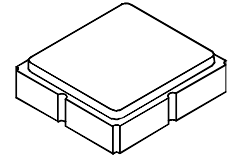


- SAW Filter for Digital Television
- Complies with Directive 2002/95/EC (RoHS)
- Moisture Sensitivity Level: 1

RoHS  
Compliant

**SF2164E**

**1484.3 MHz  
SAW Filter**



**SM3030-8**

**Characteristics:**

Differential Source and Load Configuration

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
Operable Temperature Range	-45 to +125	°C
Specification Temperature Range	-40 to +85	°C
Storage Temperature Range	-50 to +95	°C
Soldering Reflow Temperature - 5 Cycles Maximum	260 °C for 10 seconds	

**Electrical Characteristics**

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	$f_C$			1484.3		MHz
Insertion Loss, 1464.3 to 1504.3 MHz	IL			2.0	4.5	dB
Amplitude Ripple, 1464.3 to 1504.3 MHz				0.6	2.0	dB
Phase Error, 1464.3 to 1504.3 MHz				3.2	6.0	deg
Input/Output VSWR, 1464.3 to 1504.3 MHz				2:1	2.5:1	
2 dB Bandwidth			40	60		MHz
Attenuation Referenced to 0 dB:						
50 to 1402.3 MHz			48	60		dB
1566.3 to 1810.5 MHz			50	60		
1810.5 to 4250 MHz			55	65		
4250 to 6000 MHz			30	38		

Case Style	SM3030-8 3.0 x 3.0 mm Nominal Footprint
Lid Symbolization, Y=year, WW=week, S=shift, dot=pin 1 indicator	860, <u>YWWS</u>

