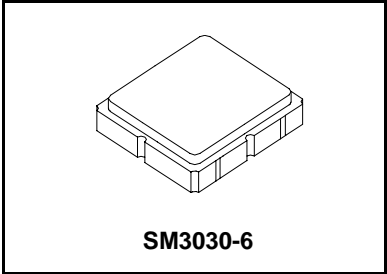




**SF2053E**

**915.00 MHz  
SAW Filter**



- Low Loss Filter for 915 MHz Front End
- Complies with Directive 2002/95/EC (RoHS)



**Absolute Maximum Ratings**

Rating	Value	Units
Input Power Level	20	dBm
DC Voltage on any Non-ground Terminal	0	V
Operating Temperature Range	-20 to +60	°C
Storage Temperature Range in Tape and Reel	-40 to +85	°C
Maximum Soldering Profile, 5 Cycles/10 seconds Maximum	265	°C

**Electrical Characteristics**

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	$f_c$			915		MHz
Insertion Loss, 908.75 to 921.25 MHz	$IL_{MIN}$			3.0	5.0	dB
Amplitude Variation, 910.25 to 921.25 MHz				1.0	1.5	dB <sub>P-P</sub>
Amplitude Variation, 908.75 to 921.25 MHz				1.0	3.1	
Attenuation, Referenced to $IL_{MIN}$						dB
850 to 902 MHz			18	31		
928 to 940 MHz			7.5	15		
800 to 850 MHz			35	48		
940 to 1000 MHz			33	41		
Temperature Coefficient of Frequency	$TC_f$			-42		ppm/K
Source Impedance	$Z_S$			50		$\Omega$
Load Impedance	$Z_L$			50		$\Omega$

Case Style	SM3030-6 3.0 x 3.0 mm Nominal Footprint					
Lid Symbolization (Y=year, WW=week, S=shift) dot=pin 1 indicator	531, YWWS					
Standard Reel Quantity	Reel Size 7 Inch					500 Pieces/Reel
	Reel Size 13 Inch					3000 Pieces/Reel

**Electrical Connections**

Connection	Terminals
Input	2
Output	5
Case Ground	All others

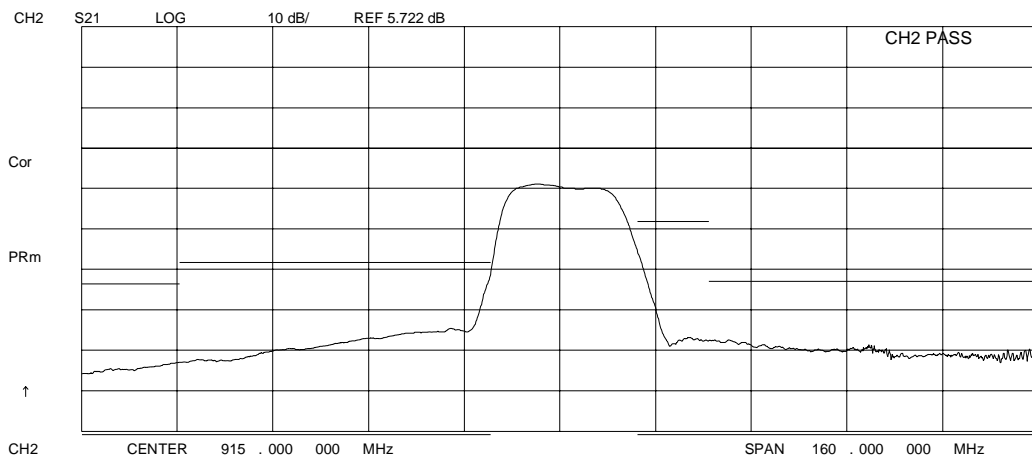
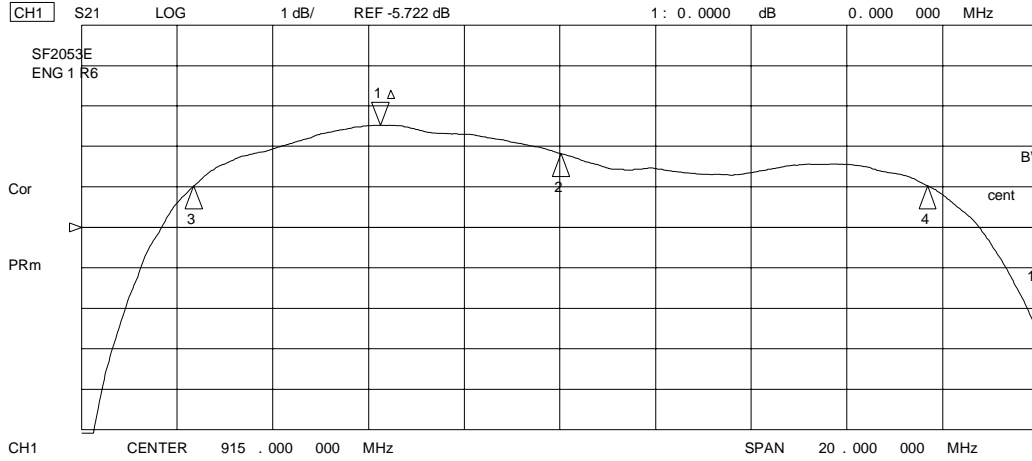


**CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**

**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  $\Omega$  and measured with 50  $\Omega$  network analyzer.
2. Unless noted otherwise, all frequency specifications are referenced to the nominal center frequency,  $f_c$ .
3. The design, manufacturing process, and specifications of this filter are subject to change.
4. US and international patents may apply.
5. RFM, stylized RFM logo, and RF Monolithics, Inc. are registered trademarks of RF Monolithics, Inc.

29 Jun 2005 13:25:50



29 Jun 2005 13:17:42

CH1 S11 1 U FS

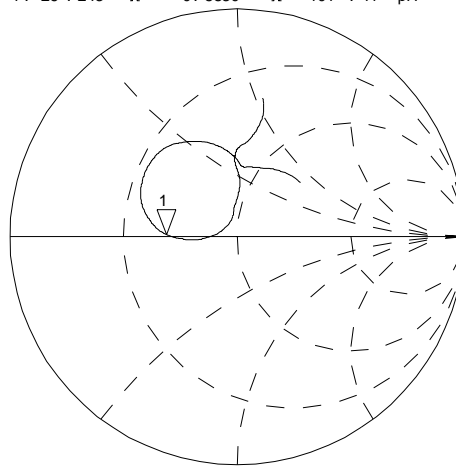
1: 26 . 243  $\Omega$  0 . 5830  $\Omega$  101 . 41 pF 915 . 000 000 MHz

SF2053E  
ENG 1 R6

Cor

PRm

↑

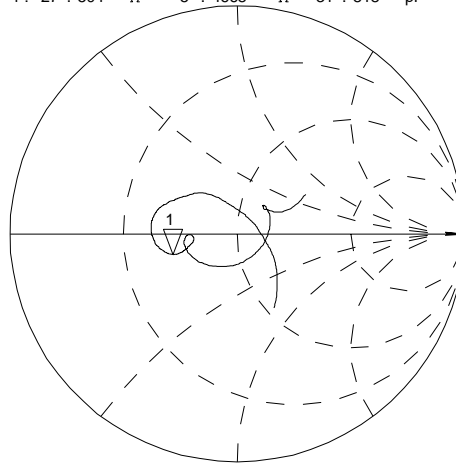


CH3 S22 1 U FS

1: 27 . 504  $\Omega$  -5 . 4668  $\Omega$  31 . 818 pF 915 . 000 000 MHz

Cor

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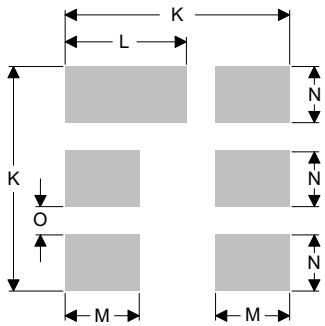


