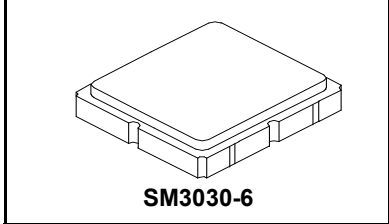


Discontinued

SF2316E-3

**1583 MHz
SAW Filter**



- 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

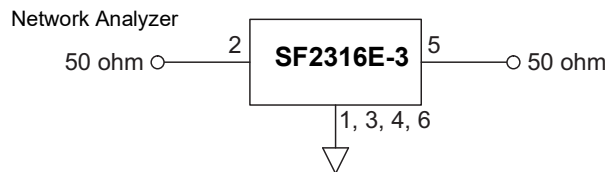
Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units			
Center Frequency	f_c			1583		MHz			
3db Bandwidth				60					
Insertion Loss, 1560 to 1606 MHz	IL	(-40 to +85°C)		2.0	3.0	dB			
		(-40 to +105°C)		2.0	3.2				
Return Loss				10		dB			
GD Ripple, 1560 to 1606 MHz				15.0	35.0	ns			
				1573.374 to 1577.466 MHz	5.0		10.0		
				1597.551 to 1605.886 MHz	5.0		17.0		
Amplitude Ripple, 1560 to 1606 MHz				0.9	2.0	dB			
				(-40 to +105°C)	0.9		2.5		
Attenuation,						dB			
							1 to 960 MHz	32	37
							1427 to 1501 MHz	35	45
							1501 to 1525 MHz	30	37
							1626 to 1660 MHz	30	43
							1710 to 1785 MHz	35	40
							1850 to 1910 MHz	35	41
							1920 to 1980 MHz	35	42
							2110 to 2170 MHz	35	44
							2400 to 2570 MHz	40	46
2570 to 4000 MHz		18							
4000 to 6000 MHz		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>YWWS</u>								

