



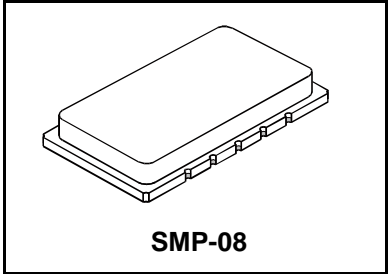
SF1097A

**71 MHz
SAW Filter**

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

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 f_c	2 dB Passband	IL	1, 2	6.5	9.0	dB			
					3 dB Passband	BW ₂		kHz		
					Group Delay Variation over $f_c \pm 90$ kHz	BW ₃				
Rejection	fc-350 to fc-250 and fc+250 to fc+250 kHz	1, 2, 3	GDV	5	500	1500	dB			
								fc-500 to fc-350 and fc+350 to fc+500 kHz	±90	ns _{p-p}
								fc-700 to fc-500 and fc+500 to fc+700 kHz	±110	
								fc-2500 to fc-700 and fc+700 to fc+2500 kHz		
								Ultimate 10 MHz to fc-2.5 MHz and fc+2.5 MHz to 130 MHz		
								Except spurious responses at 1.05, 1.6, 1.8, & 2 x f_c		
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:

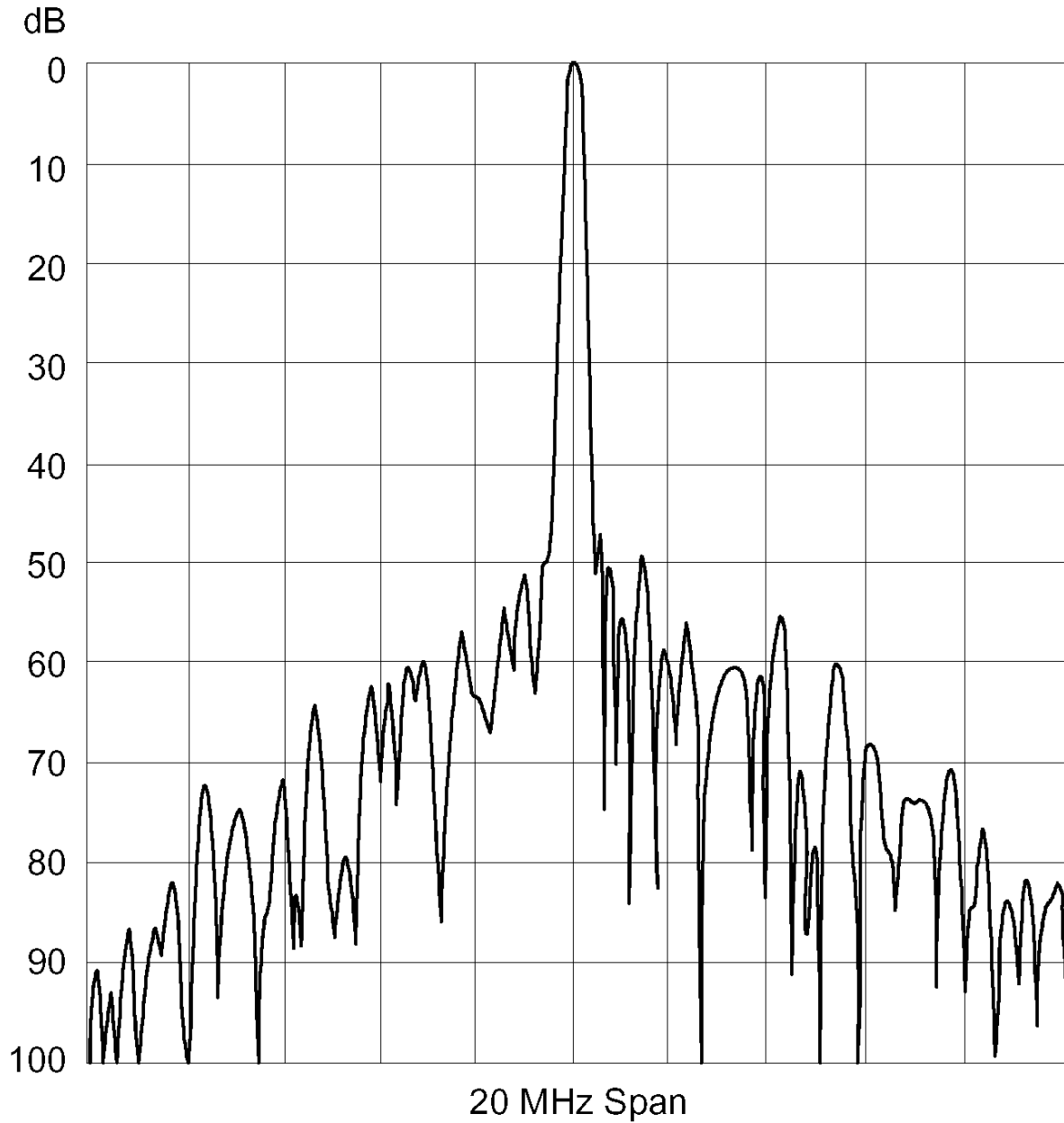
1. Unless noted otherwise, all specifications apply over the operating temperature range with filter soldered to the specified demonstration board with impedance matching to 50 Ω and measured with 50 Ω network analyzer.
2. Unless noted otherwise, all frequency specifications are referenced to the nominal center frequency, f_c .
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

