

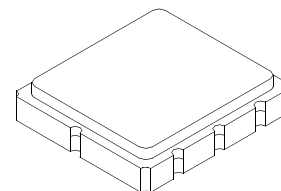
- **Low Insertion Loss**
- **5.0 X 5.0 mm Surface-mount Case**
- **Single-ended Input and Output**
- **Complies with Directive 2002/95/EC (RoHS)**
- **Moisture Sensitivity Level: 1**

Absolute Maximum Ratings

Rating	Value	Units
Maximum Incident Power in Passband	+13	dBm
Maximum DC Voltage on any Non-ground Terminal	30	VDC
Storage Temperature Range in Tape and Reel	-40 to +85	°C
Suitable for Lead-free Soldering - Maximum Soldering Temperature	260 °C for 30 s	

SF2089C

**327.5 MHz
SAW Filter**



SM5050-8

Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	f_c			327.5		MHz
Insertion Loss					12	dB
1.5 dB Bandwidth	$BW_{1.5}$		35			MHz
Amplitude Ripple, $f_c \pm 17.5$ MHz, within adjacent 5 MHz windows					1	dB _{p-p}
Group Delay Deviation, $f_c \pm 17.5$ MHz, within adjacent 5 MHz windows					50	ns _{p-p}
Group Delay Deviation, $f_c \pm 17.5$ MHz, full bandwidth				50	100	ns _{p-p}
VSWR at f_c					2.5:1	
40 dB Rejection Bandwidth					65	MHz
Operating Temperature Range			-40		85	°C
Case Style		SM5050-8 5 x 5 mm Nominal Footprint				
Lid Symbolization (Y=year, WW=week, S=shift)		591, YWWS				

Electrical Connections

Connection		Terminals
Port 1	Input	1
Port 2	Output	5
	Ground	All others
Dot indicates Pin 1		



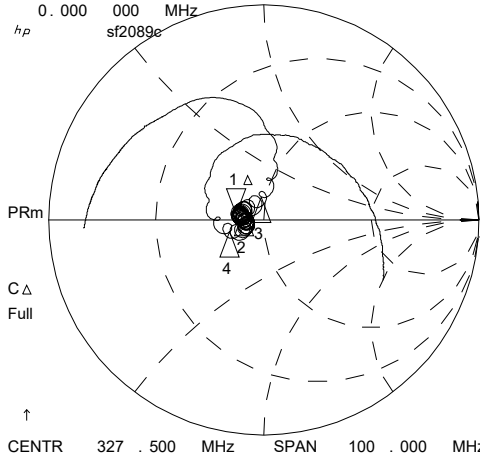
CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

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.

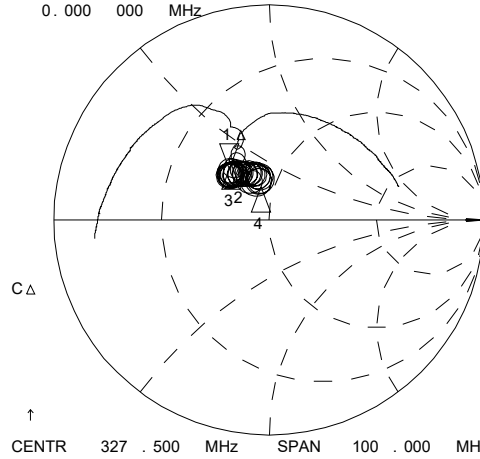
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CH1 S11 1 UFS
1: 0.0000 0.0000 0.0000 H
0.000 000 MHz
sf2089c