Electrical Connections

Connection	Terminals
Input	2
Output	5
Ground	All Others

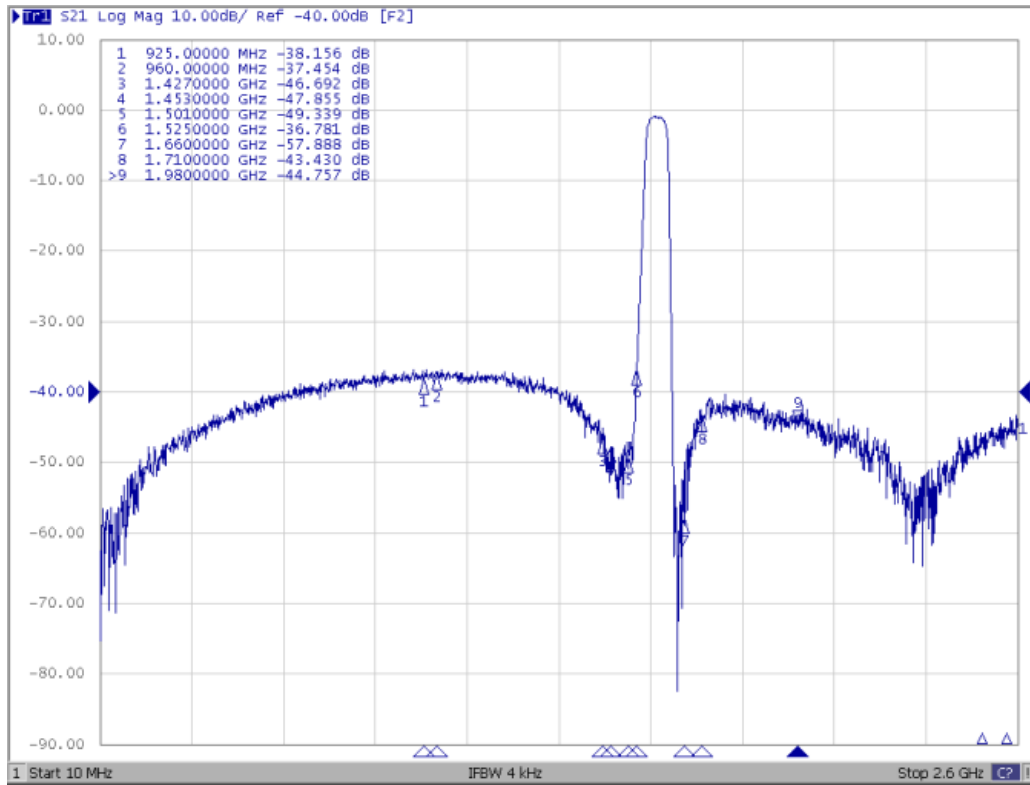
Measurement Circuit



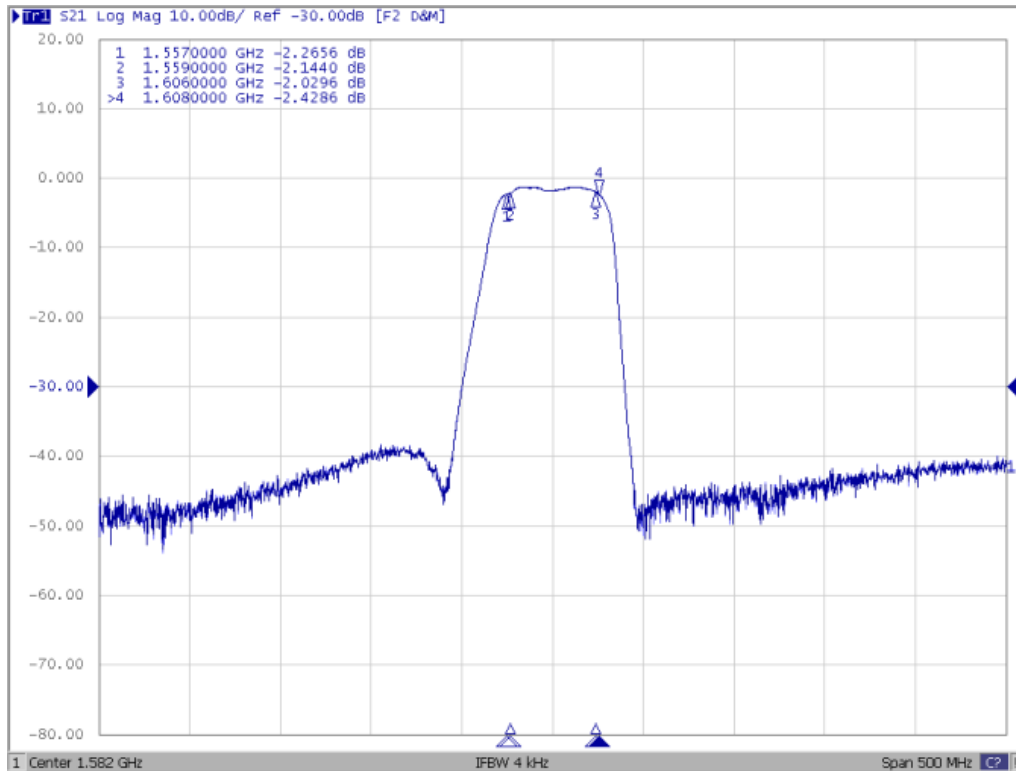
CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

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.