**Electrical Connections**

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

Dot Indicates Pin 1

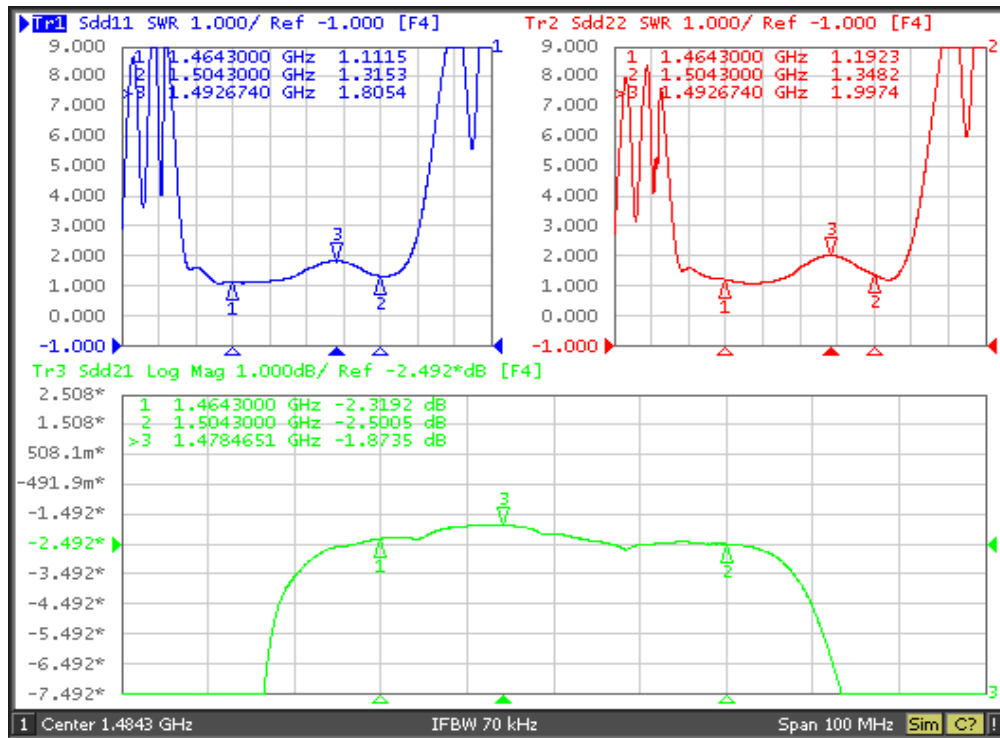


**CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**

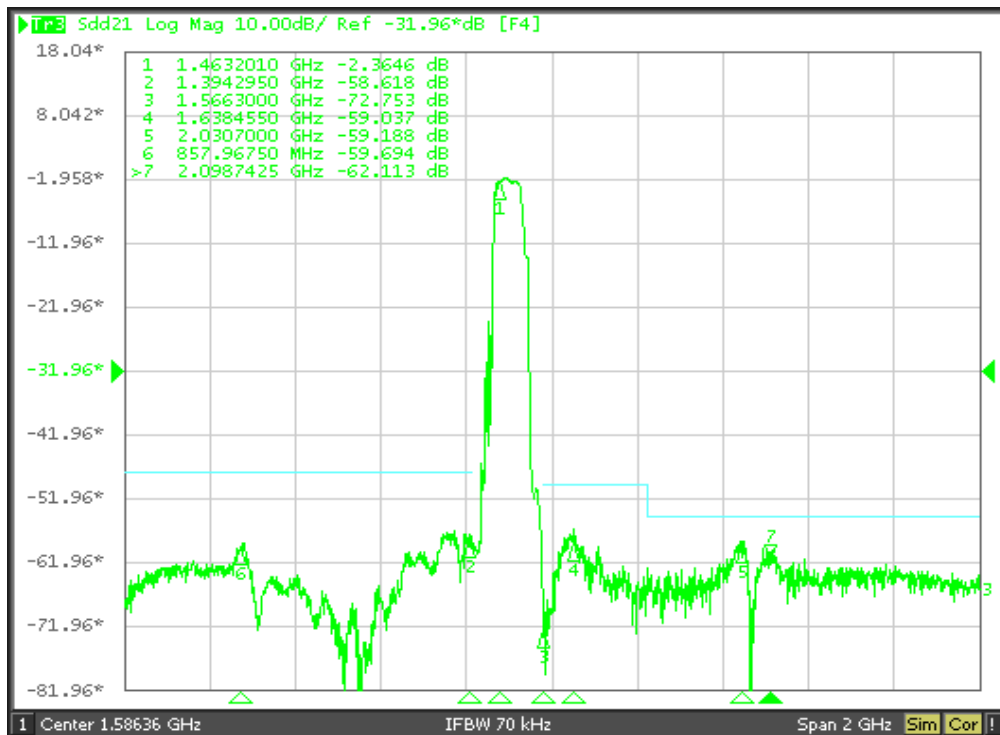
**NOTES:**

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.

