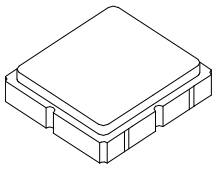
Preliminary

RFM products are now Murata products.

SF2323E

314.67 MHz SAW Filter

- ***Low-loss 314.67 MHz SAW Filter***
- ***Designed for 50 ohm Source/Load***
- ***Complies with Directive 2002/95/EC (RoHS)***



SM3030-6

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 +105	°C
Storage Temperature Range in Tape and Reel	-40 to +105	°C
Maximum Soldering Profile, 5 cycles/10 seconds maximum	260	°C
Terminating Source Impedance (Z_S)	50	Ω
Terminating Load Impedance (Z_L)	50	Ω

Electrical Characteristics

Characteristic @ 25°C	Sym	Notes	Min	Typ	Max	Units
Center Frequency	f_C			314.67		MHz
Insertion Loss (incl. loss in matching elements - Q_L=44)	α_{min}			1.9	2.7	dB
(excl. loss in matching elements)				1.0	1.8	dB
Pass Band (relative to α_{min}) 314.14 to 315.2 MHz				1.1	2.5	dB
314.12 to 315.22 MHz				1.3	3.0	dB
Relative Attenuation (relative to α_{rel})	α_{rel}					dB
10 to 250 MHz			57	62		dB
250 to 305 MHz			47	52		dB
305 To 310 MHz			30	35		dB
310 to 314.4 MHz			13	18		dB
316 to 318 MHz			10	15		dB
318 to 323 MHz			20	25		dB
323 to 325 MHz			27	32		dB
325 to 330 MHz			34	39		dB
330 to 375 MHz			44	49		dB
375 to 550 MHz			55	60		dB
550 to 2500 MHz			60	65		dB
Impedance for Pass Band Matching						
Input: $Z_{IN} = R_{IN}$ II C_{IN}				790 II 2.8		ΩII pF
Output: $Z_{OUT} = R_{OUT}$ II C_{OUT}				790 II 2.8		ΩII pF

Case Style	SM3030-6 3.0 x 3.0 mm Nominal Footprint
Lid Symbolization (Y=year, WW=week, S=shift) dot=pin 1 indicator	B25, YWWS
Standard Reel Quantity Reel Size 7 inch	500 Pieces/Reel
Reel Size 13 inch	3000 Pieces/Reel

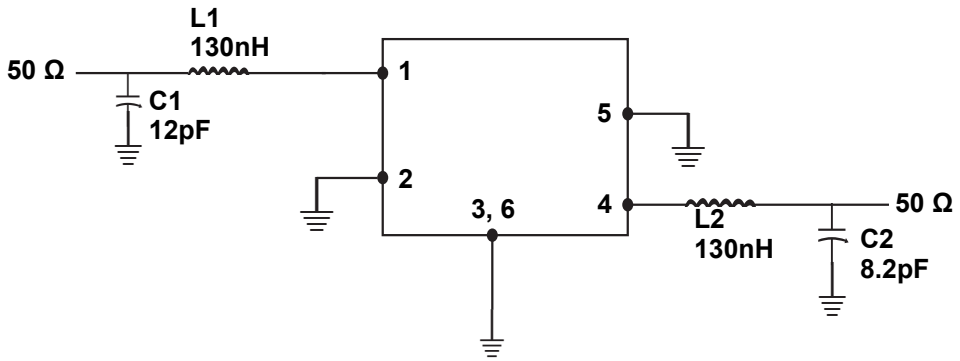
CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