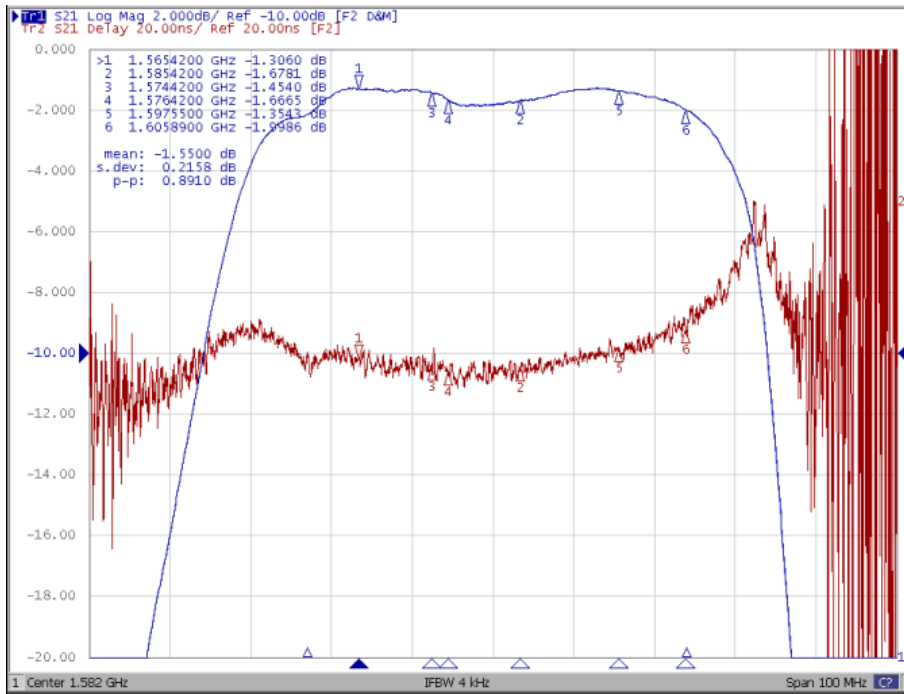
Frequency Characteristics: S21 response: (span 2.6 GHz)



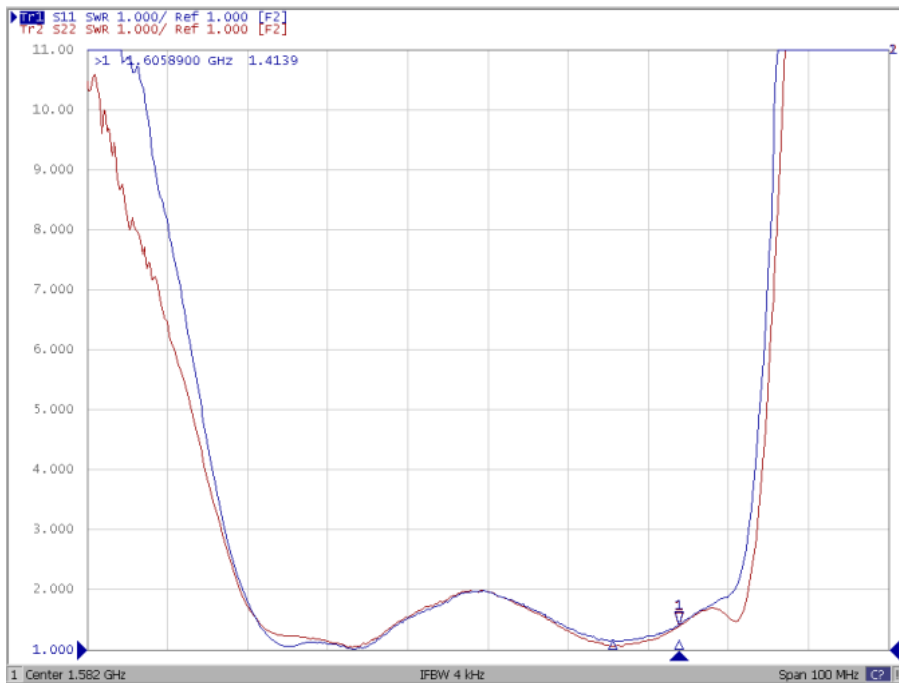
S21 response: (span 500 MHz)



S21 response: (span 100 MHz)



S11 and S22VSWR: (span 100 MHz)



