

- **SAW Filter for Digital Television**
- **Complies with Directive 2002/95/EC (RoHS)**
- **Moisture Sensitivity Level: 1**

Characteristics :

Balance-to-balanced Operation

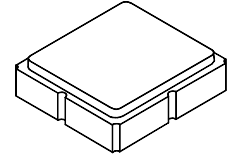
Terminating Source/Load Impedance : $Z_S = 150 \Omega$

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

SF2162E

**1178.12 MHz
SAW Filter**



SM3030-8

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

Electrical Connections

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

Dot Indicates Pin 1



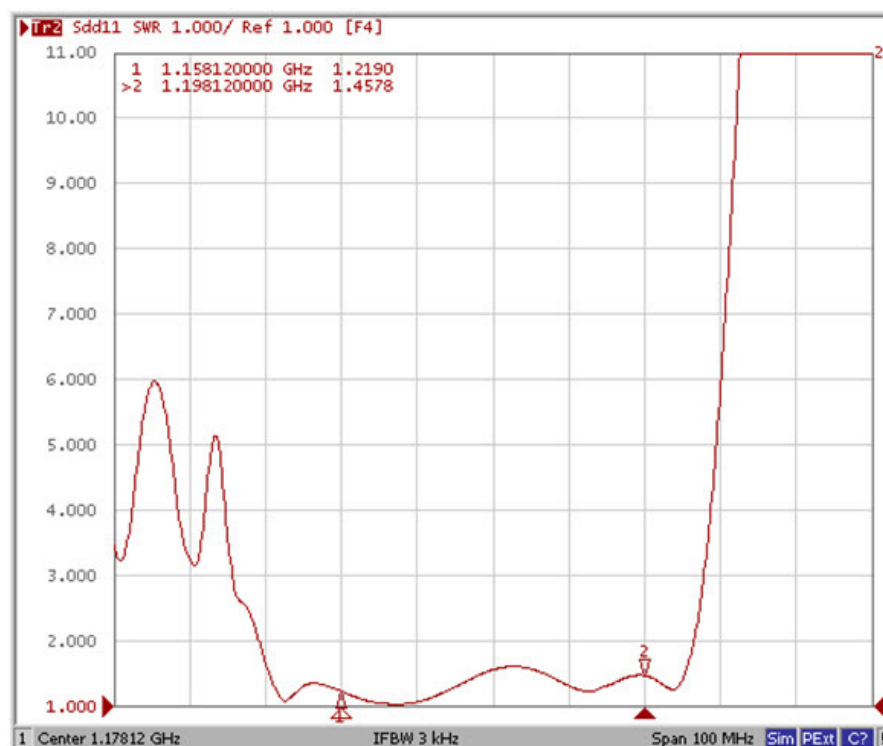
CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

NOTES:

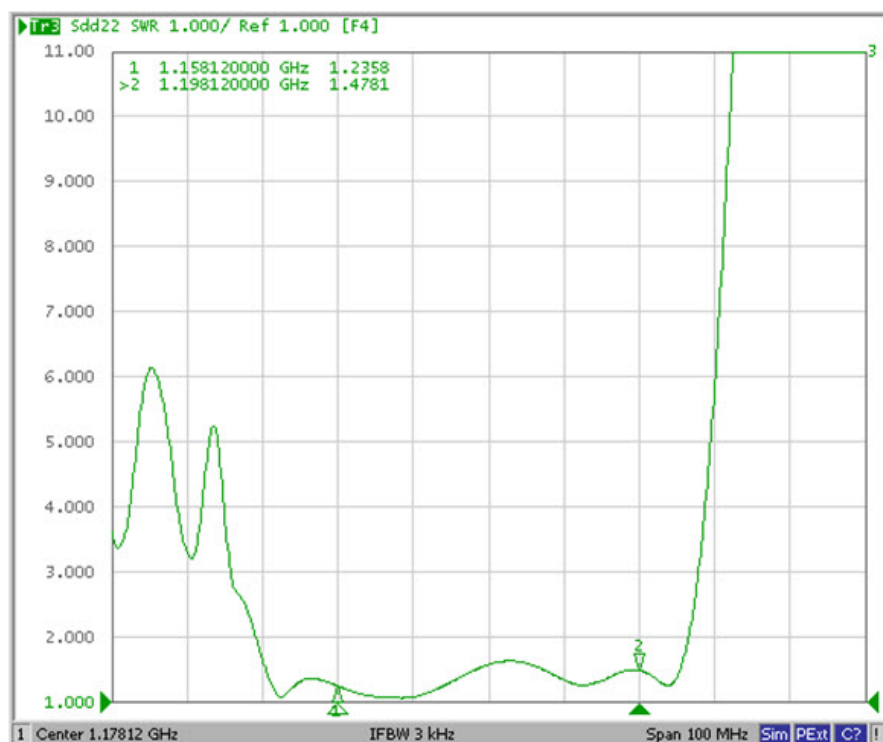
1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

