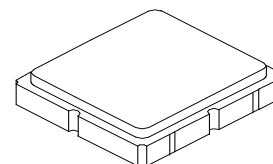


Discontinued

SF2316E-3

**1583 MHz
SAW Filter**



SM3030-6

- **Low-loss 1582 MHz SAW Filter**
- **Designed for 50 ohm Source/Load**
- **Operable Temperature Range -45°/125°C**

Absolute Maximum Ratings

Rating	Value	Units
Input Power Level	+10	dBm
DC Voltage on any Non-ground Terminal	3	V
Operable Temperature Range	-45 to +125	°C
Specification Temperature Range	-40 to +105	°C
Storage Temperature Range in Tape and Reel	-40 to +85	°C

Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	f _C			1583		MHz
3db Bandwidth				60		
Insertion Loss, 1560 to 1606 MHz (-40 to +85°C) (-40 to +105°C)	IL			2.0	3.0	dB
				2.0	3.2	
Return Loss				10		dB
GD Ripple, 1560 to 1606 MHz 1573.374 to 1577.466 MHz 1597.551 to 1605.886 MHz				15.0	35.0	ns
				5.0	10.0	
				5.0	17.0	
Amplitude Ripple, 1560 to 1606 MHz (-40 to +85°C) (-40 to +105°C)				0.9	2.0	dB
				0.9	2.5	
Attenuation, 1 to 960 MHz 1427 to1501 MHz 1501 to 1525 MHz 1626 to 1660 MHz 1710 to 1785 MHz 1850 to 1910 MHz 1920 to 1980 MHz 2110 to 2170 MHz 2400 to 2570 MHz 2570 to 4000 MHz 4000 to 6000 MHz						dB
			32	37		
			35	45		
			30	37		
			30	43		
			35	40		
			35	41		
			35	42		
			35	44		
			40	46		
				18		
				4.5		
	Case Style	SMD 3.0 x 3.0 mm Nominal Footprint				
Lid Symbolization (Y=year, WW=week, S=shift) dot=pin 1 indicator	9D, <u>YWW</u> S					

Electrical Connections

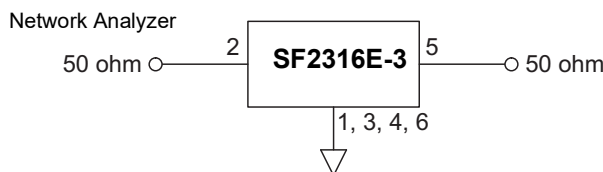
Connection	Terminals
Input	2
Output	5
Ground	All Others



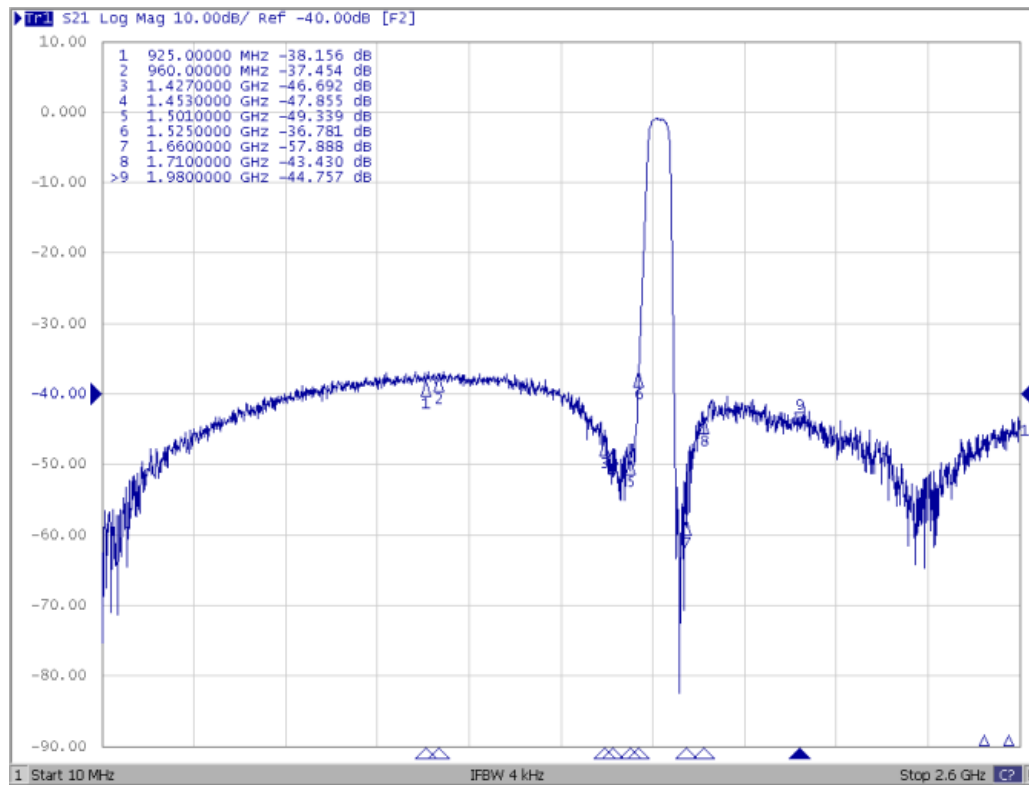
CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