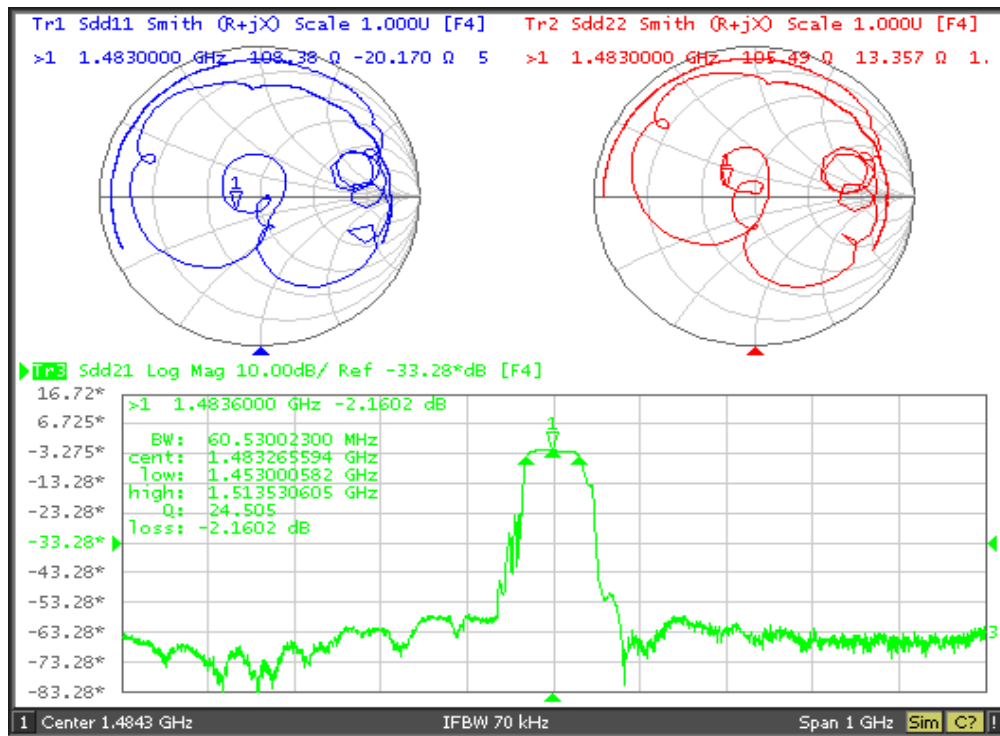
## Passband Amplitude and SWR Response



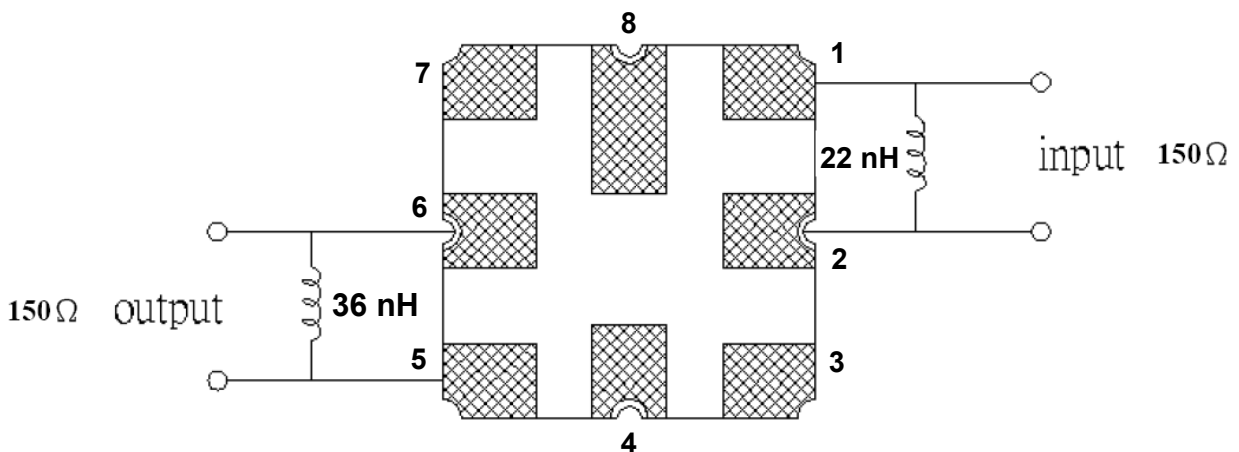
## Broadband Response



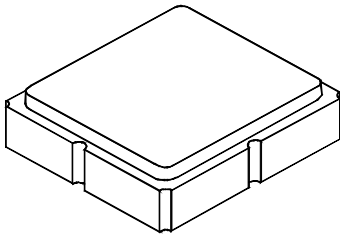
## S<sub>11</sub>, S<sub>22</sub> and S<sub>21</sub> Plots



## Test Circuit, Bottom View

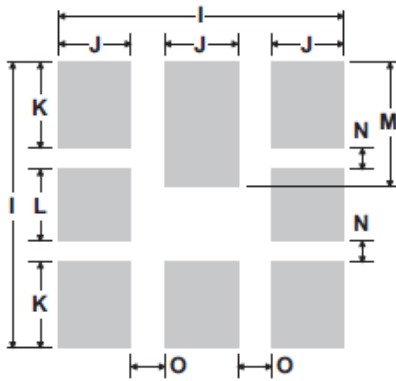


## 8-Terminal Ceramic Surface-Mount Case 3.0 X 3.0 mm Nominal Footprint



### 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	1.40	0.045	0.050	0.055
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		3.19			0.126	
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	



