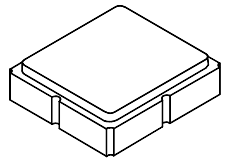
muRata
INNOVATOR IN ELECTRONICS

SF2162E

1178.12 MHz SAW Filter

- ***SAW Filter for Digital Television***
- ***Complies with Directive 2002/95/EC (RoHS)***



SM3030-8

Characteristics :

Balance-to-balanced Operation

Terminating Source/Load Impedance : Z_S = 150 Ω

Maximum Rating

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	-50 to +95	°C
Maximum Soldering Profile, 5 cycles/ 10 seconds maximum	265	°C

Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	f_C			1178.12		MHz
1.5 dB Passband				50		
Bandwidth at -2dB			40	55		
Maximum Insertion Loss, 1158.12 to 1198.12 MHz	IL_{MAX}			2.5	5.0	dB
Amplitude Ripple, 1158.12 to 1198.12 MHz				0.9	2.0	
Phase error 1158.12 to 1198.12 MHz				3.0	5.5	deg
I/O VSWR 1158.12 to 1198.12 MHz				1.7	2.5	
Attenuation, Referenced to IL_{MAX}						
50 to 1096.06 MHz			42	55		dB
1260.18 to 2000 MHz			42	50		
2000 to 3500MHz			35	44		
3500 to 6000 MHz			22	26		
Group Delay Ripple, 1158.12 to 1198.12 MHz				12	35	ns_{P-P}

Case Style	SM3030-8 3.0 x 3.0 mm Nominal Footprint
Lid Symbolization (Y=year, WW=week, S=shift) dot=pin 1 indicator	857, YWWS
Standard Reel Quantity Reel Size 7 Inch	500 Pieces/Reel
Reel Size 13 Inch	3000 Pieces/Reel

Electrical Connections

	Connection	Terminals
Port 1	Balanced Input	1,2
Port 2	Balanced Output	5,6
	Ground	All Others
Dot Indicates Pin 1		

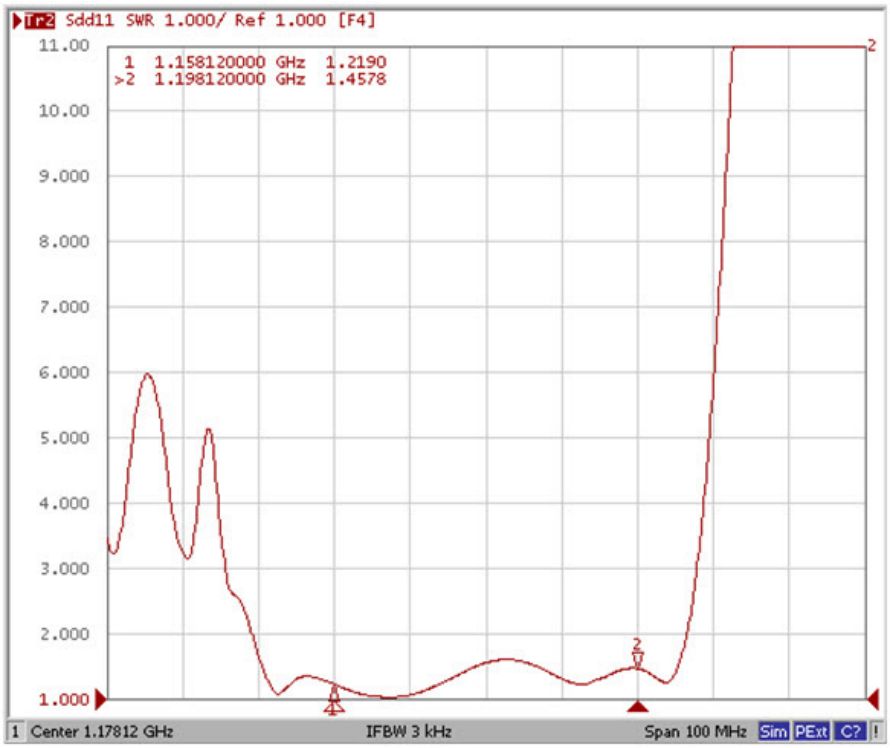
CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

NOTES:

