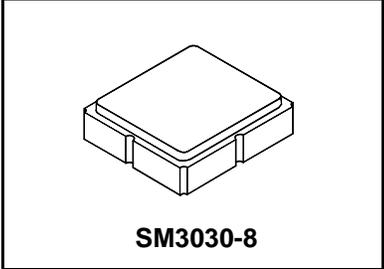




# SF2166E

## 1280.18 MHz SAW Filter



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

**Characteristics:**

Balance-to-balanced operation  
 Terminating source/load impedance :  $Z_S = 150 \Omega$

**Maximum Rating**

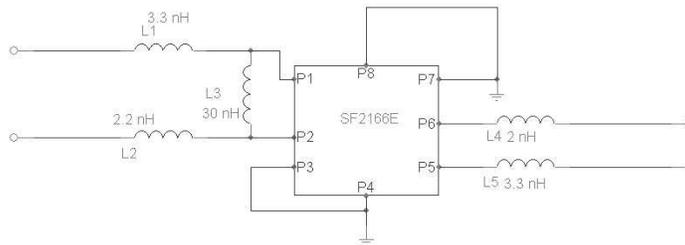
Rating	Value	Units
Input Power Level	+10	dBm
DC Voltage on any Non-ground Terminal	3	V
Operating Temperature Range	-40 to +85	°C
Storage Temperature Range	-50 to +95	°C
Maximum Soldering Profile, 5 cycles/ 10 seconds maximum	265	°C

**Electrical Characteristics**

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	$f_C$			1280.18		MHz
Insertion Loss, 1260.18 to 1300.18 MHz	IL			3.2	4.5	dB
Amplitude Ripple, 1260.18 to 1300.18 MHz				1.0	2.3	dB
Group Delay Ripple, 1260.18 to 1300.18 MHz				20	30	ns <sub>p-p</sub>
Attenuation, 0 dB Reference:						
100 to 1198.12 MHz			47	50		dB
1362.24 to 2000 MHz			45	55		
2000 to 6000 MHz			30	40		

Case Style	SM3030-8 3.0 x 3.0 mm Nominal Footprint		
Lid Symbolization (Y=year, WW=week, S=shift) dot=pin 1 indicator	858, YWWS		
Standard Reel Quantity	Reel Size 7 inch	500 Pieces/Reel	
	Reel Size 13 inch	3000 Pieces/Reel	

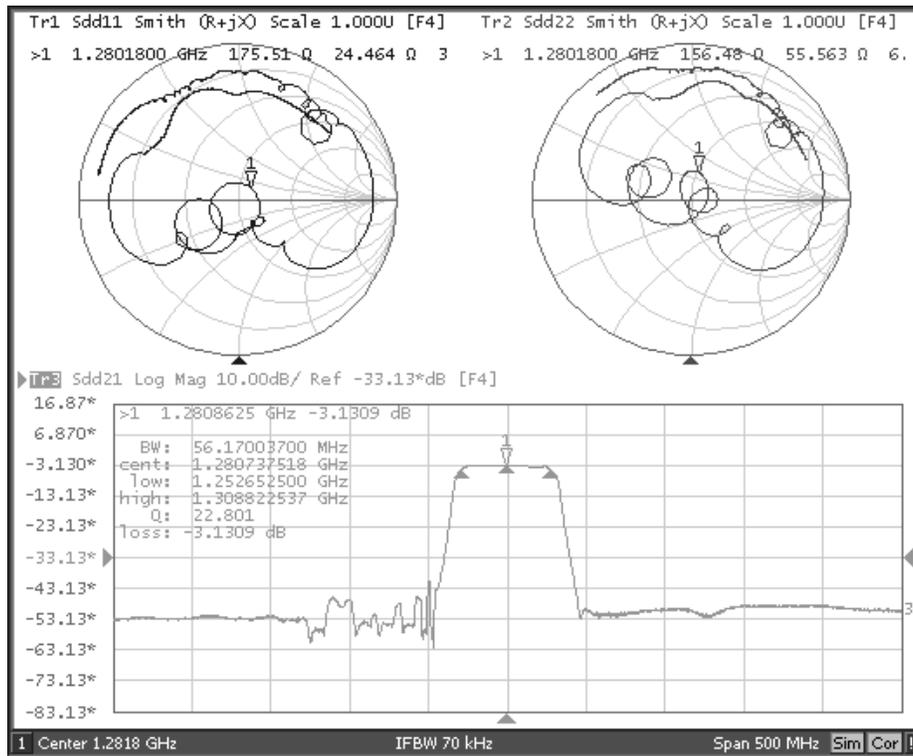
Tuning Network, 150 ohm Balanced Source/Load



