

- Low-loss 1588.655 MHz SAW Filter
- Designed for 50 ohm Source/Load
- Complies with Directive 2002/95/EC (RoHS)

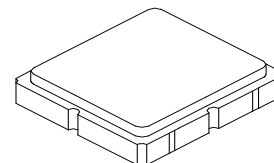


Absolute Maximum Ratings

Rating	Value	Units
Input Power Level	+10	dBm
DC Voltage on any Non-ground Terminal	3	V
Operating Temperature Range	-40 to +85	°C
Storage Temperature Range in Tape and Reel	-40 to +85	°C
Maximum Soldering Profile, 5 cycles/10 seconds maximum	265	°C

SF2316E

**1588.655 MHz
SAW Filter**



SM3030-6

Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	f _C			1588.655		MHz
Insertion Loss, 1573.42 to 1577.42 MHz	IL			1.6	1.80	dB
Insertion Loss, 1571.00 to 1606.00 MHz				2.0	2.50	
Amplitude Ripple, 1573.42 to 1577.42 MHz				0.32	0.6	dB _{P-P}
Amplitude Ripple, 1571.00 to 1606.00 MHz				0.80	1.2	
VSWR, 1573.42 to 1577.42 MHz				1.6:1	2.0:1	
VSWR, 1571.42 to 1605.89 MHz				2.3:1	2.5:1	
Attenuation, Referenced to 0 dB:						dB
0 to 1452 MHz			27	30		
1452 to 1525 MHz			26	28		
1710 to 1785 MHz			40	45		
1785 to 3000 MHz			23	25		
Source Impedance	Z _S			50		Ω
Load Impedance	Z _L			50		
Case Style	SM3030-6 3.0 x 3.0 mm Nominal Footprint					
Lid Symbolization (Y=year, WW=week, S=shift) dot=pin 1 indicator	A78, YWWS					
Standard Reel Quantity	Reel Size 7 inch	500 Pieces/Reel				
	Reel Size 13 inch	3000 Pieces/Reel				

