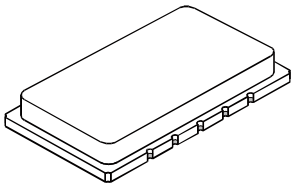
SF1097A

71 MHz SAW Filter

- ***Designed for GSM Terminal IF Applications***
- ***Excellent Size-to-Performance Ratio***
- ***Hermetic 14 x 8 mm Surface-Mount Case***



SMP-08

Absolute Maximum Ratings

Rating	Value	Units
Maximum Incident Power in Passband	+20	dBm
Max. DC voltage between any 2 terminals	30	VDC
Storage Temperature Range	-40 to +85	°C
Max. Soldering Profile	235°C for 90 s	

Electrical Characteristics

Characteristic		Sym	Notes	Min	Typ	Max	Units
Nominal Center Frequency		f_C	1		71.000		MHz
Passband	Insertion Loss at fc	IL			6.5	9.0	dB
	2 dB Passband	BW_2	1, 2	±90			kHz
	3 dB Passband	BW_3		±110			
	Group Delay Variation over fc ±90 kHz	GDV			500	1500	ns_{P-P}
Rejection	fc-350 to fc-250 and fc+250 to fc+250 kHz		1, 2, 3	5			dB
	fc-500 to fc-350 and fc+350 to fc+500 kHz			20			
	fc-700 to fc-500 and fc+500 to fc+700 kHz			30			
	fc-2500 to fc-700 and fc+700 to fc+2500 kHz			35			
	Ultimate 10 MHz to fc-2.5 MHz and fc+2.5 MHz to 130 MHz			40			
	Except spurious responses at 1.05, 1.6, 1.8, & 2 x fc			35			
Operating Temperature Range		T_A	1	-20		+80	°C

Case Style	SMP-08 14 x 8 mm Nominal Footprint
Lid Symbolization (YY = year, WW = week)	RFM SF1097A YYWW

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 W and measured with 50 Ω network analyzer.
2. Unless noted otherwise, all frequency specifications are referenced to the nominal center frequency, fc.
3. Rejection is measured as attenuation below the minimum IL point in the passband. Rejection in final user application is dependent on PCB layout and external impedance matching design. See Application Note No. 42 for details.
4. "LRIP" or "L" after the part number indicates "low rate initial production" and "ENG" or "E" indicates "engineering prototypes."
5. The design, manufacturing process, and specifications of this filter are subject to change.
6. Either Port 1 or Port 2 may be used for either input or output in the design. However, impedances and impedance matching may vary between Port 1 and Port 2, so that the filter must always be installed in one direction per the circuit design.
7. US and international patents may apply.
8. Electrostatic Sensitive Device. Observe precautions for handling.