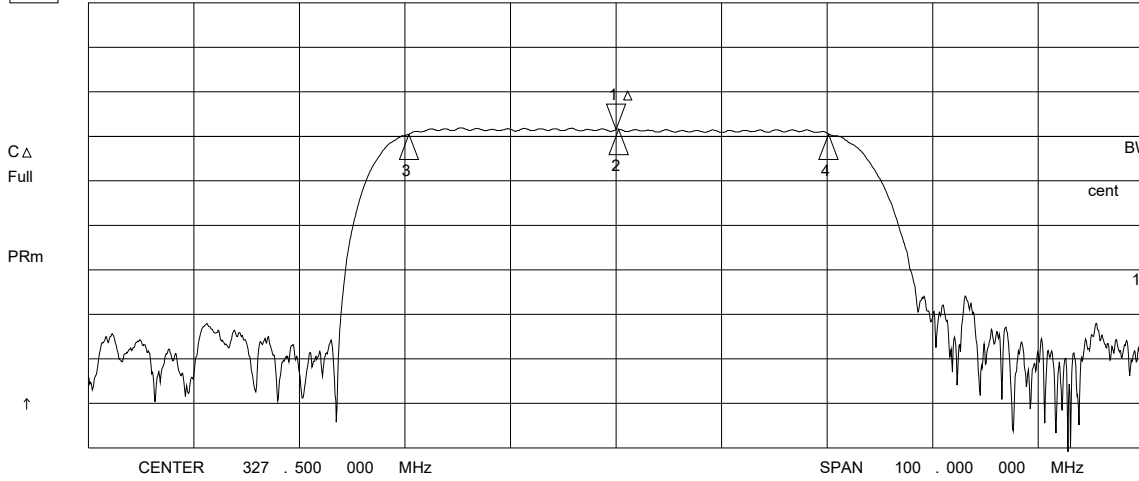
CH1 Markers
Δ REF=1
2: 3.0195 Ω
1.6621 Ω
282.553 kHz
3: 9.3320 Ω
8.3770 Ω
-19.5794 MHz
4: -2.2051 Ω
-6.1328 Ω
20.1445 MHz

CH3 S22 1 UFS
1: 0.0000 0.0000 0.0000 H
0.000 000 MHz



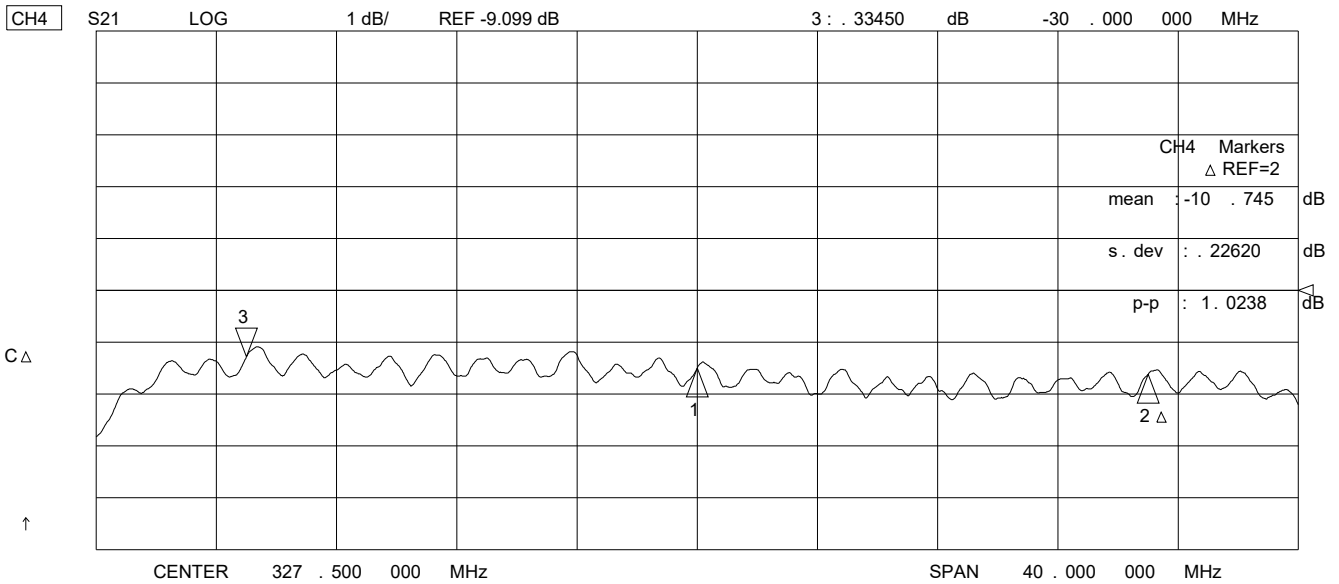
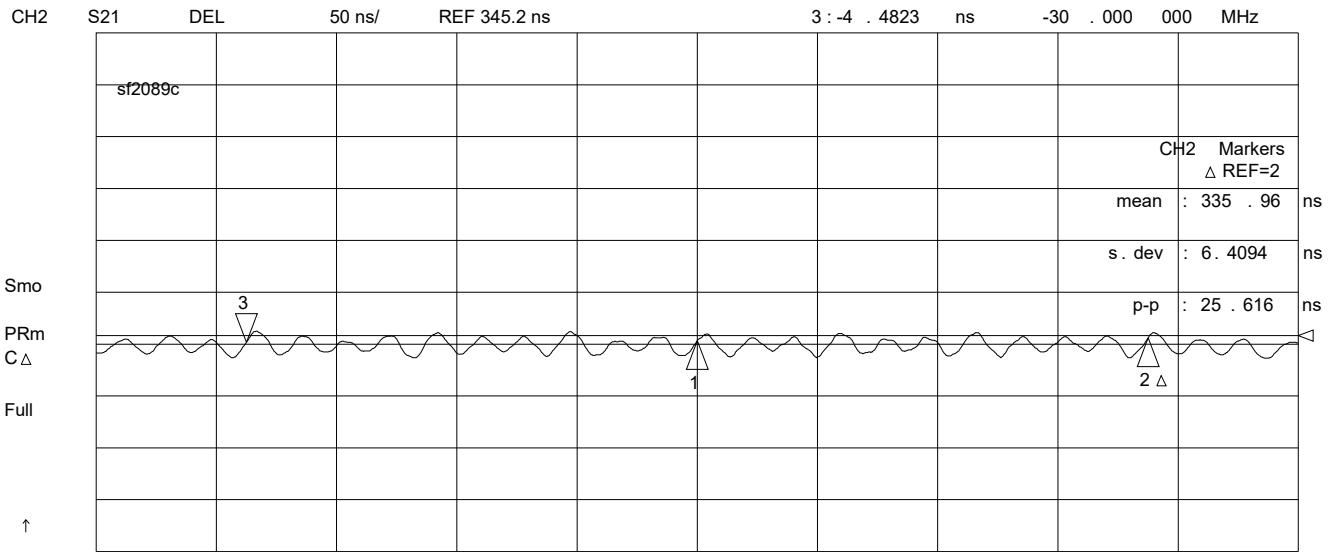
CH3 Markers
Δ REF=1
2: 2.5342 Ω
4.0986 Ω
282.553 kHz
3: 70.313 mΩ
1.7891 Ω
-19.5794 MHz
4: 13.325 Ω
-2.1670 Ω
20.1445 MHz