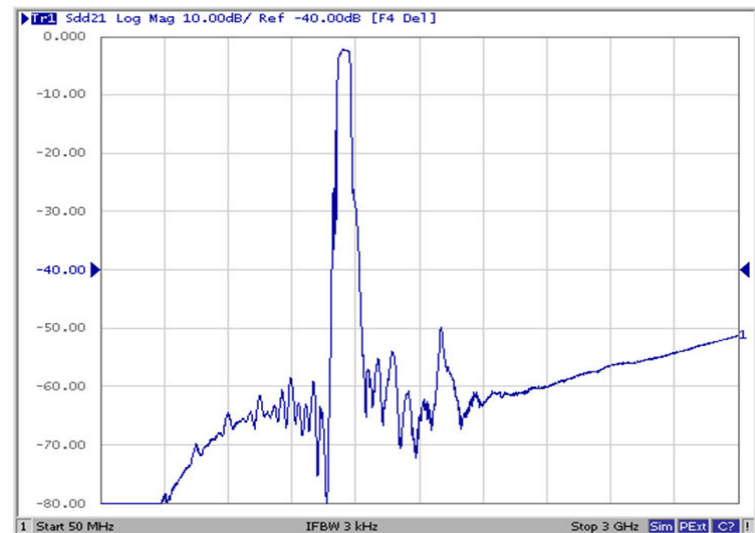
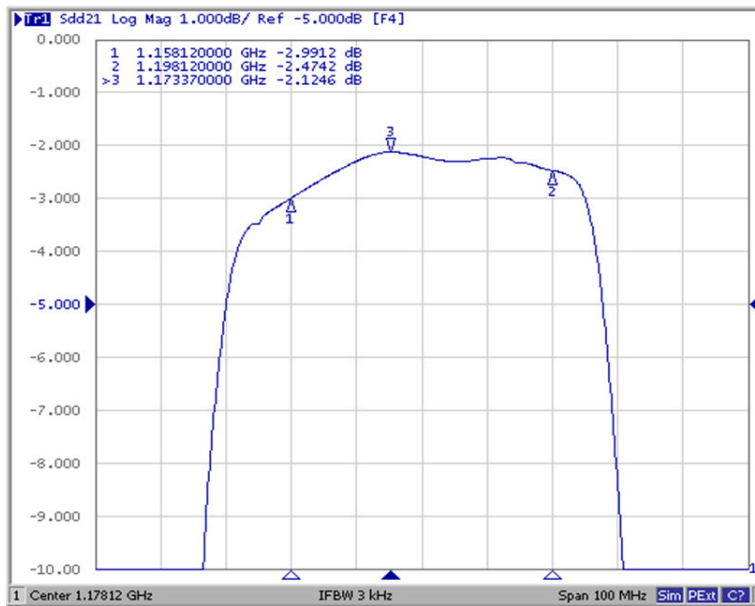
Filter S_{11} , and S_{22}