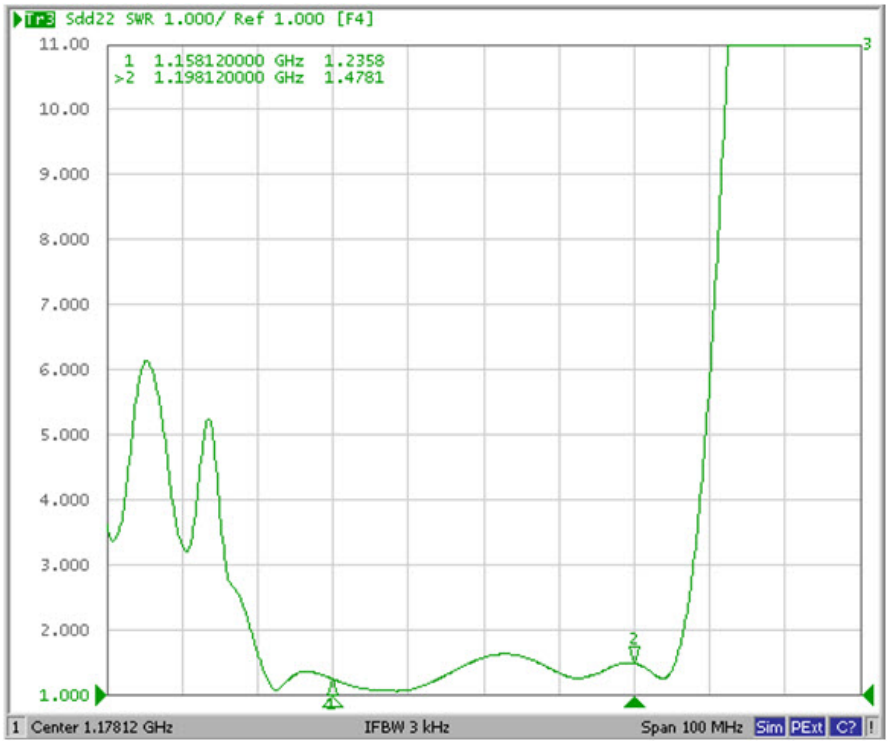
1. US and international patents may apply.
2. Murata, stylized Murata logo, and Murata N.A., Inc. are registered trademarks of Murata Manufacturing Co., Ltd.