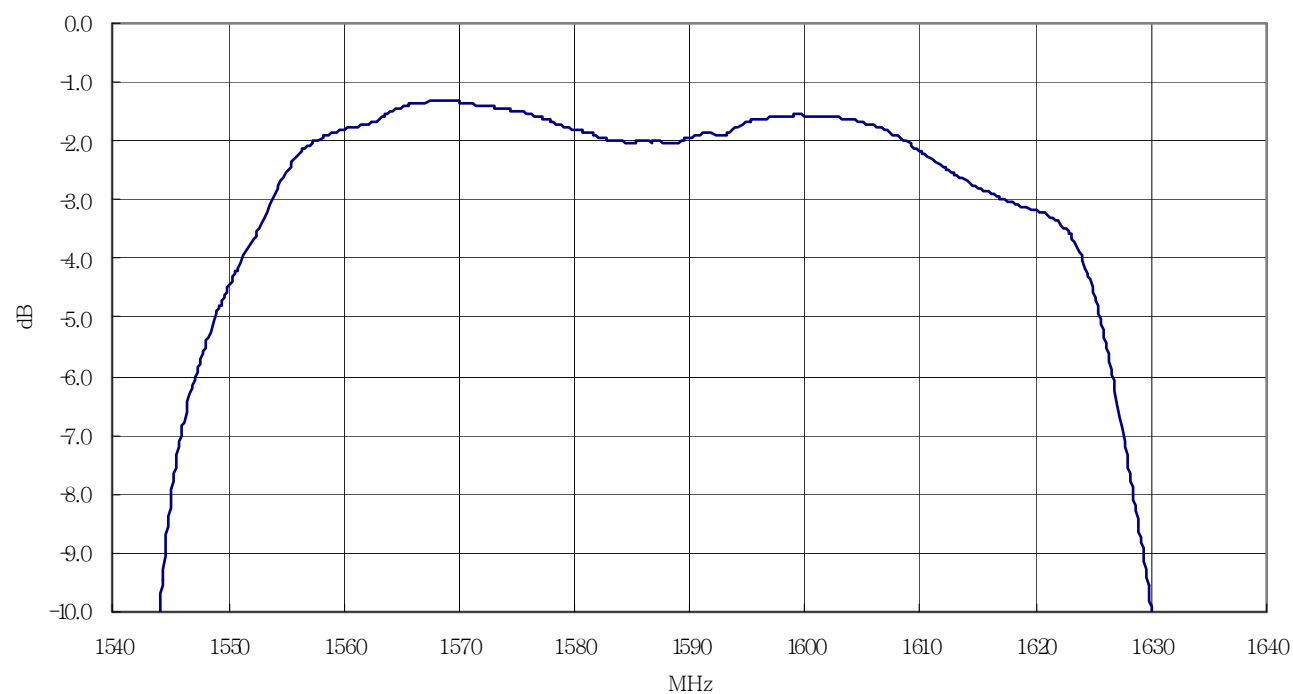
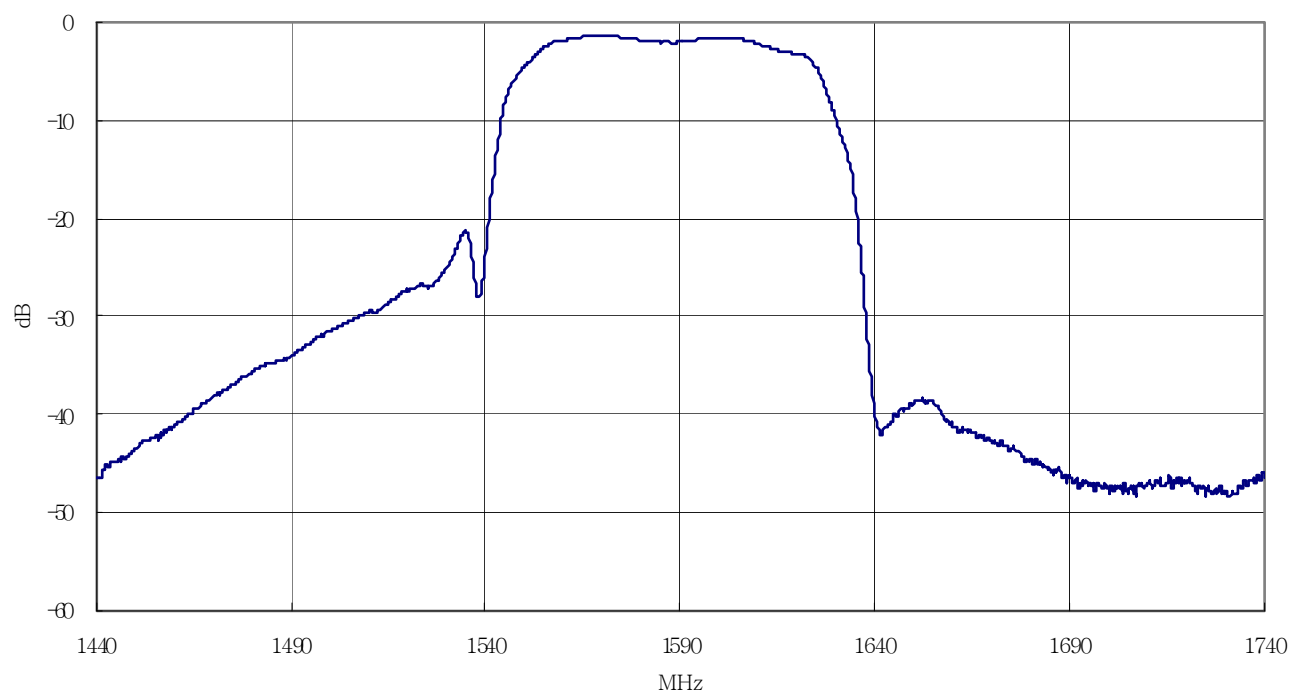