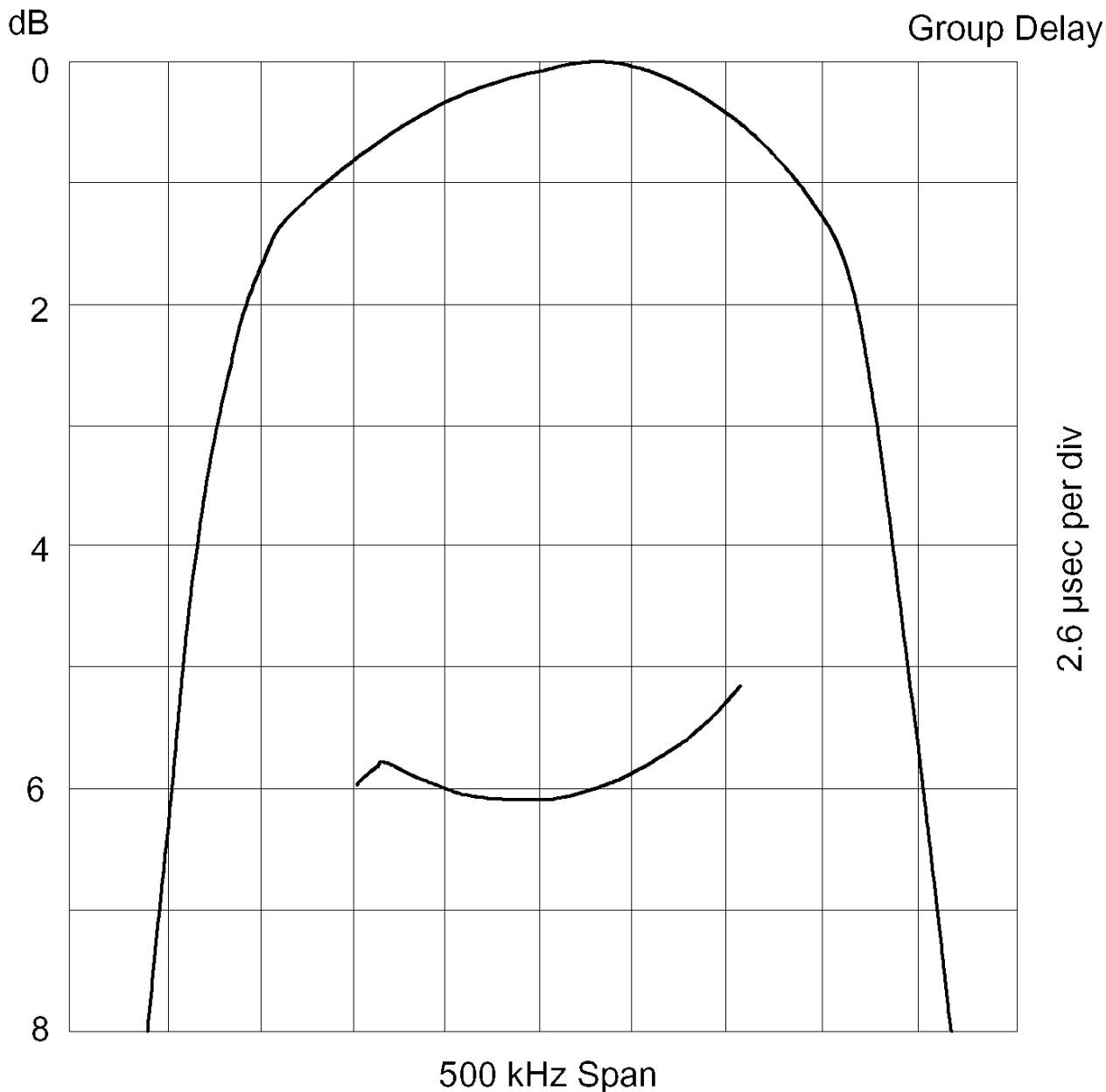
SF1097A

71 MHz SAW Filter Wide Span Plot

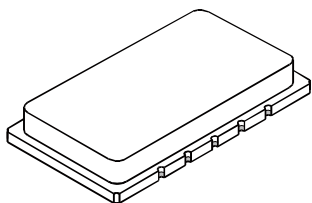


SF1097A

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