Electrical Connections

Connection	Terminals
Port 1	1, 10
Port 2	5, 6
Case Ground	All others

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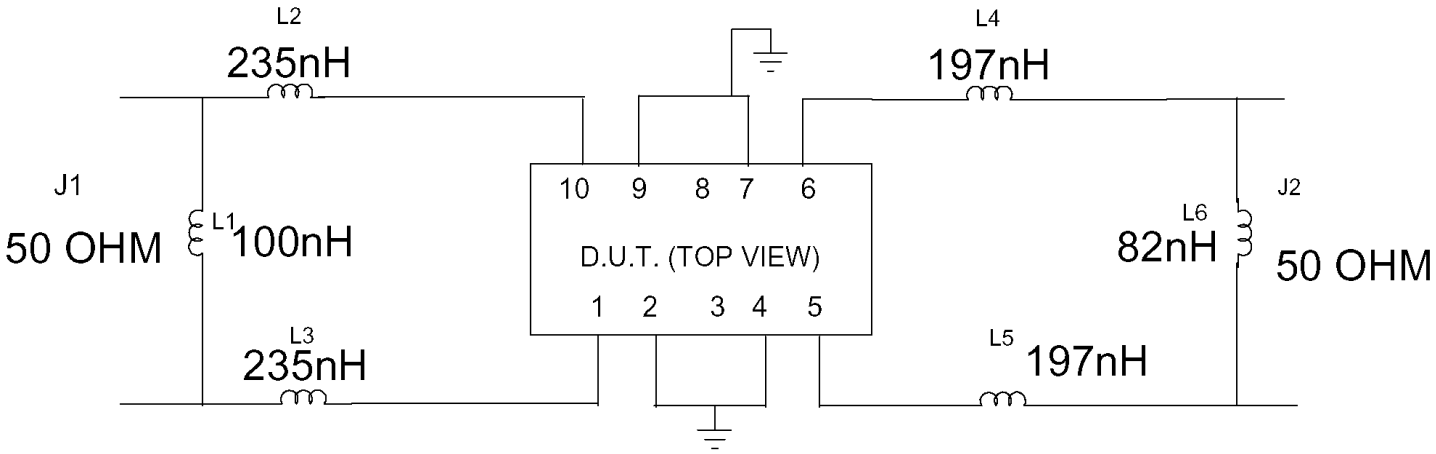
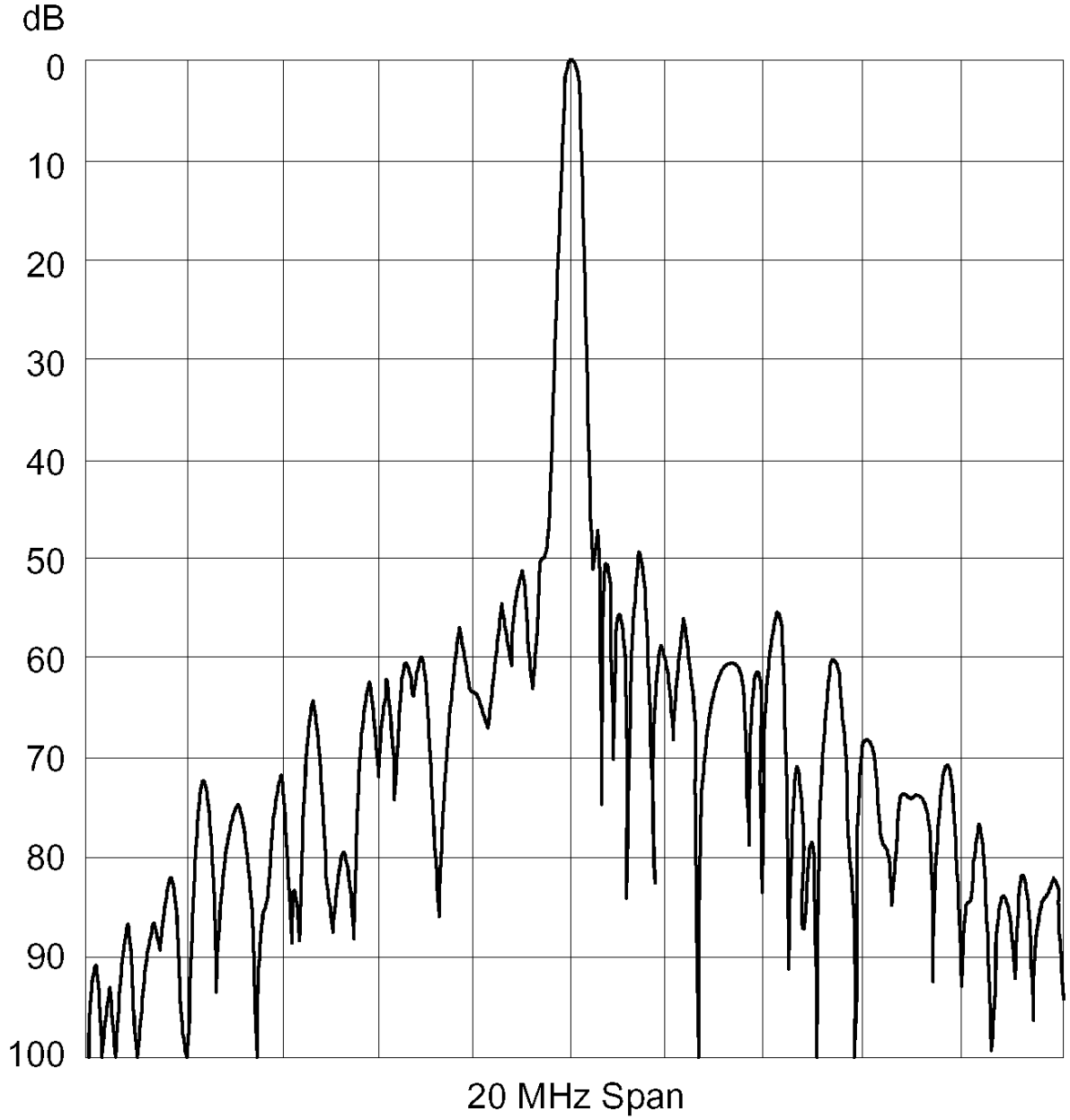
71 MHz SAW Filter Suggested Matching Network

Pinout and reference matching network. Actual values will be different on customer PCB.