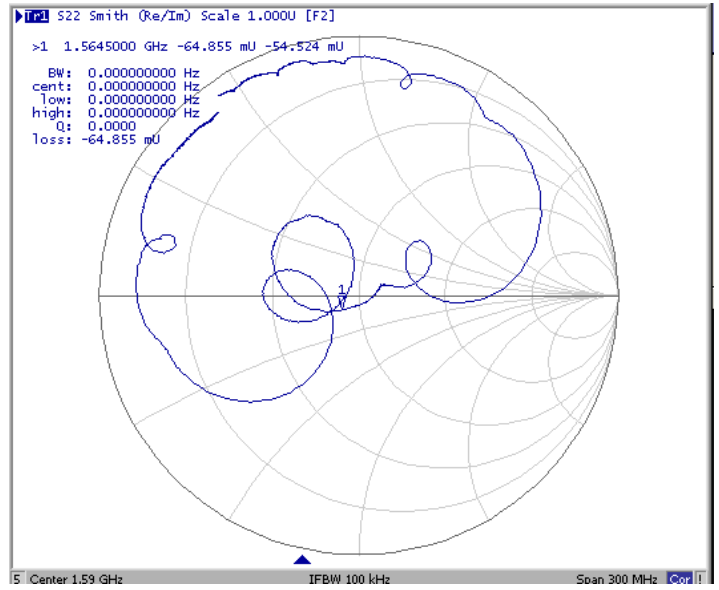
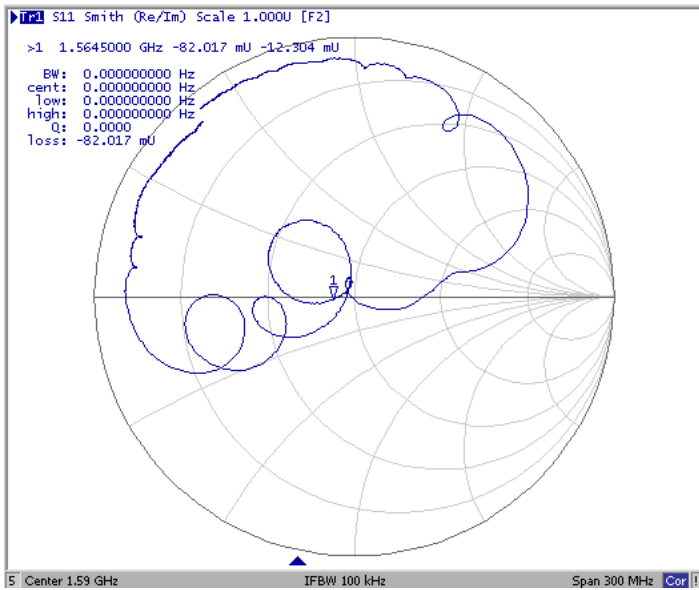
CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

NOTES:

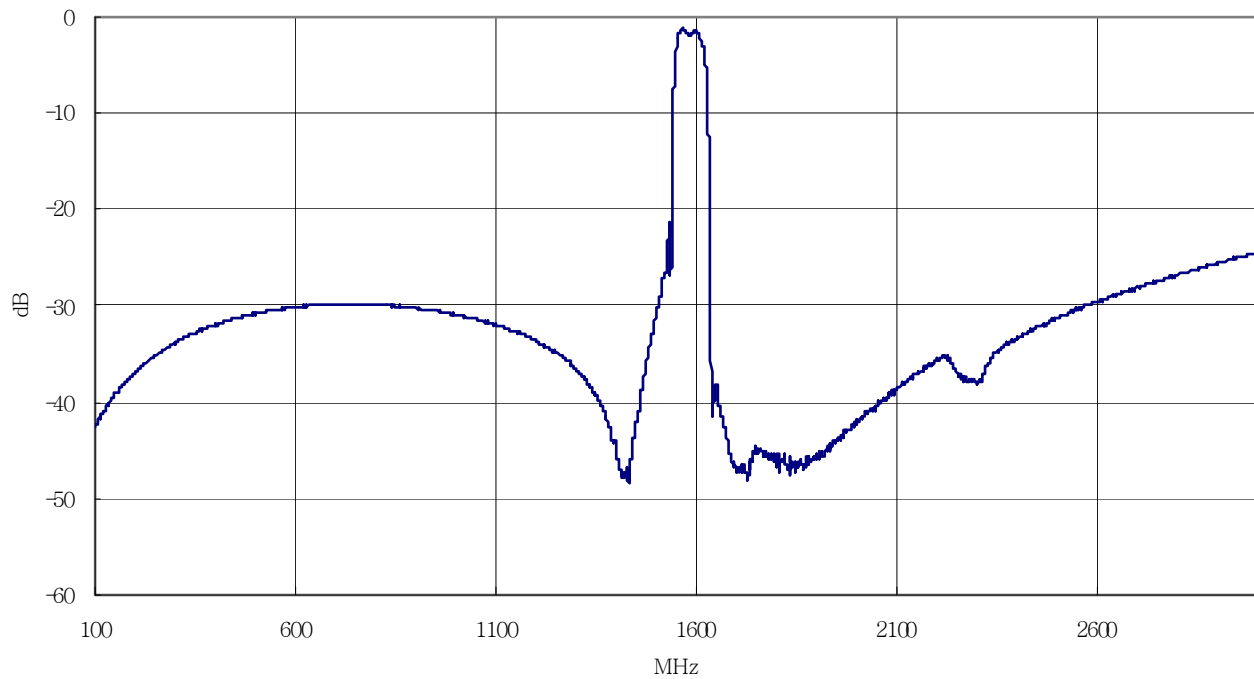
1. Unless noted otherwise, all specifications apply over the operating temperature range with filter soldered to the specified demonstration board with impedance matching to 50 Ω and measured with 50 Ω network analyzer.
2. Unless noted otherwise, all frequency specifications are referenced to the nominal 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 300 MHz)