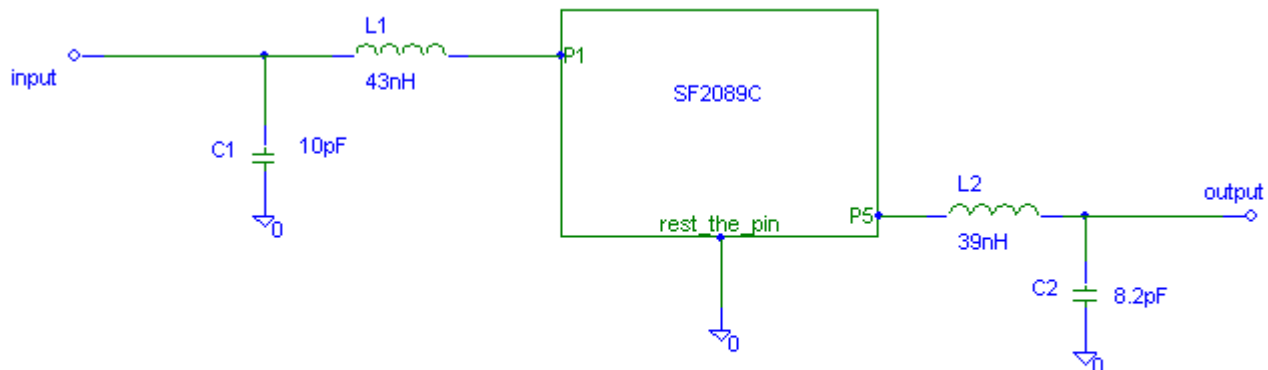
CH2 S21 LOG 10 dB/ REF -12 dB 1: 0.0000 dB 0.000 000 MHz



