SAW Bandpass Filter F1H55

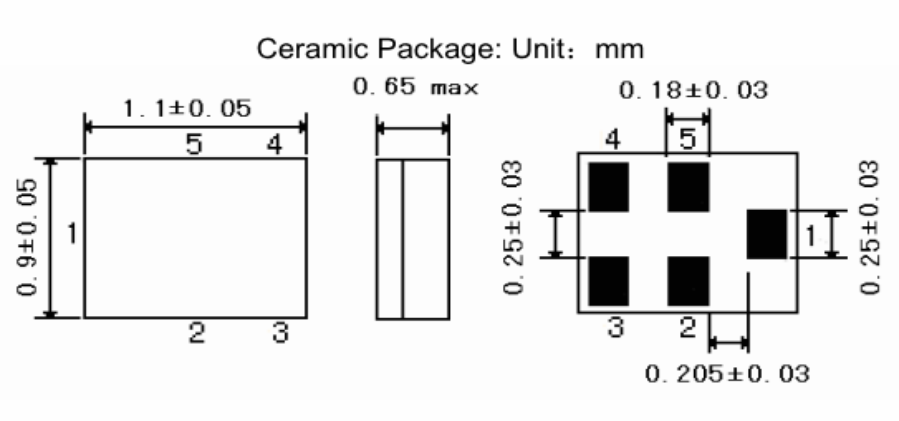
1580MHz – 46.8MHz

Features

- SAW filter for Beidou & GPS & GLONASS.
- High stability and reliability with good performance and no adjustment.
- No matching 50Ω single-ended operation
- Narrow and sharp pass band characteristics. RoHS compatible.
- Low insertion loss and deep stop band attenuation for interference.
- Package size 1.1mm*0.9mm*0.65mm.
- This part is compliant with AEC-Q200

Package Dimensions

`



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

Maximum Ratings

Rating		Value	Unit
DC Voltage (between any Terminals)	V DC	10	V
RF Power (in BW)	P	13	dBm
Operating Temperature Range	TA	-40 ~ +110	°C
Storage Temperature Range	Tstg	-45 ~ +125	°C
ESD Voltage (HB)	VESD	150	V
Moisture Sensitivity Levels	MSL	2A	

** Electrostatics Sensitive Device (**ESD**)

SAW Bandpass Filter F1H55

1580MHz – 46.8MHz

Specifications (GPS + Glonass + Beidou)

	Minimum	Typical	Maximum	Unit
Center Frequency (Fc)	-	1580	-	MHz
Insertion Loss (1559.09 ~ 1563.09 MHz)	-	1.2	2.0	dB
(1574.42 ~ 1576.42 MHz)		1.0	1.6	
(1597.55 ~ 1605.89 MHz)		1.3	2.0	
Ripple (1559.09 ~ 1563.09 MHz)	-	0.2	0.5	-
(1574.42 ~ 1576.42 MHz)		0.2	0.4	
(1597.55 ~ 1605.89 MHz)		0.3	0.6	
Group Delay Ripple				nsec
(1559.09 ~ 1563.09 MHz)	-	2	7	
(1574.42 ~ 1576.42 MHz)	-	2	7	
(1597.55 ~ 1605.89 MHz)	-	2	8	
VSWR (1559.09 ~ 1563.09 MHz)	-	1.6	1.9	-
(1574.42 ~ 1576.42 MHz)		1.2	1.6	
(1597.55 ~ 1605.89 MHz)		1.3	1.8	
Attenuation				dB
DC ~ 925 MHz	45	50	-	
925 ~ 960 MHz	43	50	-	
1427 ~ 1453 MHz	41	47	-	
1453 ~ 1470 MHz	40	45	-	
1470 ~ 1530 MHz	30	35	-	
1535 ~ 1541 MHz	7	13	-	
1626 ~ 1630 MHz	10	17	-	
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		Ohms

Notes :

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

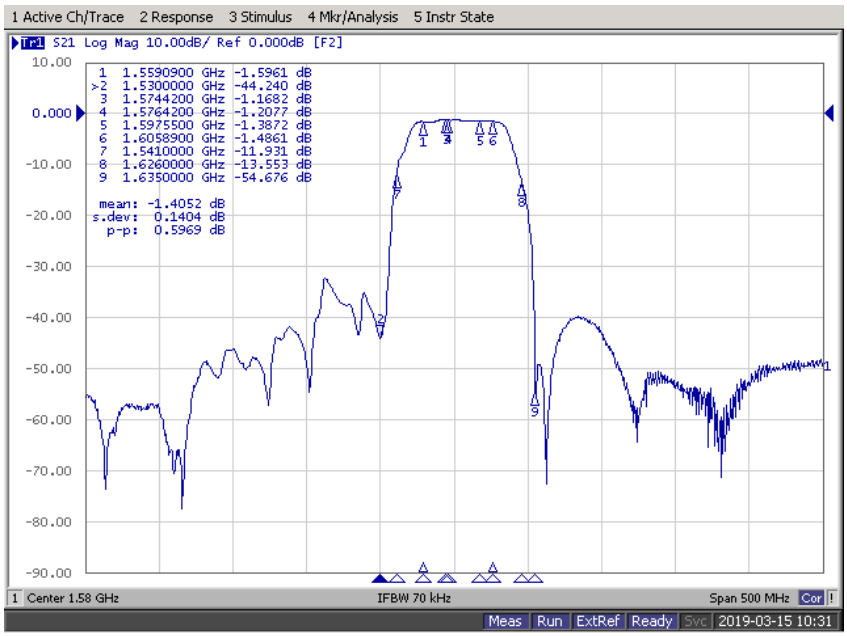
2) Electrical margin has been built into the design to account for the variations due to temperature drift and manufacturing tolerances