1. Unless noted otherwise, all specifications apply over the operating temperature range with filter soldered to the specified demonstration board with impedance matching to 50 Ω and measured with 50 Ω network analyzer.
2. Unless noted otherwise, all frequency specifications are referenced to the nominal center frequency, f_c .
3. Rejection is measured as attenuation below the minimum IL point in the passband. Rejection in final user application is dependent on PCB layout and external impedance matching design. See Application Note No. 42 for details.
4. "LRIP" or "L" after the part number indicates "low rate initial production" and "ENG" or "E" indicates "engineering prototypes."
5. The design, manufacturing process, and specifications of this filter are subject to change.
6. Either Port 1 or Port 2 may be used for either input or output in the design. However, impedances and impedance matching may vary between Port 1 and Port 2, so that the filter must always be installed in one direction per the circuit design.
7. US and international patents may apply.
8. Murata, stylized Murata logo, and Murata N.A., Inc. are registered trademarks of Murata Manufacturing Co., Ltd.

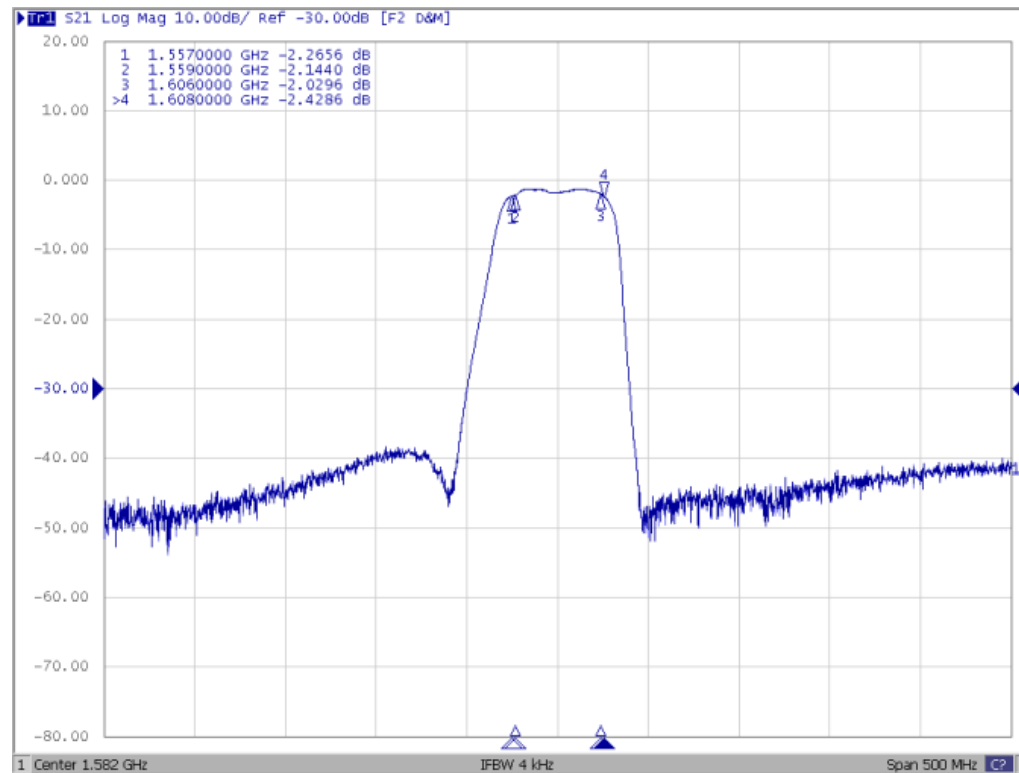
Measurement Circuit



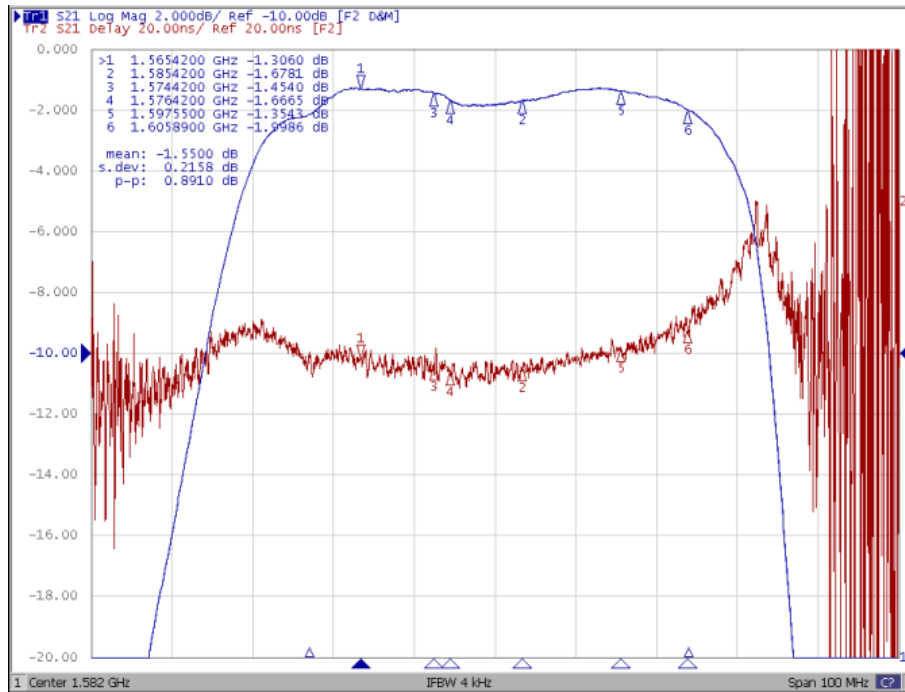
Frequency Characteristics: S21 response: (span 2.6 GHz)



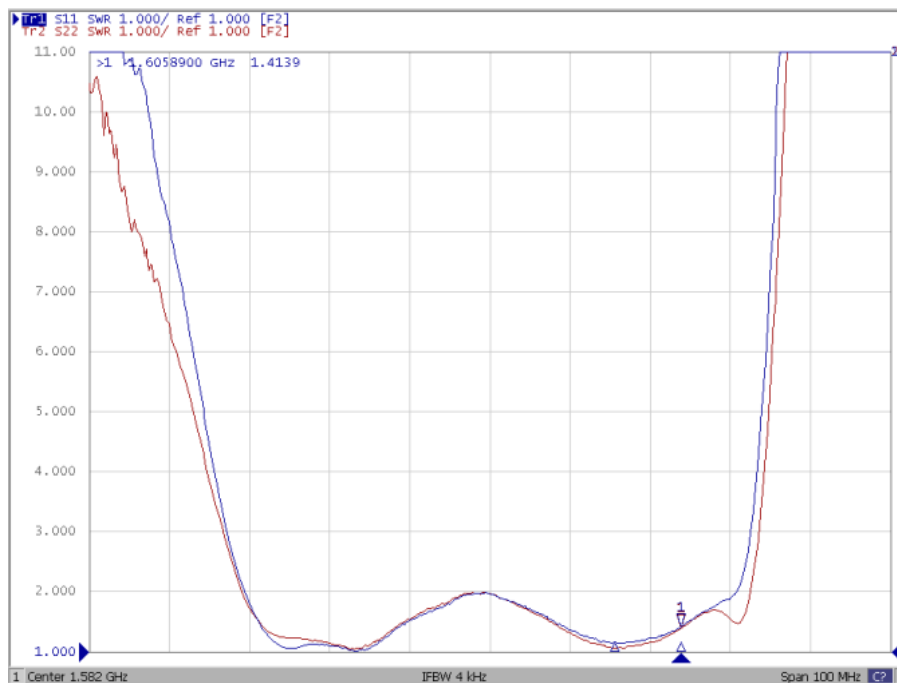
S21 response: (span 500 MHz)