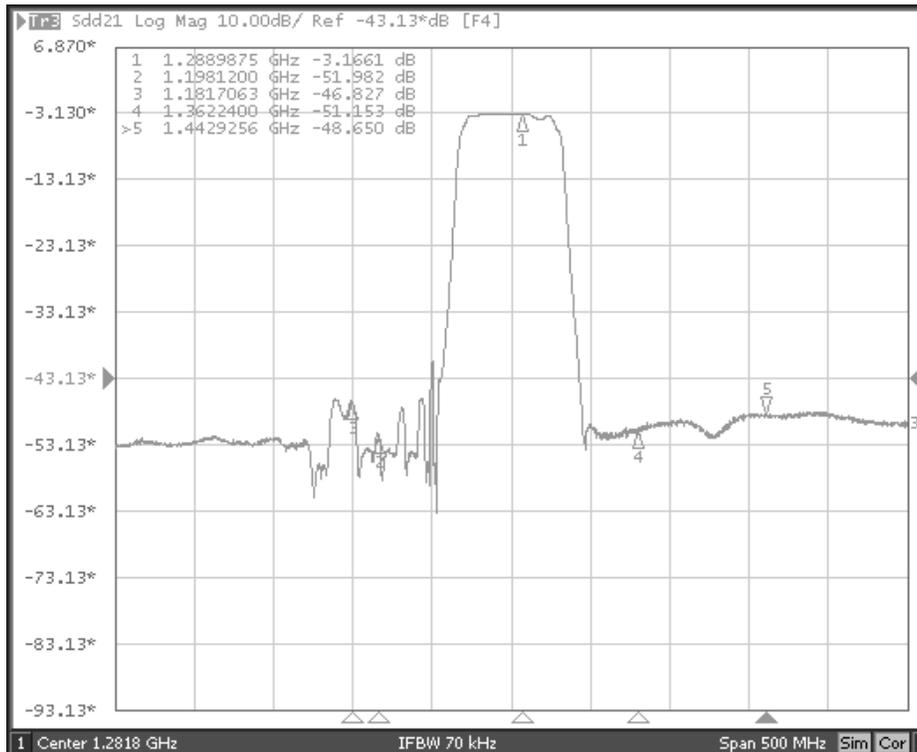
**Notes:**

1. US and international patents may apply.
2. RFM, stylized RFM logo, and RF Monolithics, Inc. are registered trademarks of RF Monolithics, Inc.
3. Electrostatic Sensitive Device. Observe precautions for handling.