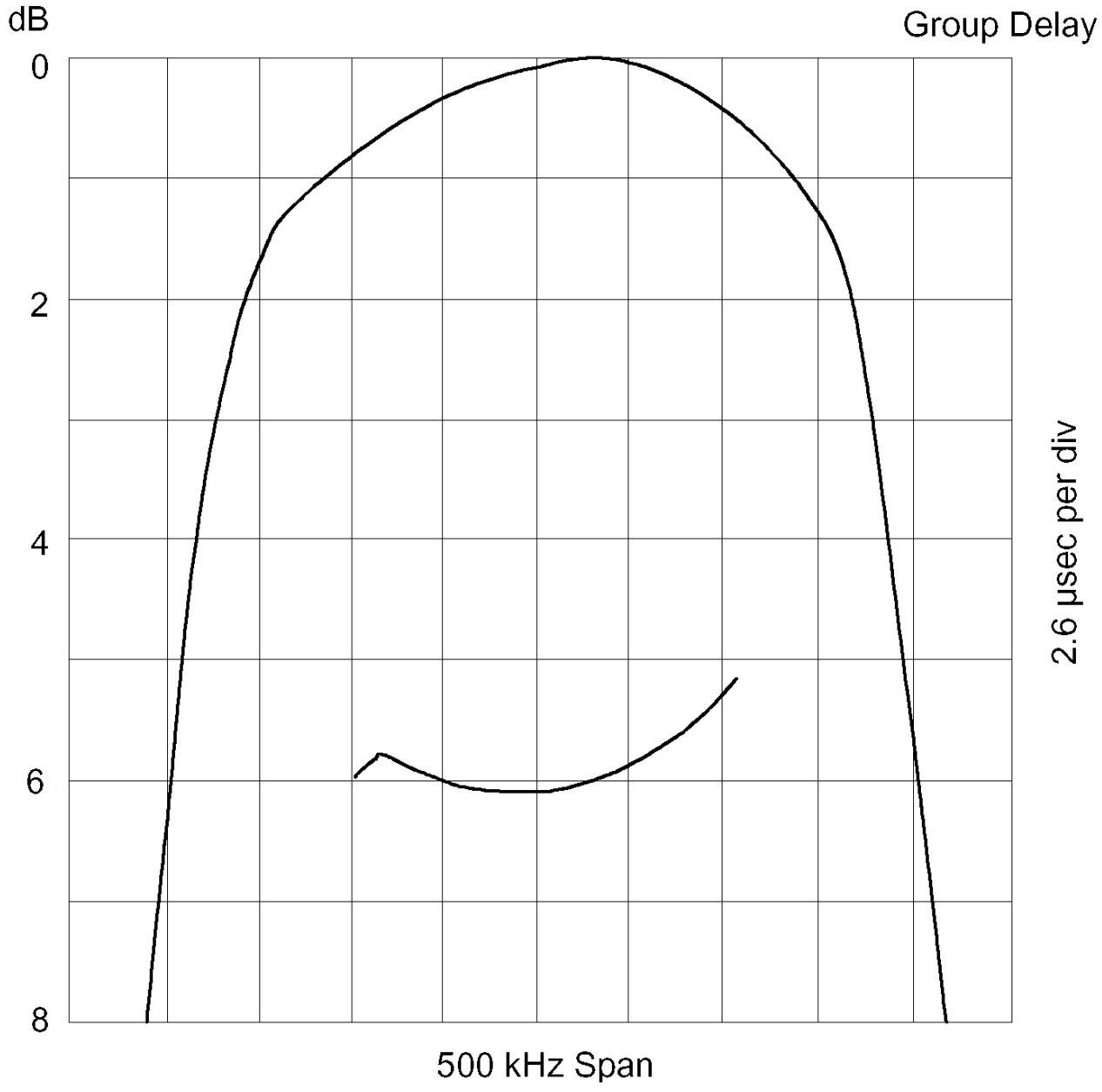
SF1097A

71 MHz SAW Filter Wide Span Plot



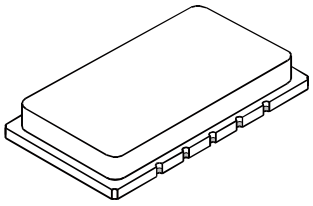
SF1097A

71 MHz SAW Filter Narrow Span Plot



SMP-08 Case

10-Terminal Ceramic Surface-Mount Case
14 x 8 mm Nominal Footprint



Case Dimensions

Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	13.69	14.00	14.30	0.539	0.551	0.563
B	7.70	8.00	8.30	0.303	0.315	0.327
C		1.70	2.00		0.067	0.079
D		2.30			0.091	
E		1.02			0.040	
F		3.19			0.126	
G		0.60			0.024	
H		1.0			0.039	
P		1.905			0.075	

Electrical Connections

Connection		Terminals
Port 1	Input or Return	10
	Return or Input	1
Port 2	Output or Return	5
	Return or Output	6
Ground		All others
Single Ended Operation		**Return is ground**
Differential Operation		**Return is hot**