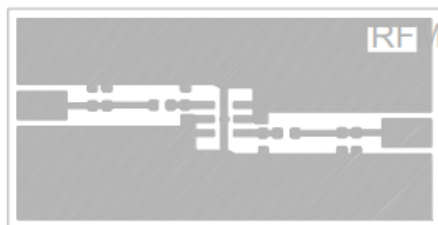
CH2 Markers
Δ REF=1
BW: 39.723986 MHz
cent: 327.782553 MHz
Q: 8.2515
1_loss: -10.490 dB

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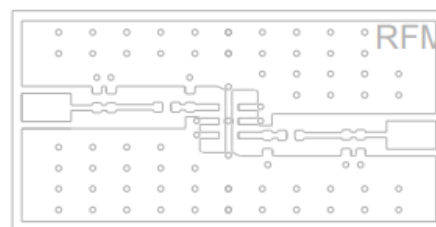
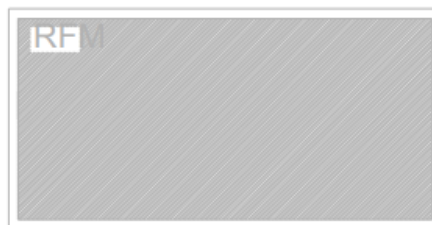




use RFM 400-1624-001 demo board
0603 Coilcraft inductor
0603 capacitor



1.590 REF.

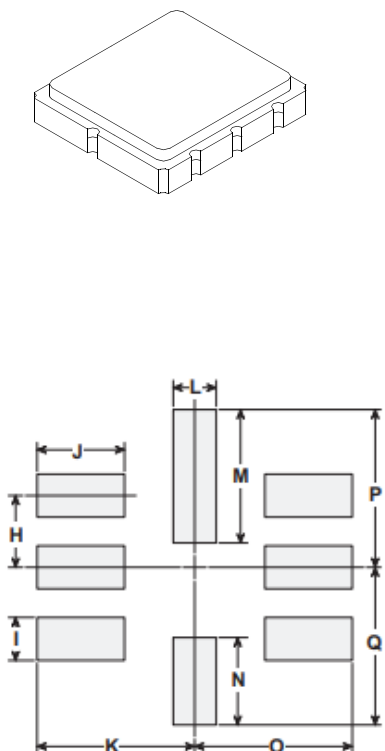


DRILL ALL HOLES #76 DRILL (0.020)
ALL HOLES ARE PLATED THRU.

SM5050-8 Surface-Mount 8-Terminal Ceramic Case **5.0 X 5.0 mm Nominal Footprint**

Case Dimensions

Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	4.80	5.00	5.20	0.189	0.197	0.205
B	4.80	5.00	5.20	0.189	0.197	0.205
C	1.30	1.50	1.70	0.050	0.060	0.067
D	1.98	2.08	2.18	0.078	0.082	0.086
E	1.07	1.17	1.27	0.042	0.046	0.050
F	0.50	0.64	0.70	0.020	0.025	0.028
G	2.39	2.54	2.69	0.094	0.100	0.106
H		1.27			0.050	
I		0.76			0.030	
J		1.55			0.061	
K		2.79			0.110	
L		0.76			0.030	
M		2.36			0.093	
N		1.55			0.061	
O		2.79			0.110	
P		2.79			0.110	
Q		2.79			0.110	

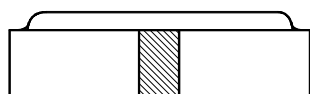
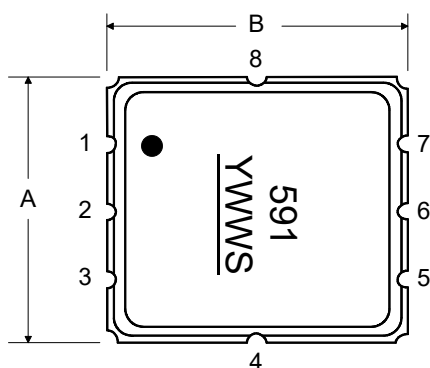