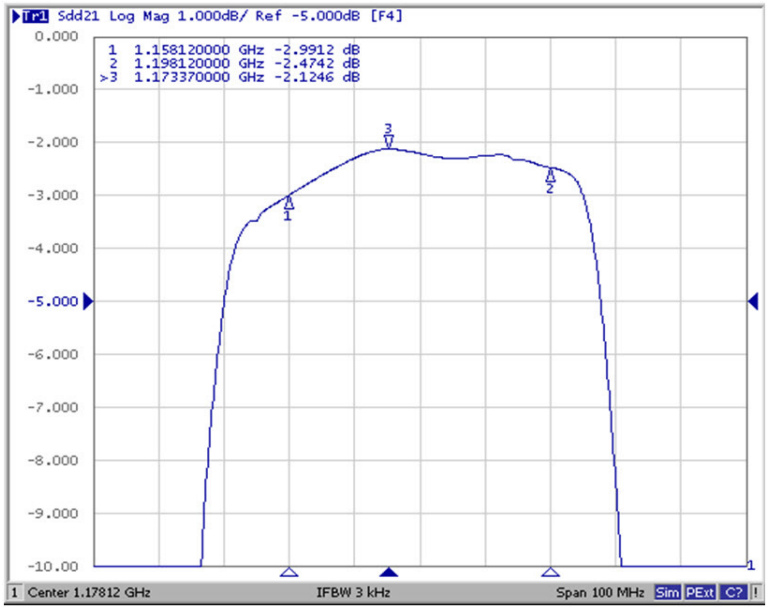
Filter S_{11}, and S_{22}

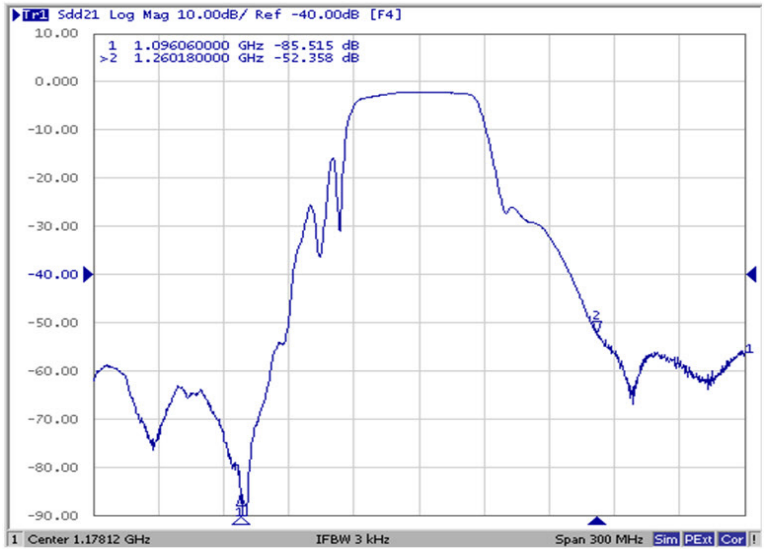
S11

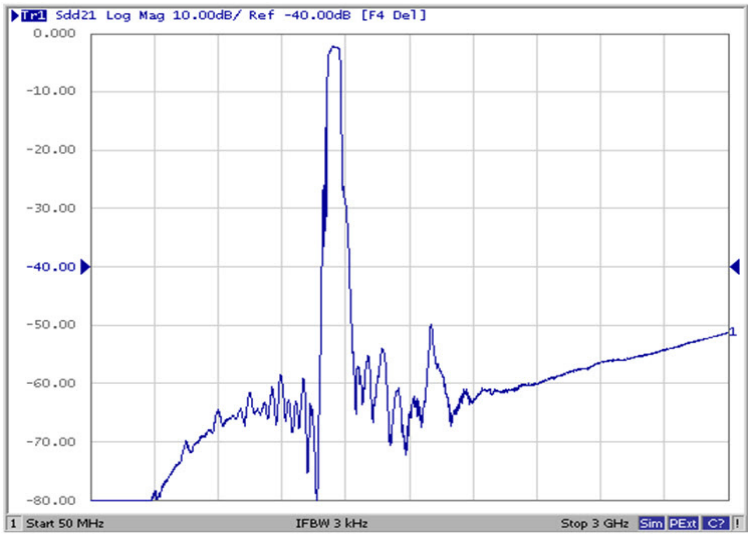


S22

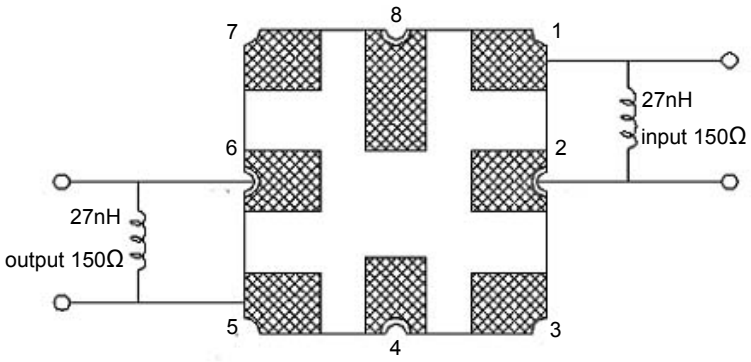




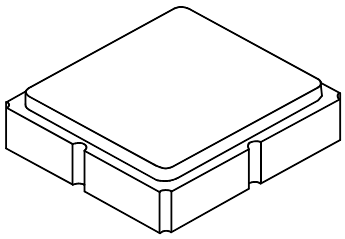


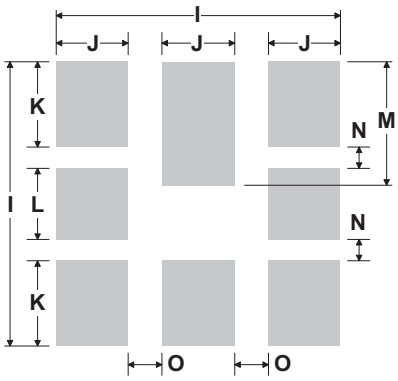


Tuning Network, 150 ohm Balanced Source/Load



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





PCB Footprint Top View

Case and PCB Footprint Dimensions

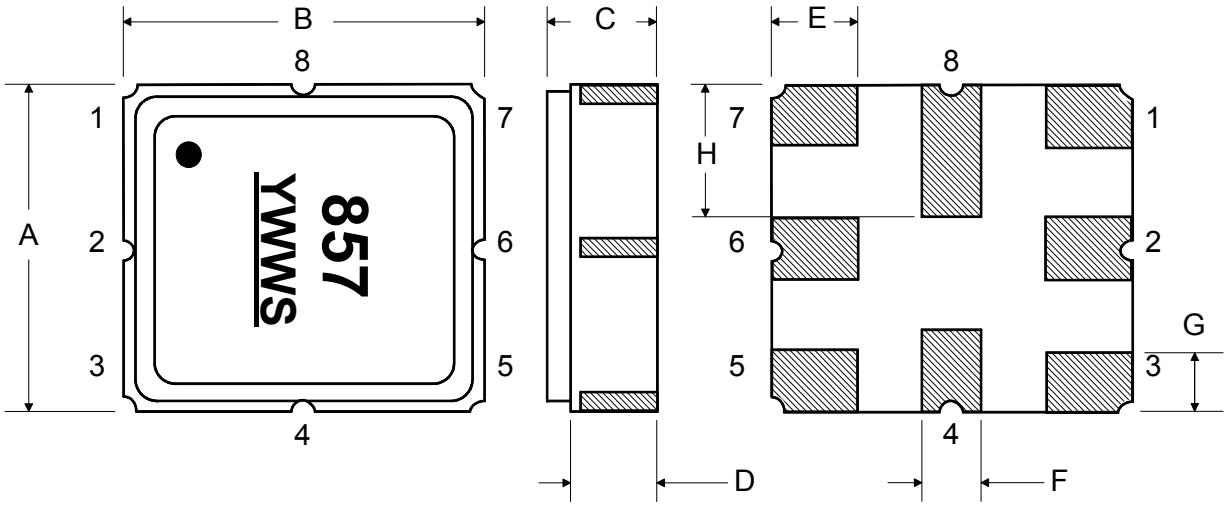
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	2.87	3.0	3.13	0.113	0.118	0.123