S21 10dB/div



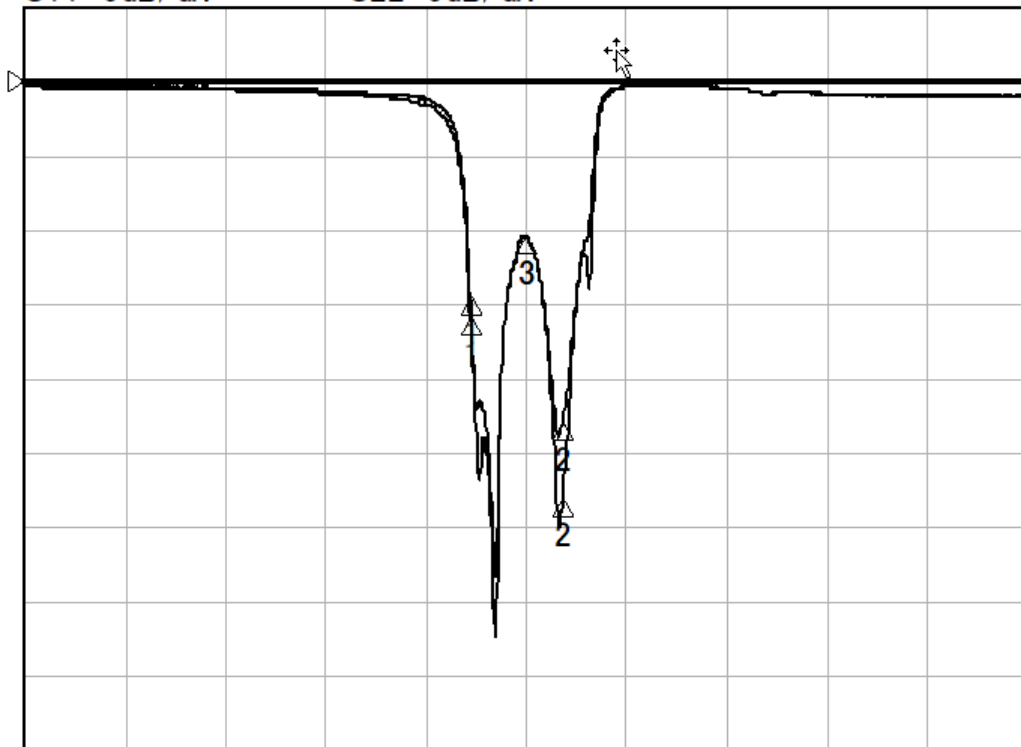
- M1 5942.20 MHz
-5.089 dB
- M2 2169.43 MHz
-44.749 dB
- M3 1572.11 MHz
-1.030 dB

START 100.00 MHz

STOP 6000.00 MHz

S11 5dB/div

S22 5dB/div

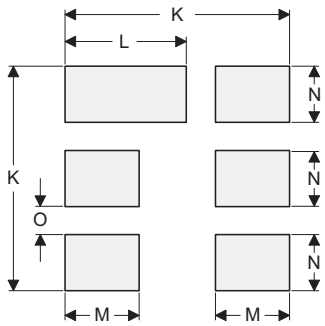
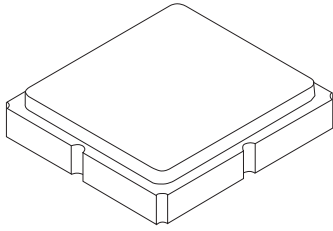


- M1 1560.00 MHz
-14.458 dB
-15.845 dB
- M2 1606.00 MHz
-22.947 dB
-27.981 dB
- M3 1587.51 MHz
-10.409 dB
-10.338 dB

START 1338.00 MHz

STOP 1838.00 MHz

SM3030-6 Ceramic 6-Terminal Surface-Mount Case 3.0 X 3.0 mm Nominal Footprint



PCB Footprint 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

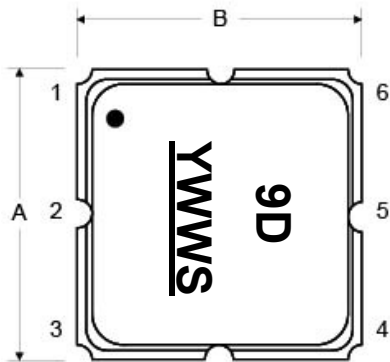
Case Materials

Materials	
Solder Pad Plating	0.3 to 1.0 μm Gold over 1.27 to 8.89 μm Nickel
Lid Plating	2.0 to 3.0 μm Nickel
Body	Al_2O_3 Ceramic
Pb Free	