SAW Bandpass Filter F1H55

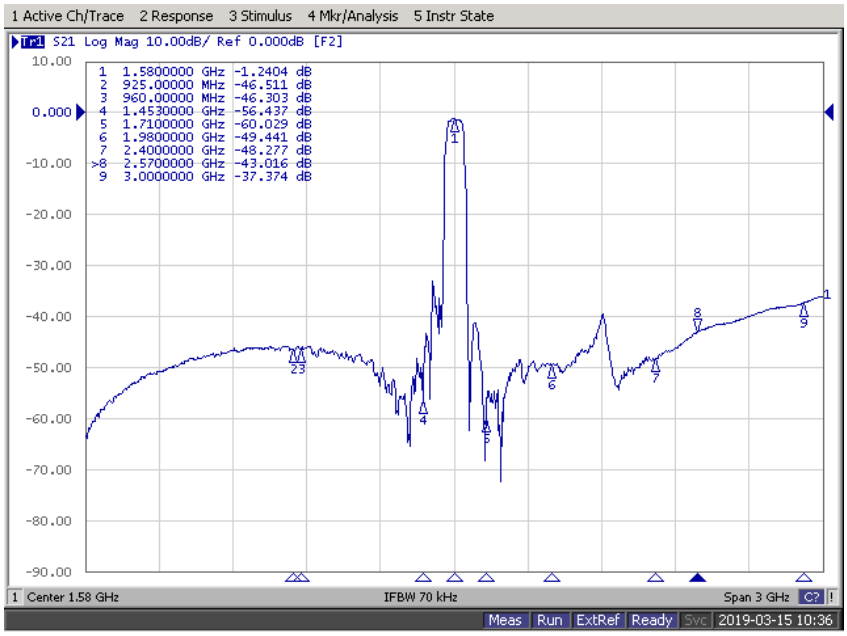
1580MHz – 46.8MHz

Typical Performance (at 25℃)

