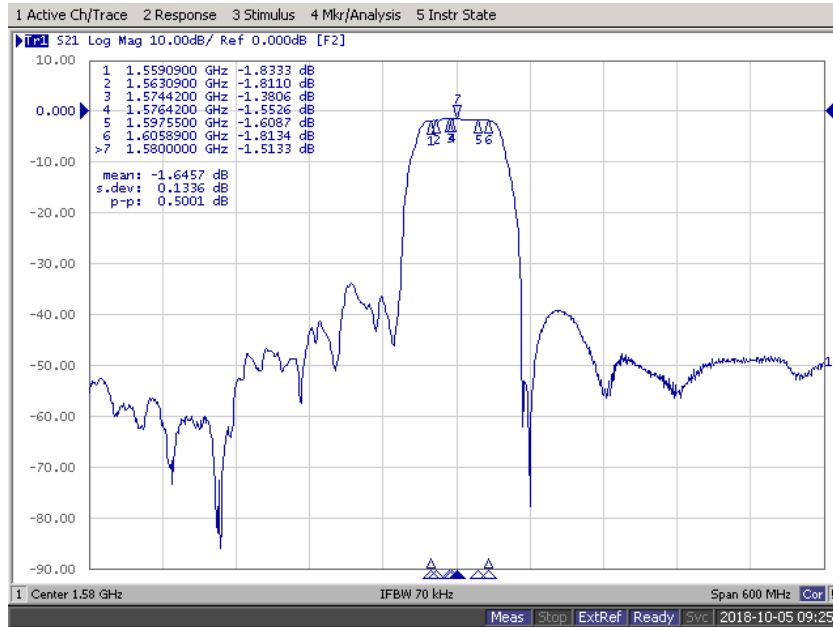
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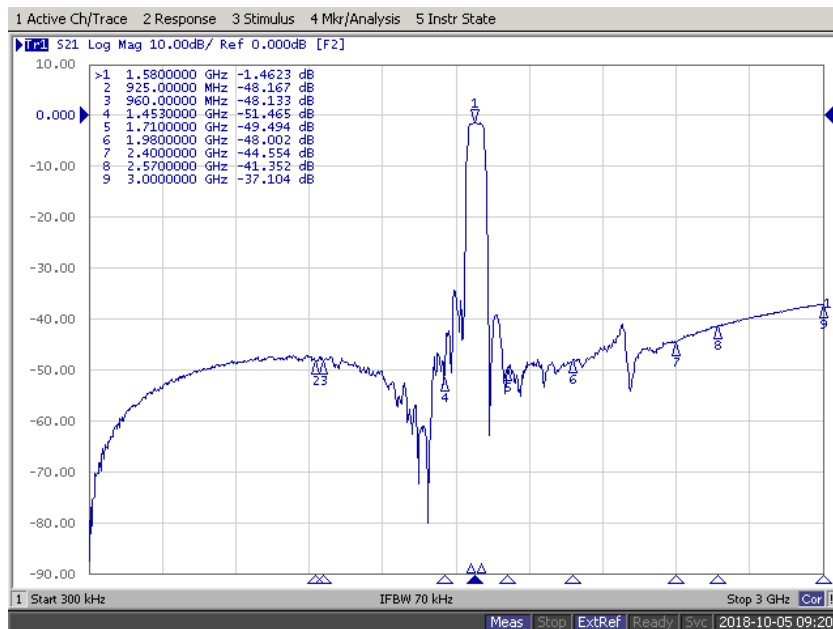



Typical Performance (at 25°C)

- Pass band & Ripple



- Wideband Attenuation



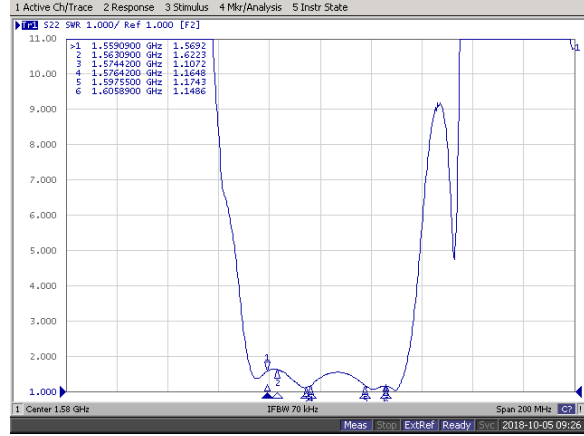
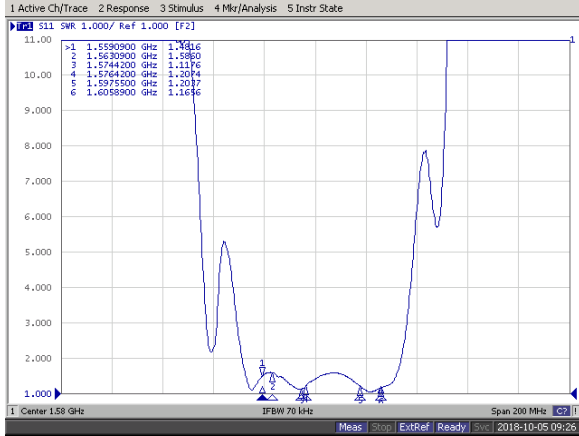
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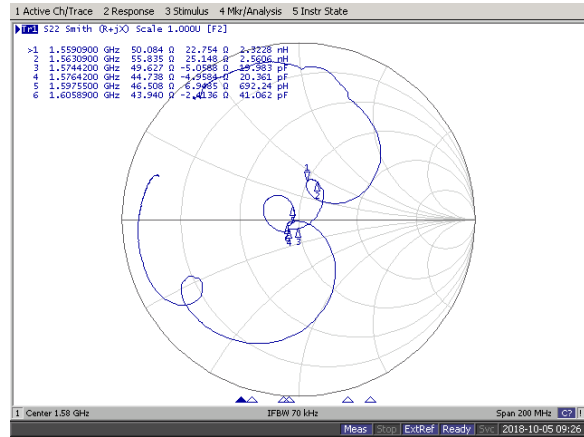
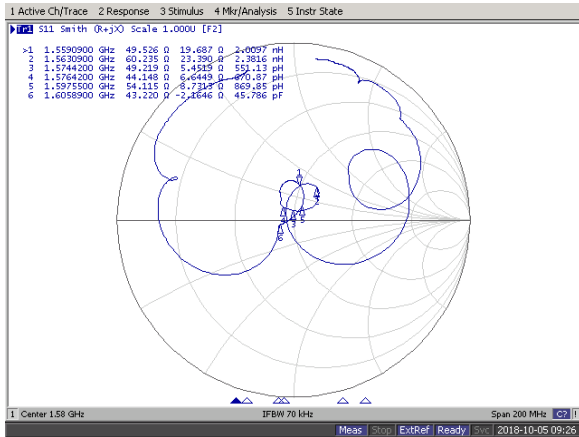
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- Input / Output VSWR



- Input / Output Smith Charts



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