S_{11}

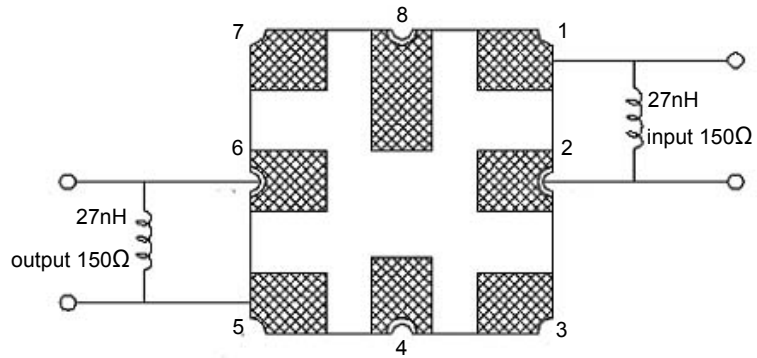


S_{22}

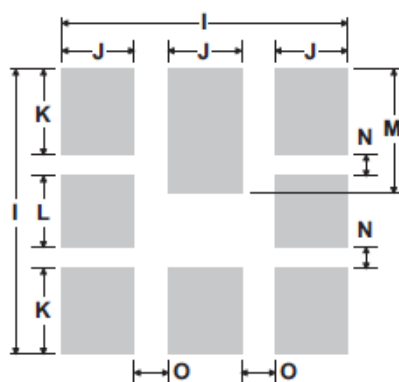
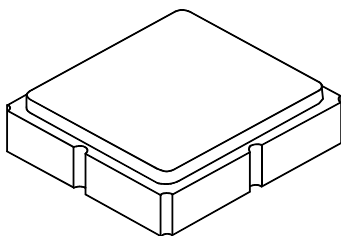