Case Materials

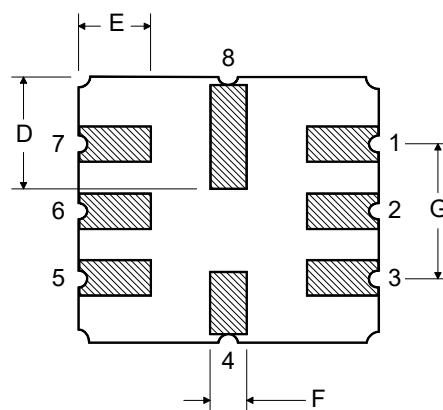
Materials	
Solder Pad Plating	0.3 to 1.0 μ m Gold over 1.27 to 8.89 μ m Nickel
Lid Plating	2.0 to 3.0 μ m Nickel
Body	Al ₂ O ₃ Ceramic

PCB Footprint

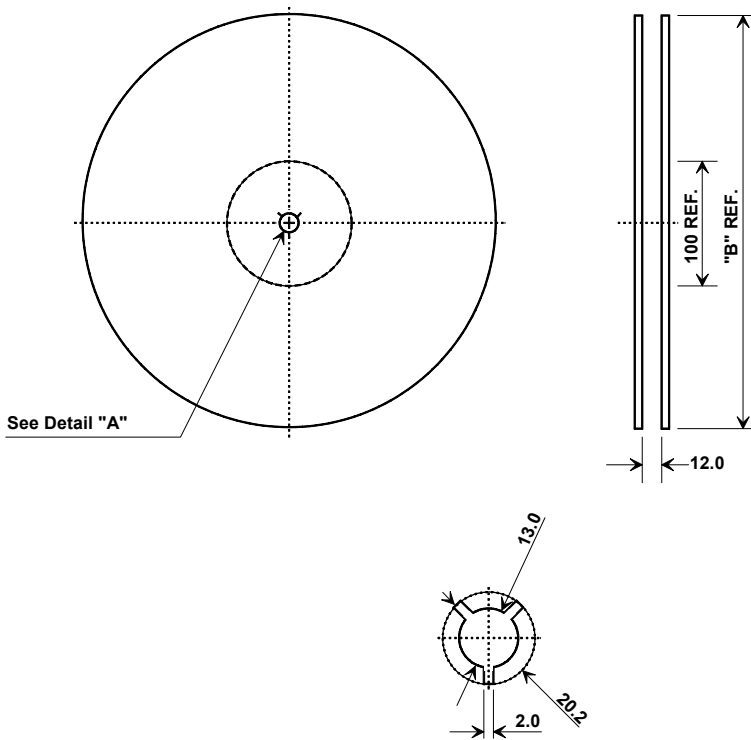
TOP VIEW



BOTTOM VIEW



Tape and Reel Specifications

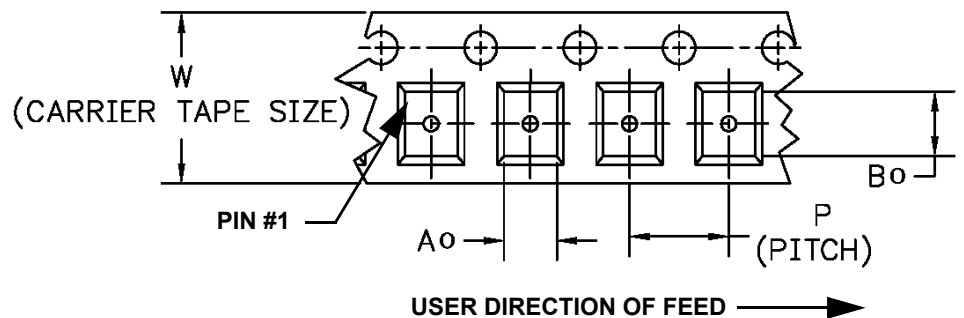
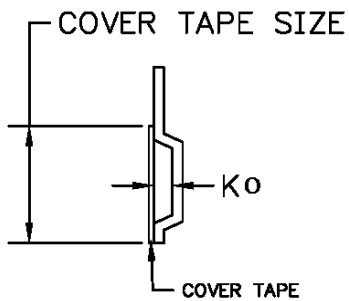


Tape and Reel Standard per ANSI/EIA-481

"B" Nominal Size		Quantity Per Reel
Inches	millimeters	
7	178	500
13	330	3000

COMPONENT ORIENTATION and DIMENSIONS

Carrier Tape Dimensions	
Ao	5.3 mm
Bo	5.3 mm
Ko	2.0 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.

