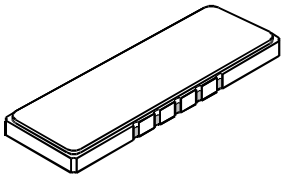
SF1081A

71.00 MHz SAW Filter

- ***Designed for GSM BTS Receiver IF Applications***
- ***Simple External Impedance Matching***
- ***Hermetic SMP-87 Surface-Mount Case***
- ***Unbalanced Input and Output***
- ***Indoor-Temperature Version of SF1081A-1***
- ***Complies with Directive 2002/95/EC (RoHS)***



SMP-87

Absolute Maximum Ratings

Rating	Value	Units
Maximum Incident Power in Passband	+10	dBm
Max. DC voltage between any 2 terminals	30	VDC
Storage Temperature Range	-40 to +85	°C
Suitable for lead-free soldering - Max Soldering Profile	260°C for 30 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	8.0	dB
	3 dB Passband	BW_3	1, 2	±100	±140	±200	kHz
	Amplitude Ripple over fc±80 kHz					1.5	dB_{P-P}
	Group Delay Variation over fc±50 kHz	GDV			300	1000	ns_{P-P}
	Absolute Group Delay	GD			2.8		µs
Rejection	fc-600 to fc-400 and fc+400 to fc+600 kHz		1, 2, 3	25	26		dB
	fc-1.0 to fc-0.6 and fc+0.6 to fc+1.8 MHz			35	40		
	69.6 to 70.0 MHz			40	45		
	31 to 69.6 and 71.8 to 111 MHz			35	50		
Operating Temperature Range		T_A	1	-5		+70	°C

Impedance Matching to 50 Ω unbalanced	External L-C
Case Style	SMP-87 22.1 X 8 mm Nominal Footprint
Lid Symbolization (YY=year, WW=week)	RFM SF1081A YYWW

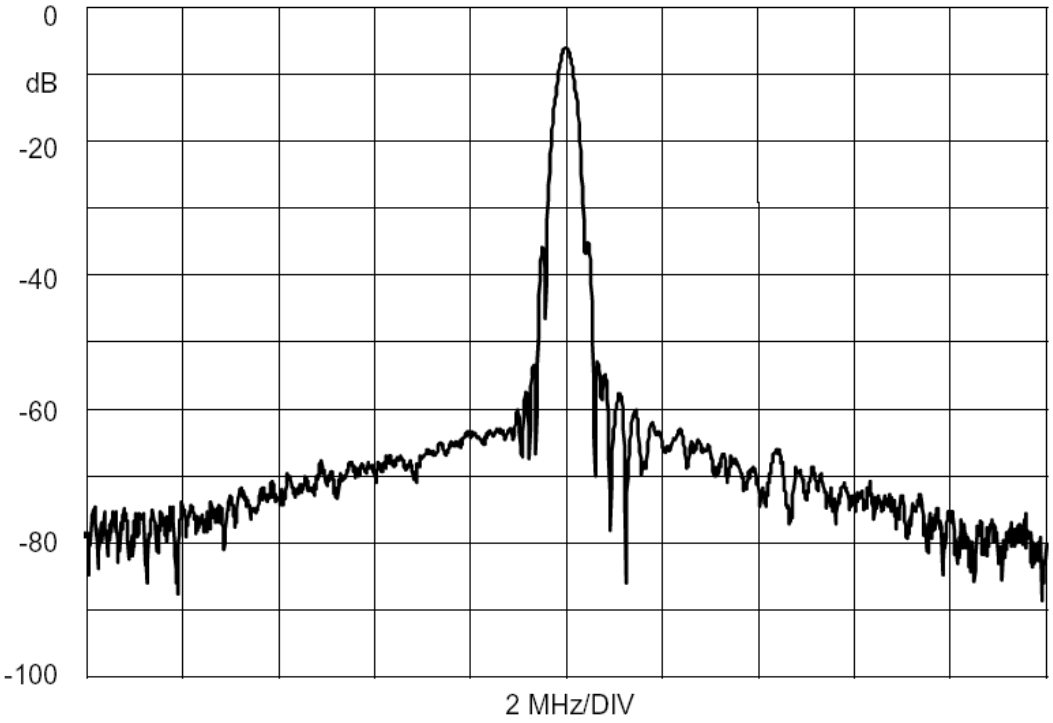
Electrical Connections

Connection	Terminals
Port 1Hot	1
Port 1 Gnd Return	10
Port 2 Hot	6
Port 2 Gnd Return	5
Case Ground	All Others

CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

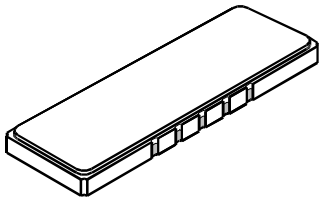
Notes:

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 Ω 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. RFM, stylized RFM logo, and RF Monolithics, Inc. are registered trademarks of RF Monolithics, Inc.
9.



SMP-87 Case

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



Case Dimensions						
Dimension	**mm**			**Inches**		
	Min	**Nom**	**Max**	**Min**	**Nom**	**Max**
A	21.90	22.10	22.40	0.862	0.870	0.882
B	7.80	8.00	8.30	0.307	0.315	0.327
C		1.78	2.00		0.070	0.079
D		2.29			0.090	
E		1.02			0.040	
H		1.0			0.039	
M		4.83			0.190	
N		2.41			0.095	
P		1.905			0.075	

Materials	
Solder Pad Termination	Au plating 30 - 60 µinches (76.2-152 µm) over 80-200 µinches (203-508 µm) Ni.
Lid	Fe-Ni-Co Alloy Electroless Nickel Plate (8-11% Phosphorus) 100-200 µinches Thick
Body	Al_2O_3 Ceramic
Pb Free	

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**