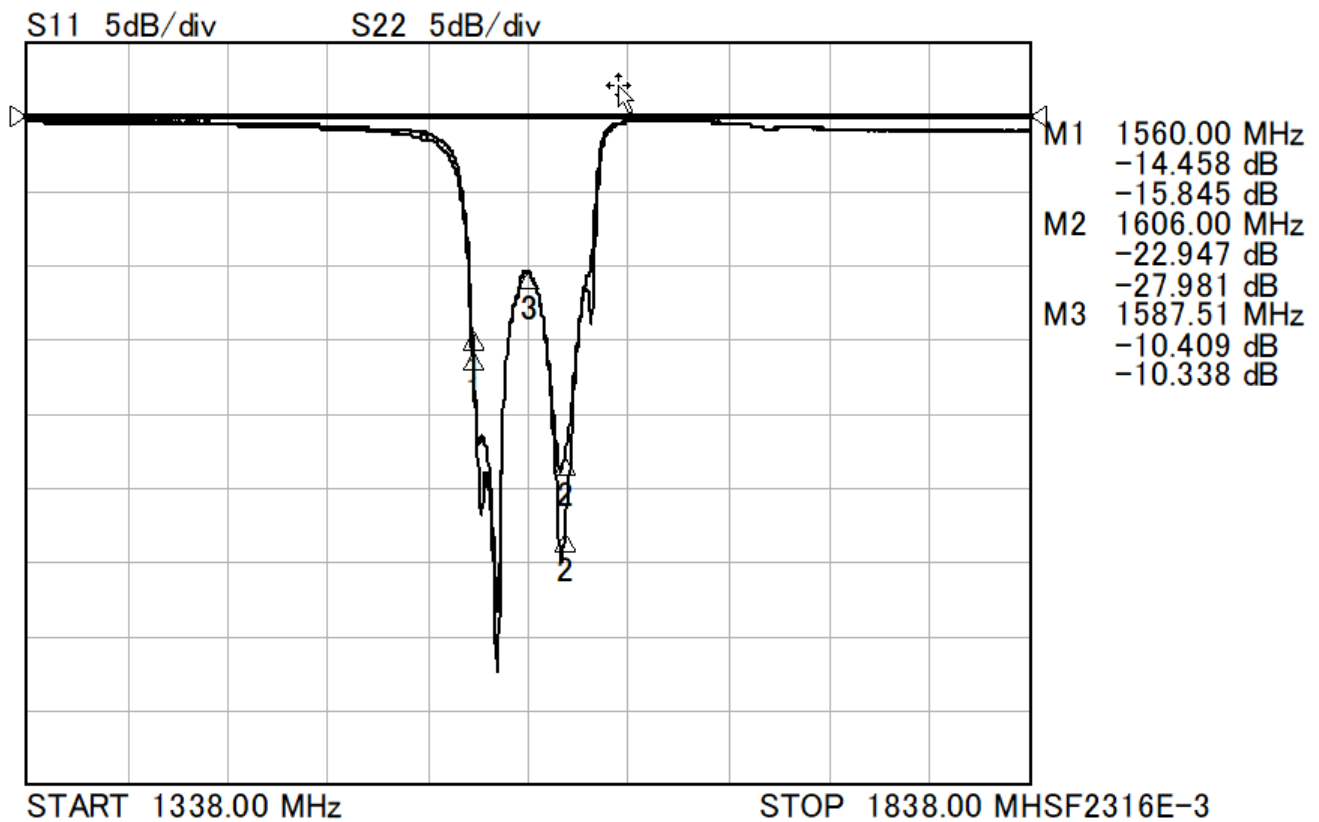