B	2.87	3.0	3.13	0.113	0.118	0.123
C	1.14	1.27	1.10	0.045	0.050	0.043
D	0.79	0.92	1.05	0.031	0.036	0.041
E	0.62	0.75	0.88	0.024	0.029	0.034
F	0.47	0.60	0.73	0.018	0.024	0.029
G	0.47	0.60	0.73	0.018	0.024	0.029
H	1.07	1.20	1.33	0.042	0.047	0.052
I		3.20			0.125	
J		0.81			0.032	
K		0.96			0.038	
L		0.81			0.032	
M		1.39			0.055	
N		0.23			0.009	
O		0.38			0.015	

Case Materials

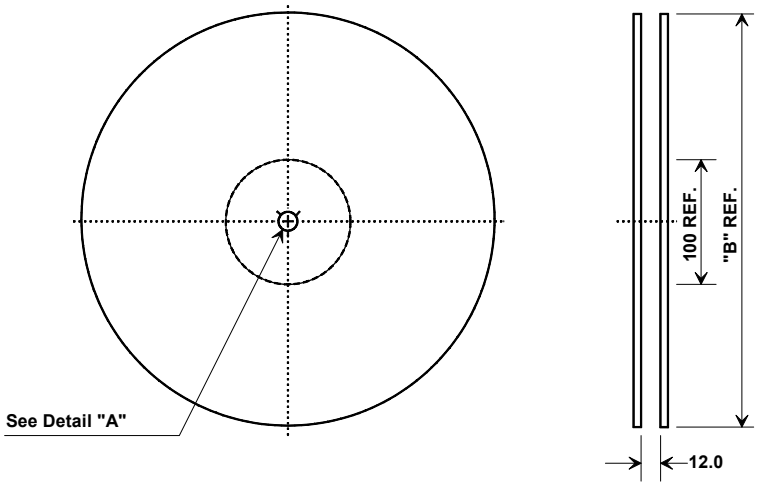
Materials	
Solder Pad Plating	0.3 to 1.0 µm Gold over 1.27 to 8.89 µm Nickel
Lid Plating	2.0 to 3.0 µm Nickel
Body	Al_2O_3 Ceramic
Pb Free	

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