NOTES

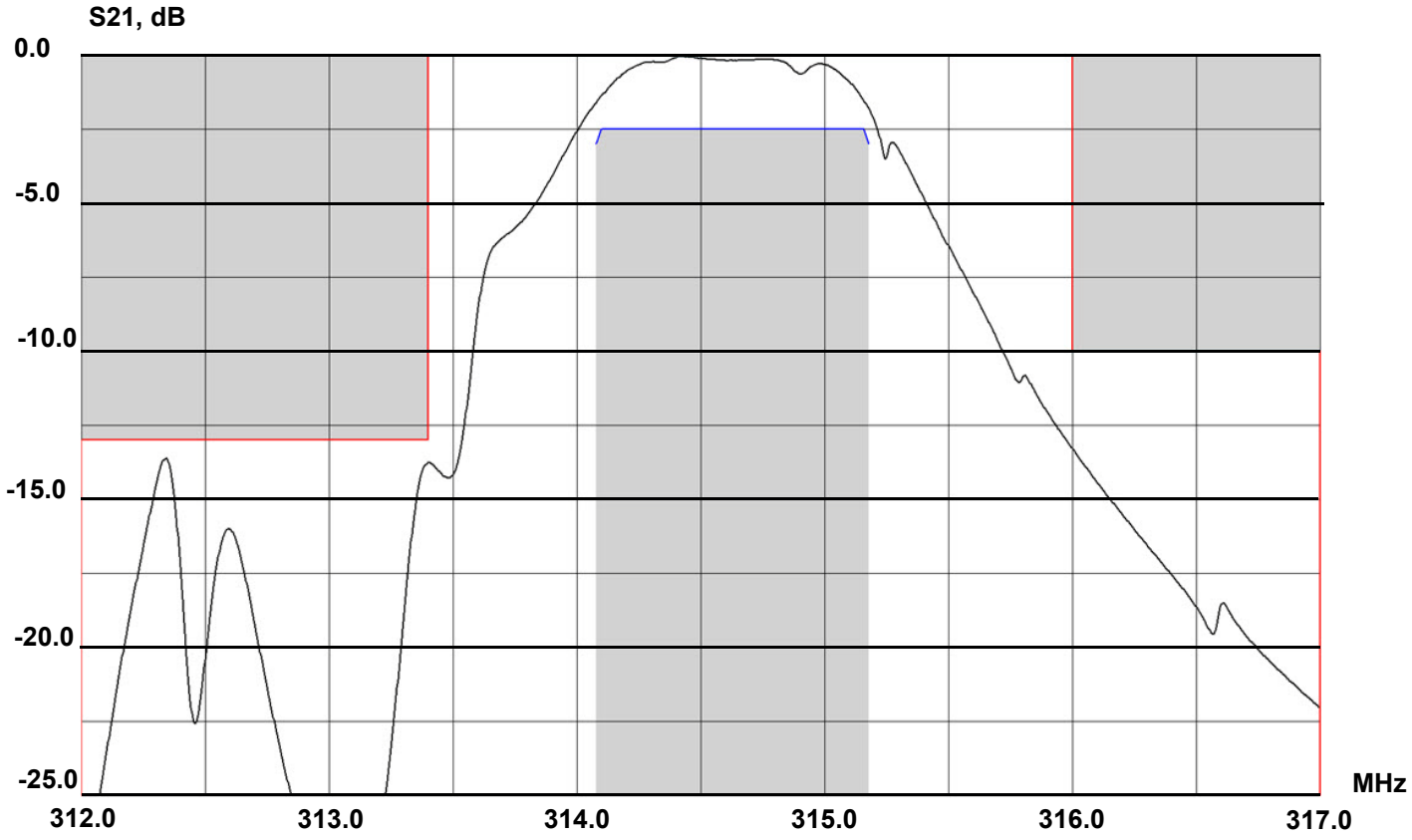
1. Unless noted otherwise, all specifications apply over the operating temperature range with filter soldered to the specified demonstration board with impedance matching to 50 Ω and measured with 50 Ω network analyzer.
2. Unless noted otherwise, all frequency specifications are referenced to the nominal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