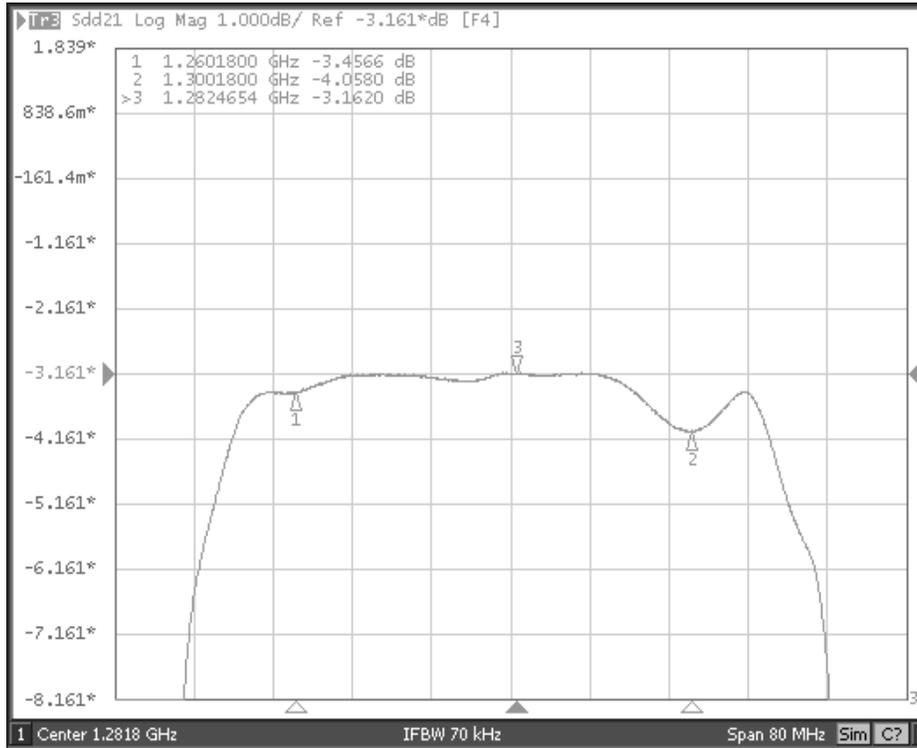
## Filter S21, S11 and S22 Plots



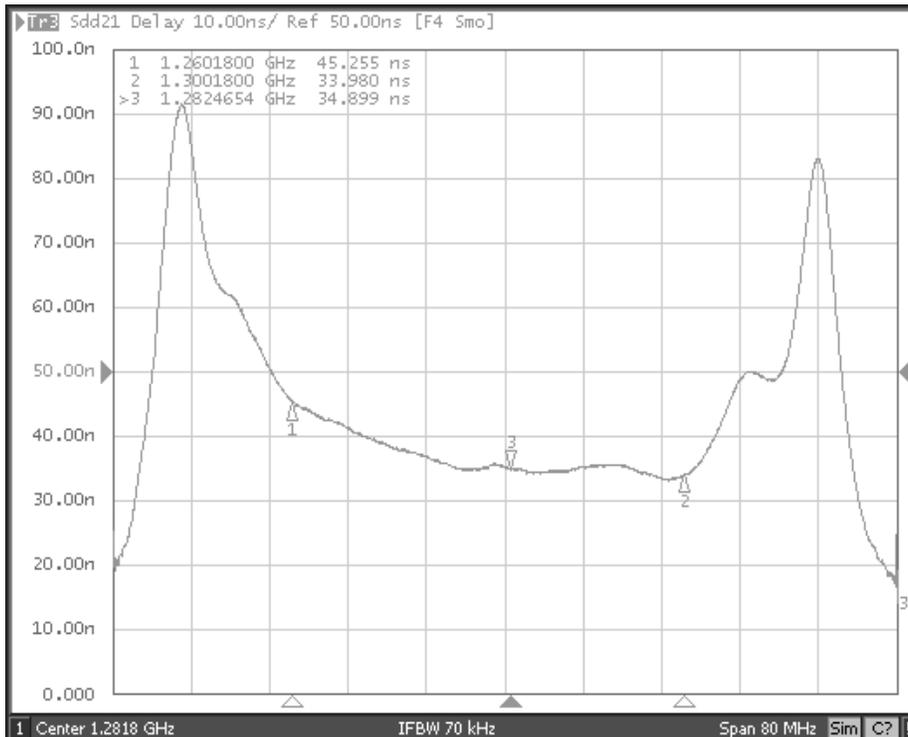
## Filter Shape Factor Plot



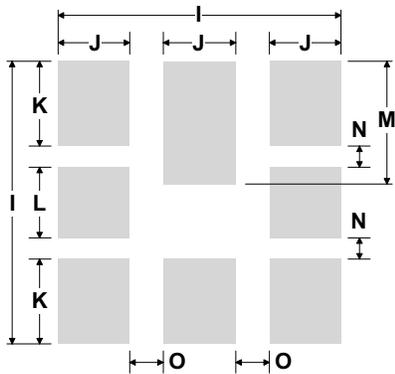
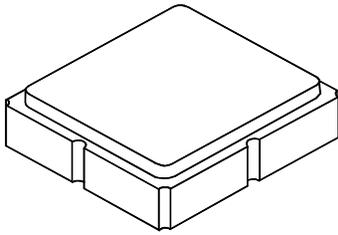
## Filter Passband Plot