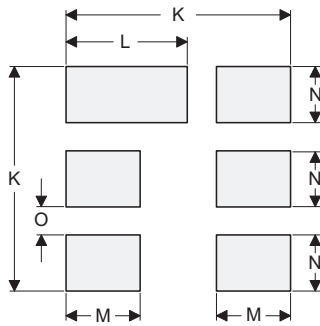
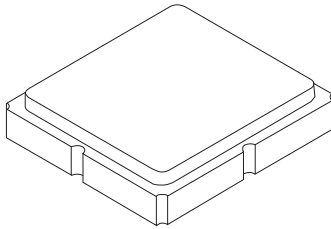




S11/S22 response: (span 3 GHz)



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	

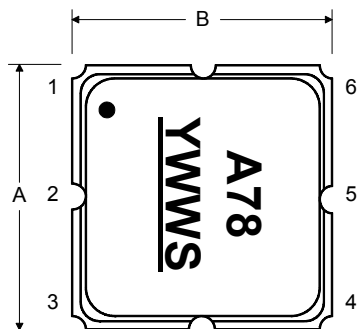
Case Materials

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 ₂ O ₃ Ceramic
Pb Free	

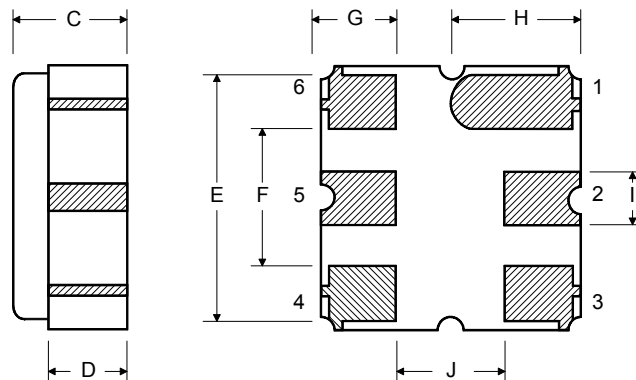
Electrical Connections

Connection	Terminals
Input	2
Output	5
Case Ground	All others

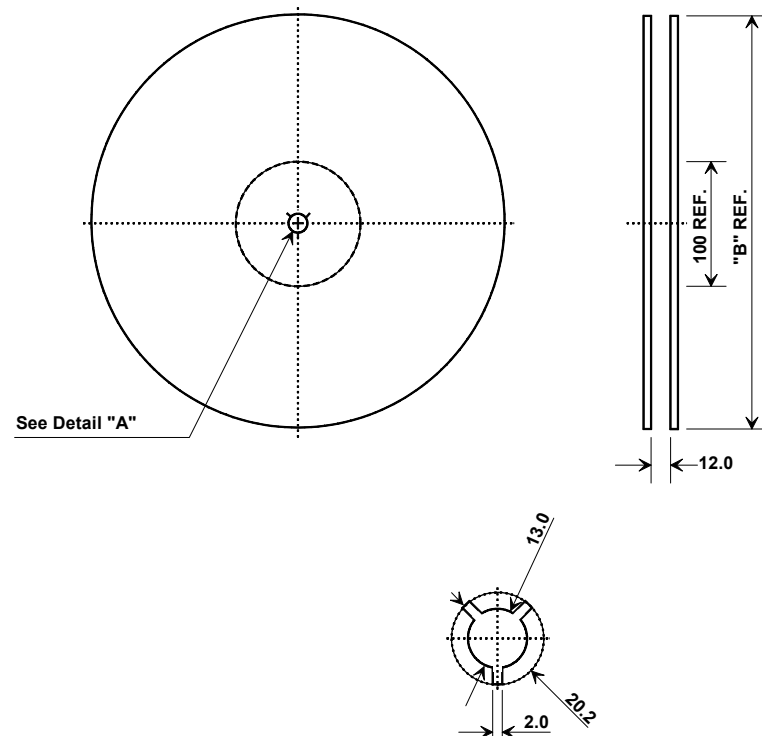
TOP VIEW



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