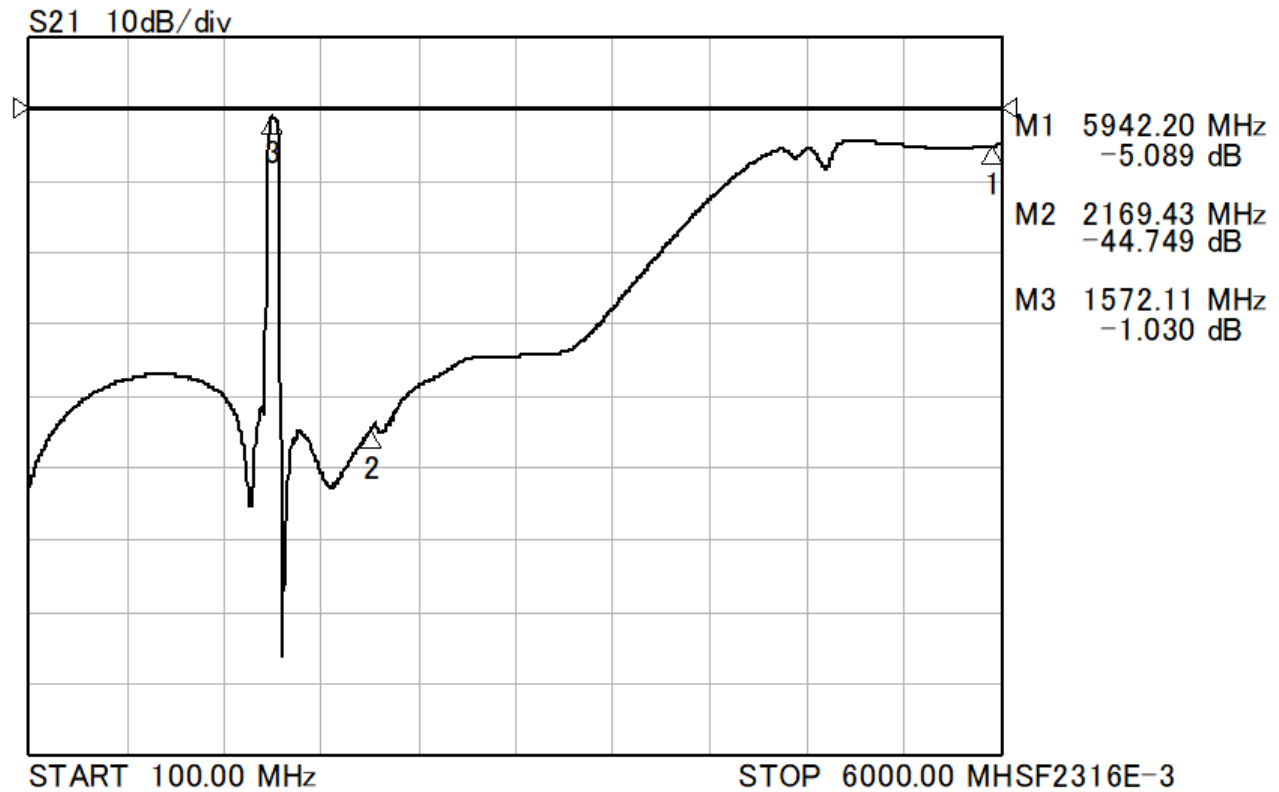