CENTER 915 . 000 000 MHz

SPAN 20 . 000 000 MHz

# SM3030-6 Case

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



PCB Footprint Top View

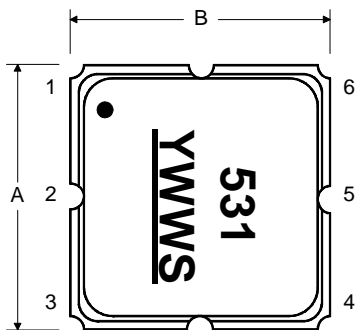
### Case and PCB Footprint Dimensions

Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	2.87	3.00	3.13	0.113	0.118	0.123
B	2.87	3.00	3.13	0.113	0.118	0.123
C	1.12	1.25	1.38	0.044	0.049	0.054
D	0.77	0.90	1.03	0.030	0.035	0.040
E	2.67	2.80	2.93	0.105	0.110	0.115
F	1.47	1.60	1.73	0.058	0.063	0.068
G	0.72	0.85	0.98	0.028	0.033	0.038
H	1.37	1.50	1.63	0.054	0.059	0.064
I	0.47	0.60	0.73	0.019	0.024	0.029
J	1.17	1.30	1.43	0.046	0.051	0.056
K		3.20			0.126	
L		1.70			0.067	
M		1.05			0.041	
N		0.81			0.032	
O		0.38			0.015	

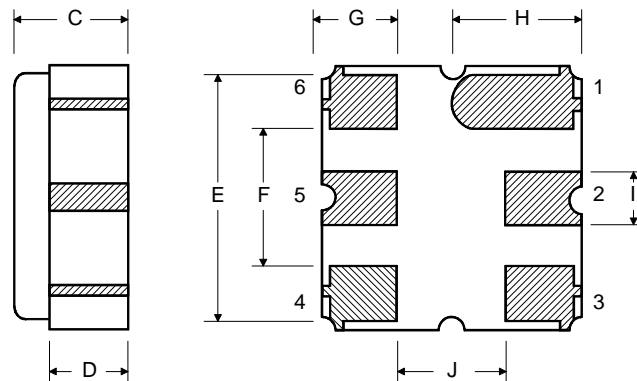
### Case Materials

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	

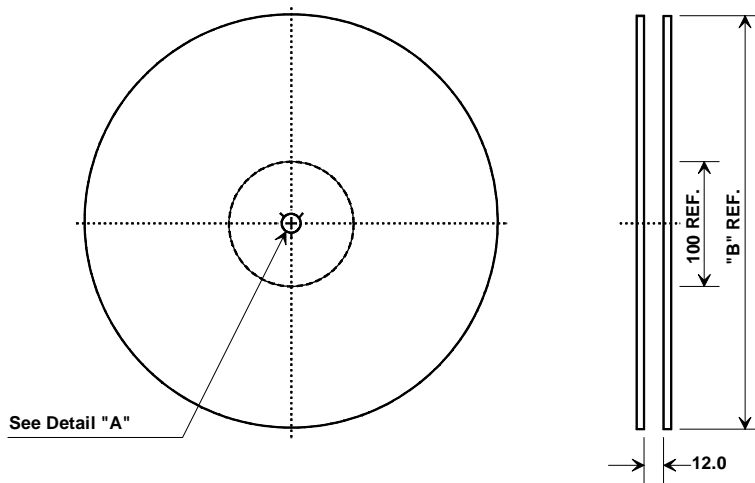
### TOP VIEW



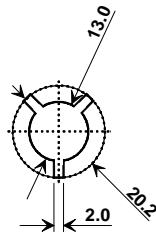
### BOTTOM VIEW



## 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