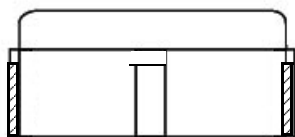
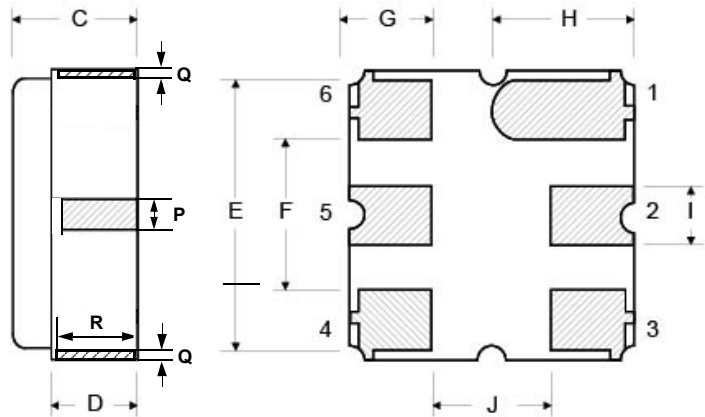
Electrical Connections

Connection	Terminals
Input	2
Output	5
Case Ground	All others

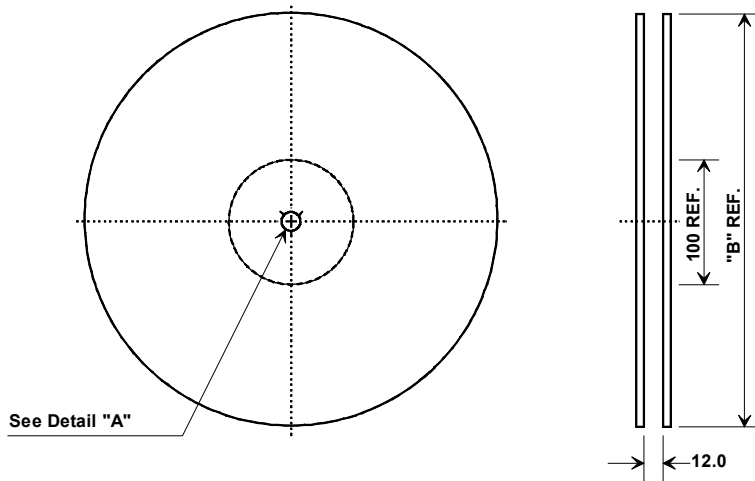
TOP VIEW



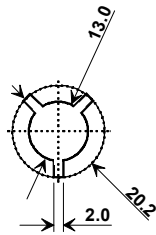
BOTTOM VIEW



Tape and Reel Specifications

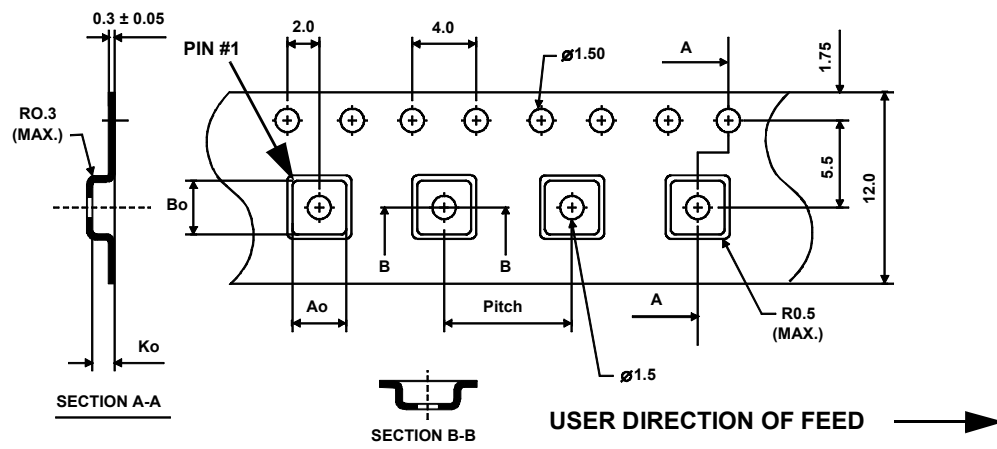


"B"		Quantity Per Reel
Inches	millimeters	
7	178	500
13	330	3000



COMPONENT ORIENTATION and DIMENSIONS

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



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