Tuning Network, 150 ohm Balanced Source/Load



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



PCB Footprint Top View

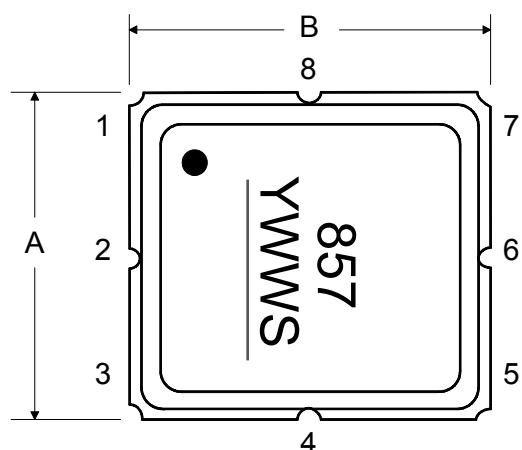
Case and PCB Footprint Dimensions

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	

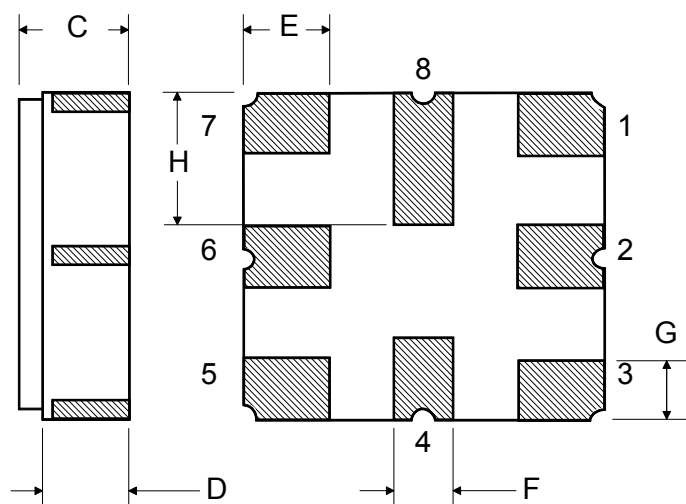
Case Materials

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

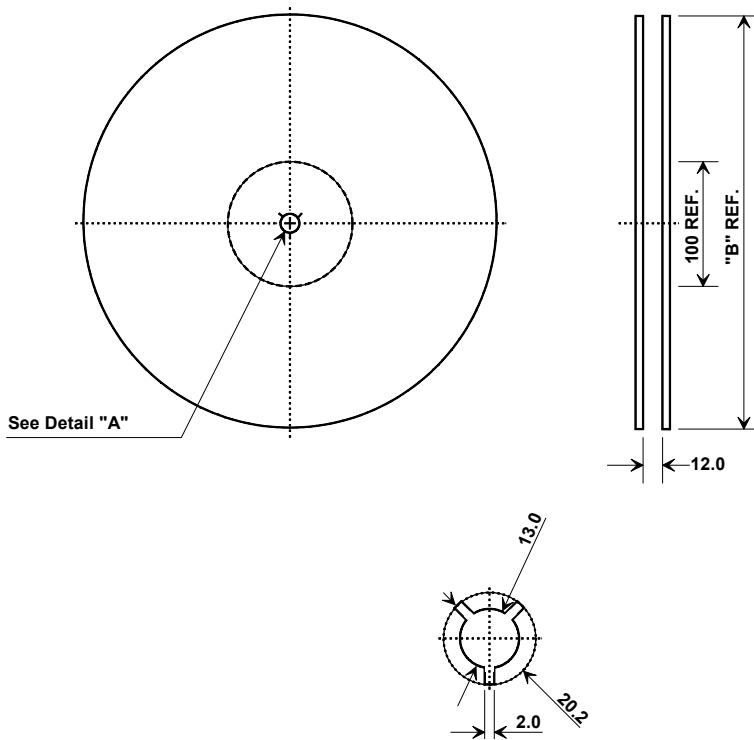
TOP VIEW



BOTTOM VIEW



Tape and Reel Specifications

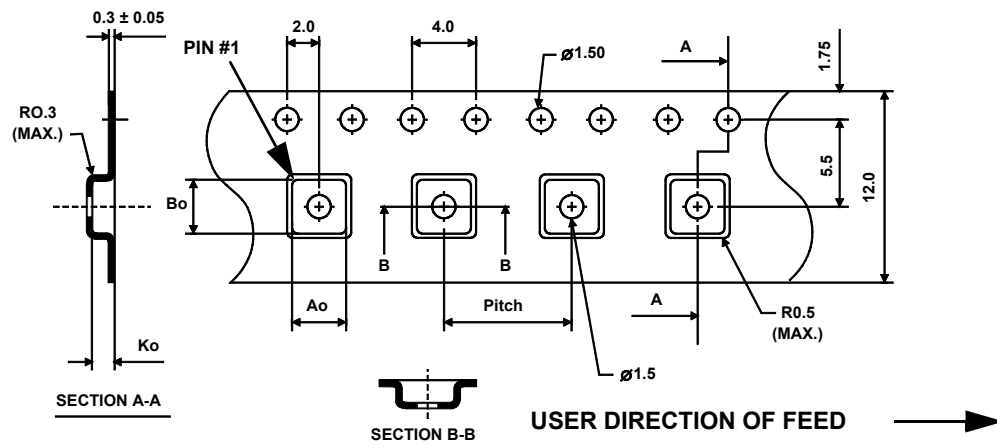


Tape and Reel Standard per ANSI/EIA-481

"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



Recommended Reflow Profile

1. Preheating shall be fixed at 150~180°C for 60~90 seconds.
2. Ascending time to preheating temperature 150°C shall be 30 seconds min.
3. Heating shall be fixed at 220°C for 50~80 seconds and at 260°C +0/-5°C peak (10 seconds).
4. Time: 5 times maximum.