## Filter Group Delay Plot



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



**PCB Footprint Top View**

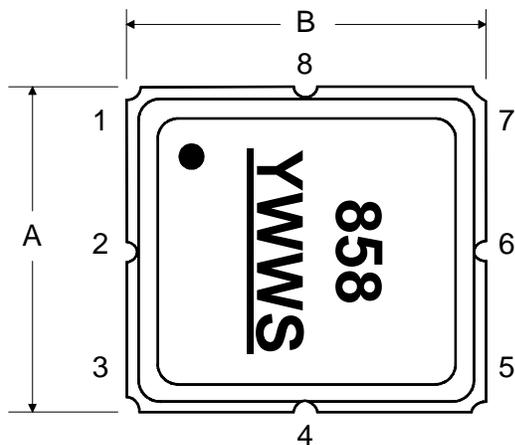
### Case and PCB Footprint Dimensions

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	1.40	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	-

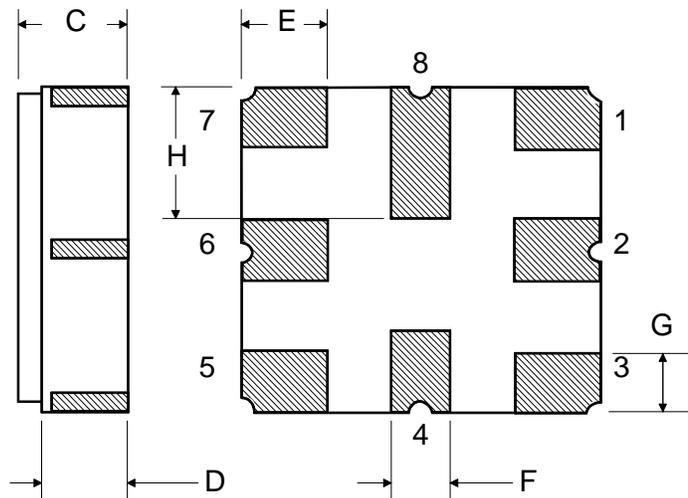
### Case Materials

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
Pb Free	

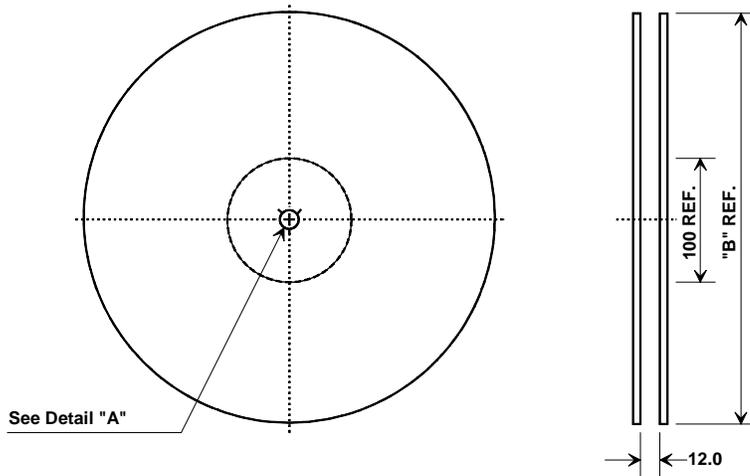
TOP VIEW



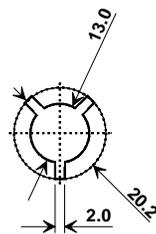
BOTTOM VIEW



## 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