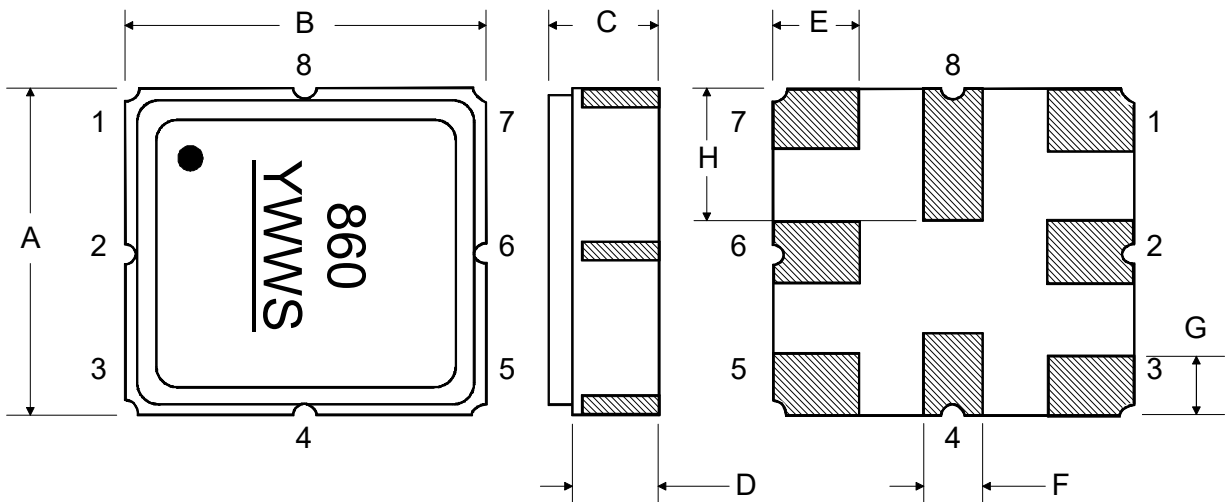
PCB Footprint Top View

### Case Materials

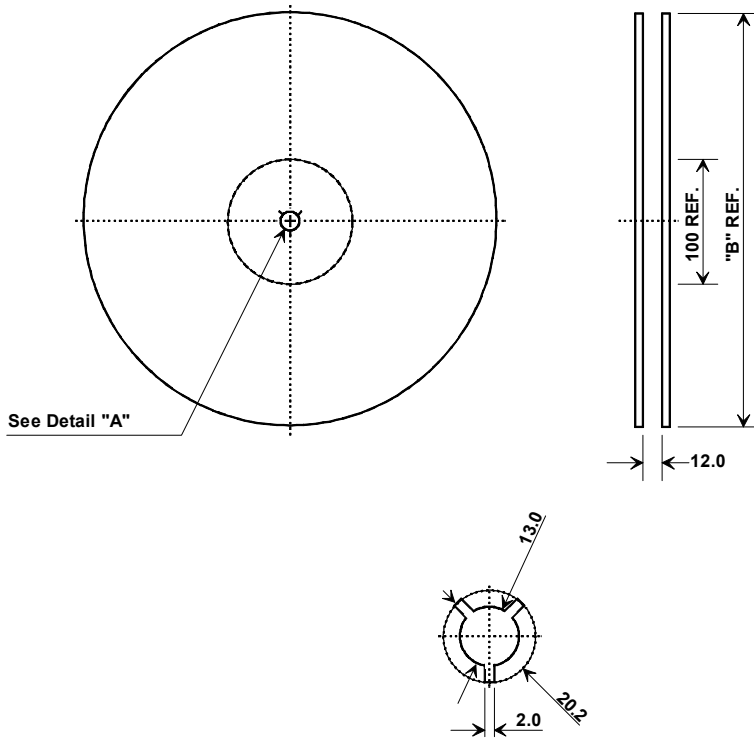
Materials	
Solder Pad Plating	0.3 to 1.0 $\mu\text{m}$ Gold over 1.27 to 8.89 $\mu\text{m}$ Nickel
Lid Plating	2.0 to 3.0 $\mu\text{m}$ Nickel
Body	$\text{Al}_2\text{O}_3$ Ceramic

TOP VIEW

BOTTOM VIEW



## Tape and Reel Specifications

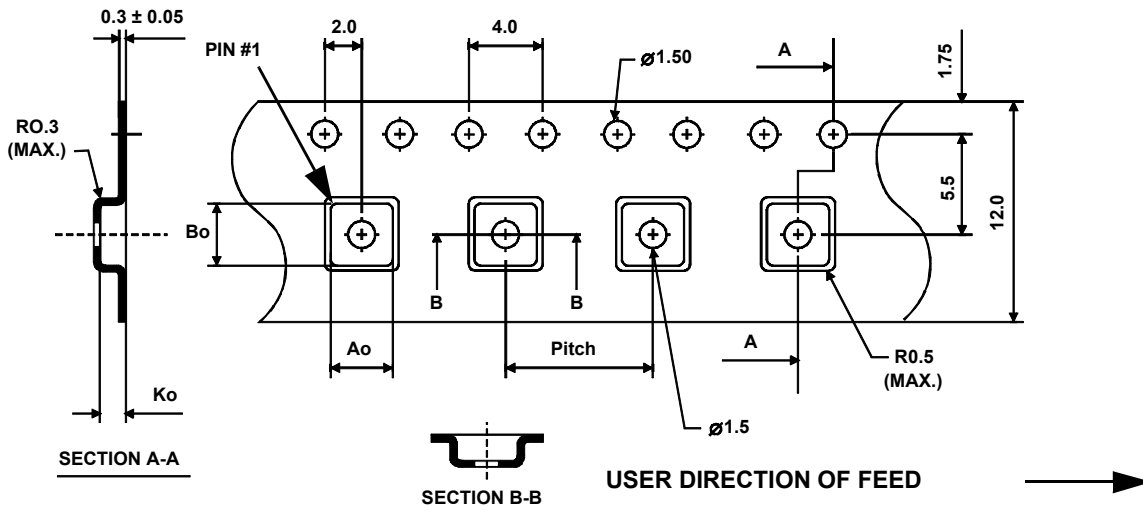


Tape and Reel Standard per ANSI/EIA-481

"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	1.4 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.