- Pass band & Ripple



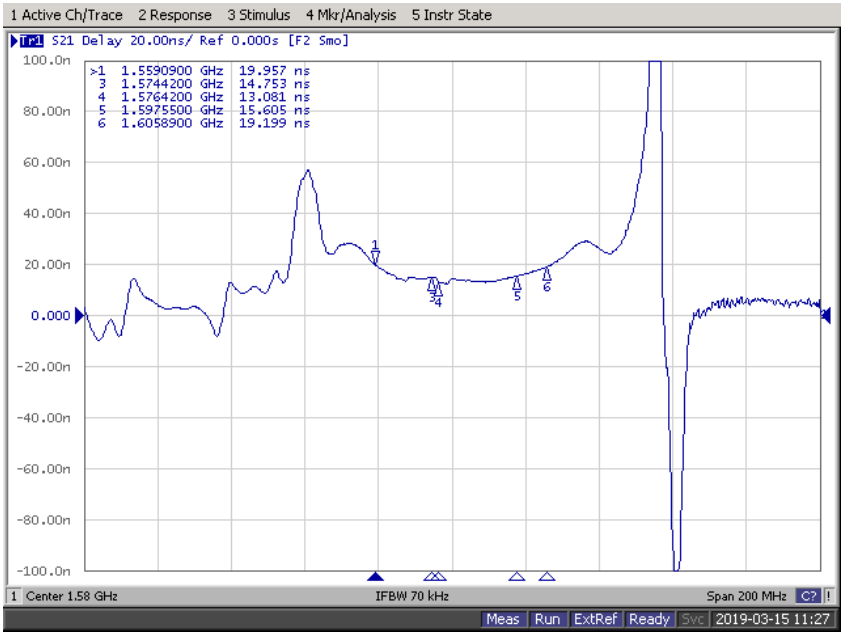
- Wideband Attenuation



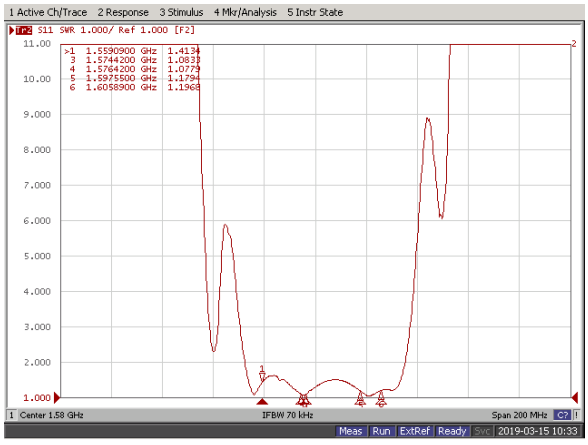
SAW Bandpass Filter F1H55

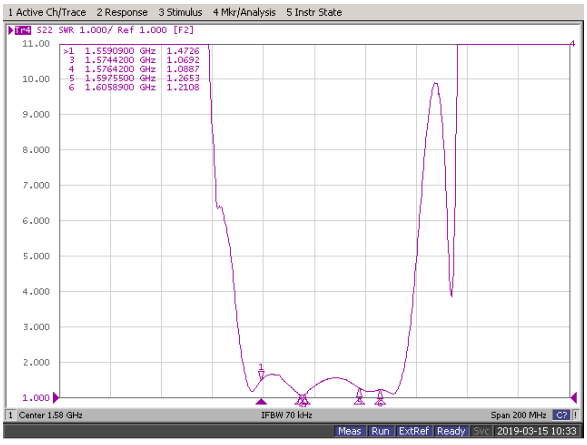
1580MHz – 46.8MHz

- Group Delay Ripple



- Input / Output VSWR

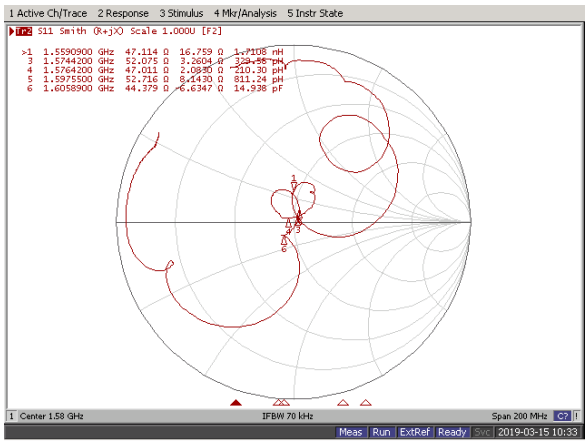


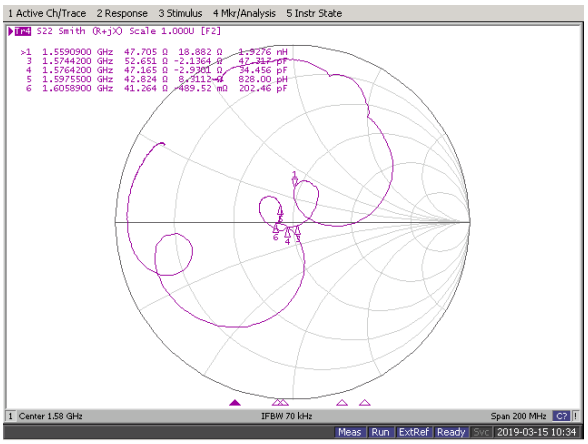


SAW Bandpass Filter F1H55

1580MHz – 46.8MHz

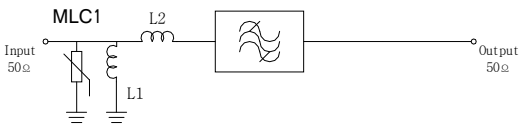
- Input / Output Smith Charts



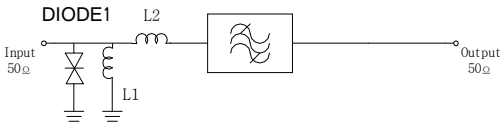


ESD protection of SAW filters

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

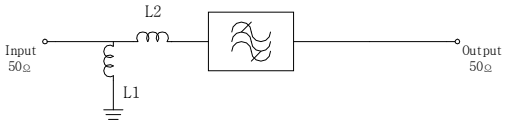


(Case A : MLC varistor used ESD matching structure)

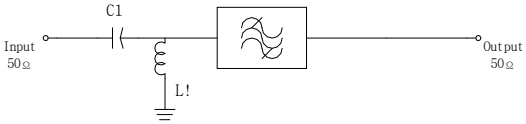


(Case B : Diode used ESD matching structure)

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)

Marking Configuration

* Laser Marking

H3 [1)]

o[2)] ** [3)]

1) H3: Model Name

2) o: Dot marking, indicates input 1

3) **: Month Code (The code shown below varies in a 4-year-cycle)

Reflow Condition