S21 response: (span 100 MHz)



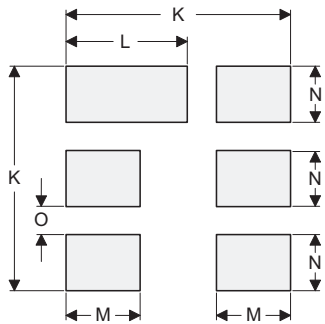
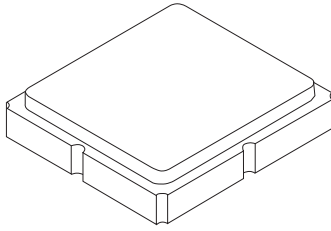
S11 and S22 VSWR: (span 100 MHz)





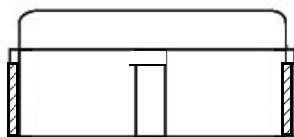
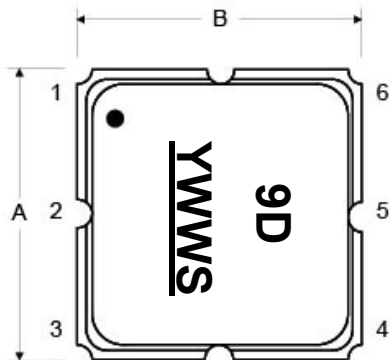
SM3030-6 Ceramic 6-Terminal Surface-Mount Case

3.0 X 3.0 mm Nominal Footprint



PCB Footprint Top View

TOP VIEW



Case and PCB Footprint Dimensions

Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	2.87	3.00	3.13	0.113	0.118	0.123
B	2.87	3.00	3.13	0.113	0.118	0.123
C	1.12	1.25	1.38	0.044	0.049	0.054
D	0.77	0.90	1.03	0.030	0.035	0.040
E	2.67	2.80	2.93	0.105	0.110	0.115
F	1.47	1.60	1.73	0.058	0.063	0.068
G	0.72	0.85	0.98	0.028	0.033	0.038
H	1.37	1.50	1.63	0.054	0.059	0.064
I	0.47	0.60	0.73	0.019	0.024	0.029
J	1.17	1.30	1.43	0.046	0.051	0.056
K		3.20			0.126	
L		1.70			0.067	
M		1.05			0.041	
N		0.81			0.032	
O		0.38			0.015	
P	0.15	0.30	0.45	0.005	0.011	0.017
Q	0.07	0.20	0.36	0.002	0.007	0.014
R	0.62	0.7	0.78	0.024	0.027	0.030

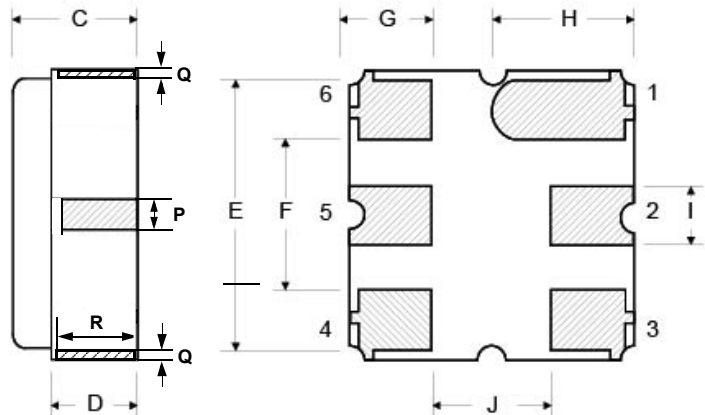
Case Materials

Materials	
Solder Pad Plating	0.3 to 1.0 μ m Gold over 1.27 to 8.89 μ m Nickel
Lid Plating	2.0 to 3.0 μ m Nickel
Body	Al ₂ O ₃ Ceramic
Pb Free	

Electrical Connections

Connection	Terminals
Input	2
Output	5
Case Ground	All others

BOTTOM VIEW



See Detail "A"

100 REF.

"B" REF.

12.0

13.0

20.2

2.0

“B”		Quantity Per Reel
Inches	millimeters	
7	178	500
13	330	3000

Carrier Tape Dimensions	
Ao	3.35 mm
Bo	3.35 mm
Ko	1.40 mm
Pitch	8.0 mm
W	12.0 mm