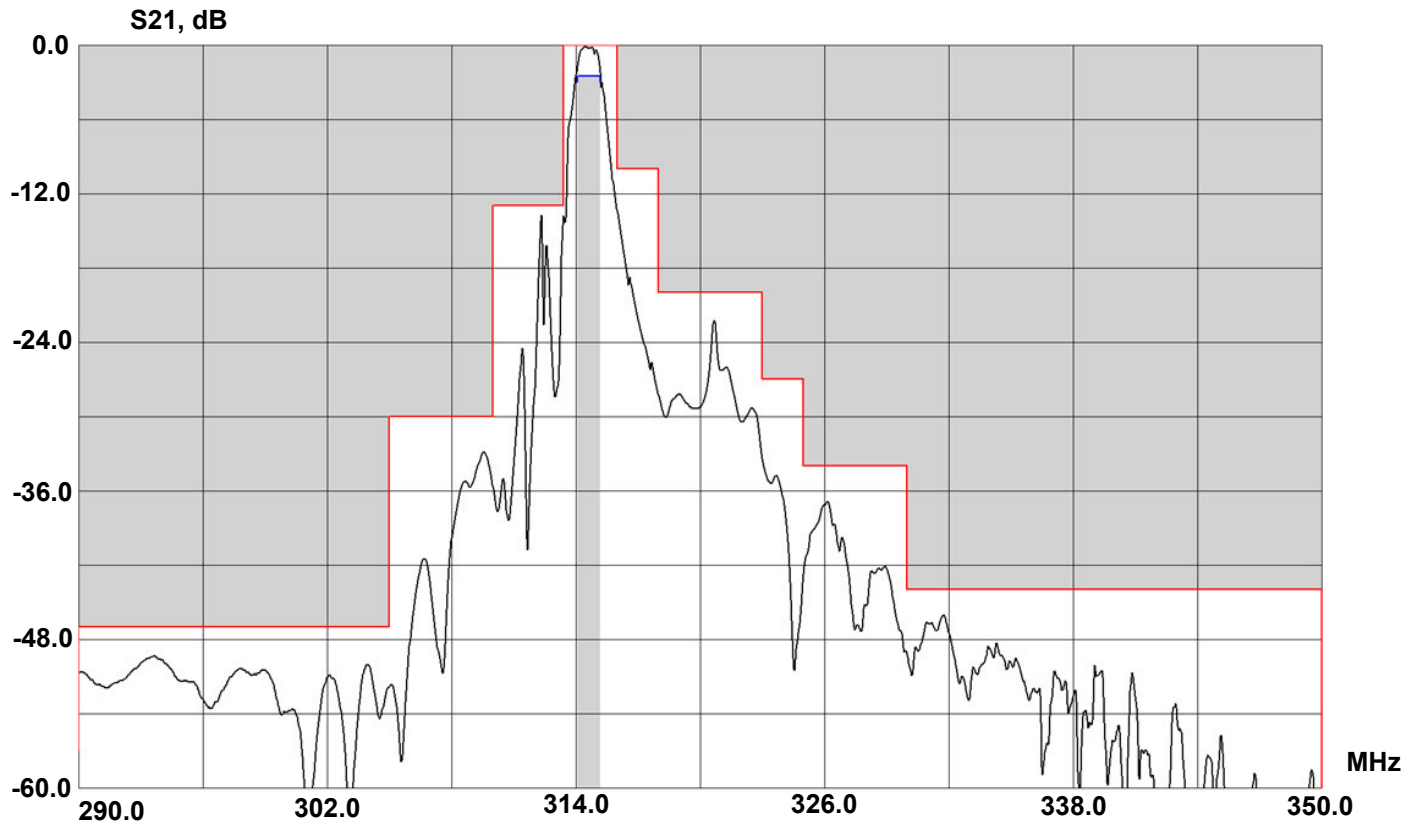
Electrical Connections

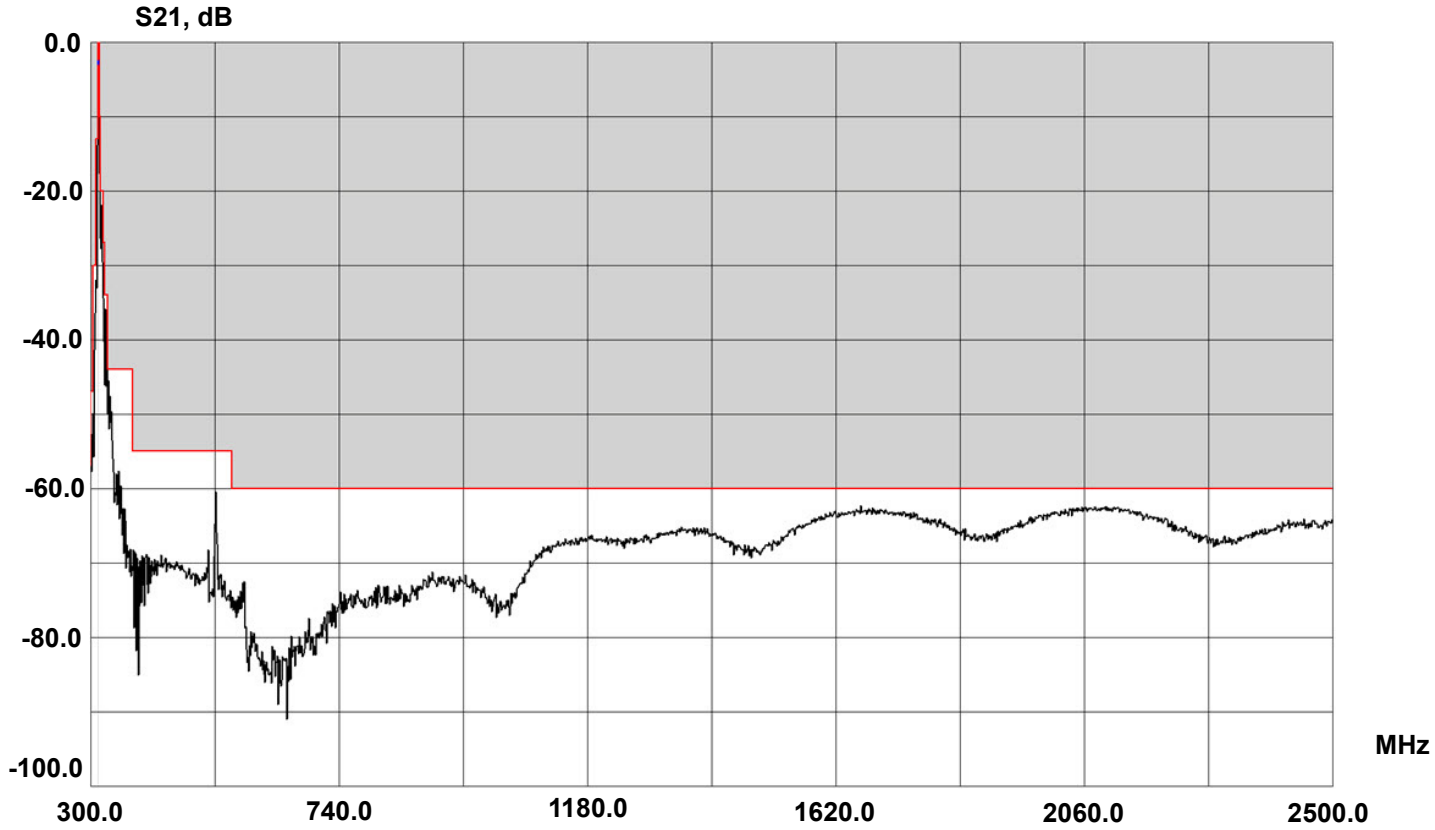
Connection	Terminals
Input or Input Ground	1
Input Ground or Input	2
Output or Output Ground	4
Output Ground	5
Grounded	3, 6



Frequency Characteristics:

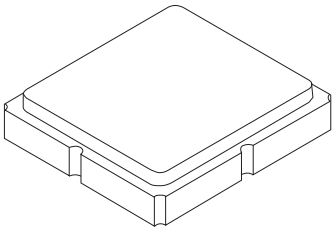


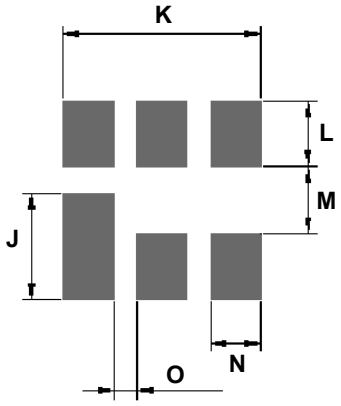




SM3030-6 Case

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





PCB Footprint

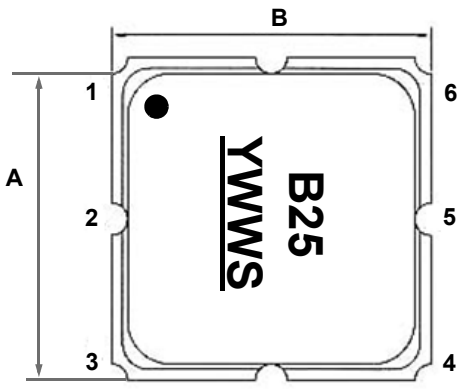
Case and PCB Footprint Dimensions

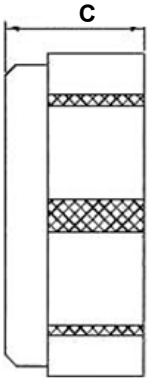
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	2.85	3.00	3.15	0.112	0.118	0.124
B	2.85	3.00	3.15	0.112	0.118	0.124
C	-	-	1.40	-	-	0.055
D	2.39	2.54	2.69	0.094	0.100	0.105
E	1.45	1.60	1.75	0.057	0.062	0.068
F	0.70	0.85	0.90	0.027	0.033	0.003
G	1.35	1.50	1.65	0.053	0.059	0.064
H	0.45	0.60	0.75	0.017	0.023	0.029
I	1.15	1.30	1.45	0.045	0.051	0.057
J	-	1.70		-	0.066	-
K	-	3.20	-	-	0.125	-
L	-	1.05	-	-	0.041	-
M	-	1.09	-	-	0.042	-
N	-	0.81	-	-	0.031	-
O	-	0.38	-	-	-0.014	-

Case Materials

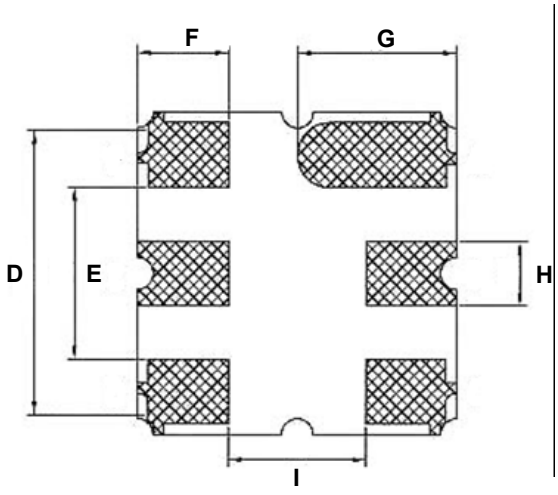
Materials	
Solder Pad Plating	0.3 to 1.0 µm Gold over 1.27 to 8.89 µm Nickel
Lid Plating	2.0 to 3.0 µm Nickel
Body	Al_2O_3 Ceramic
Pb Free	

TOP VIEW

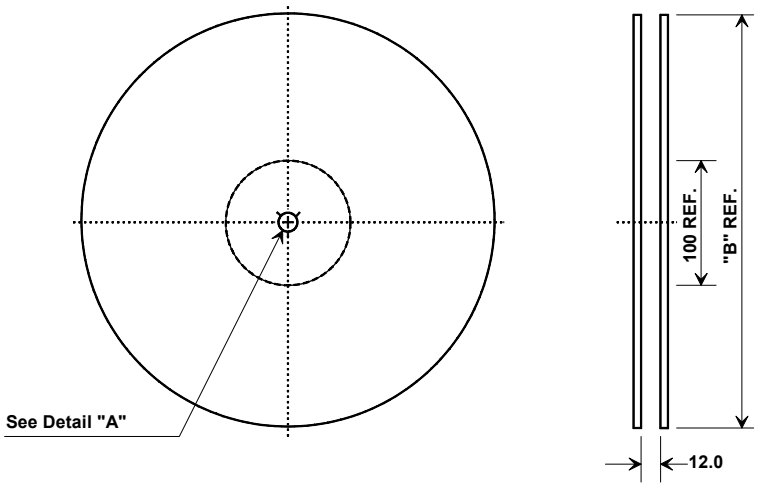


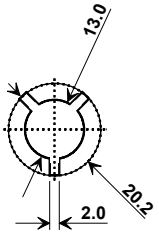


BOTTOM VIEW



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