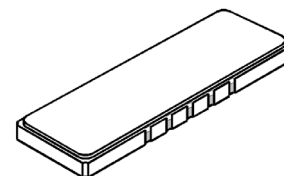


# SF1081A-1

## 71.00 MHz SAW Filter



SMP-87

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

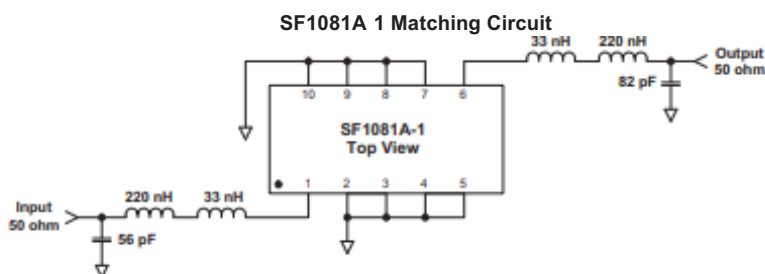
### Absolute Maximum Ratings

Rating	Value	Units
Maximum Incident Power in Passband	+10	dBm
Maximum DC Voltage on any Non-ground Terminal	30	VDC
Storage Temperature Range	-40 to +85	°C
Suitable for Lead-free Soldering - Maximum Soldering Profile	260 °C for 30 s	

### Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Nominal Center Frequency	$f_C$			71.000		MHz
Passband	Insertion Loss at $f_C$	IL		6	8.0	dB
		3 dB Passband	$BW_3$	±100	±140	±200
	Amplitude Ripple over $f_C$ ±80 kHz				1.5	dB <sub>P-P</sub>
	Group Delay Variation over $f_C$ ±50 kHz	GDV		300	1000	ns <sub>P-P</sub>
	Absolute Group Delay	GD		2.8		µs
Rejection	fc-600 to fc-400 and fc+400 to fc+600 kHz		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	$T_A$		-40		+85	°C

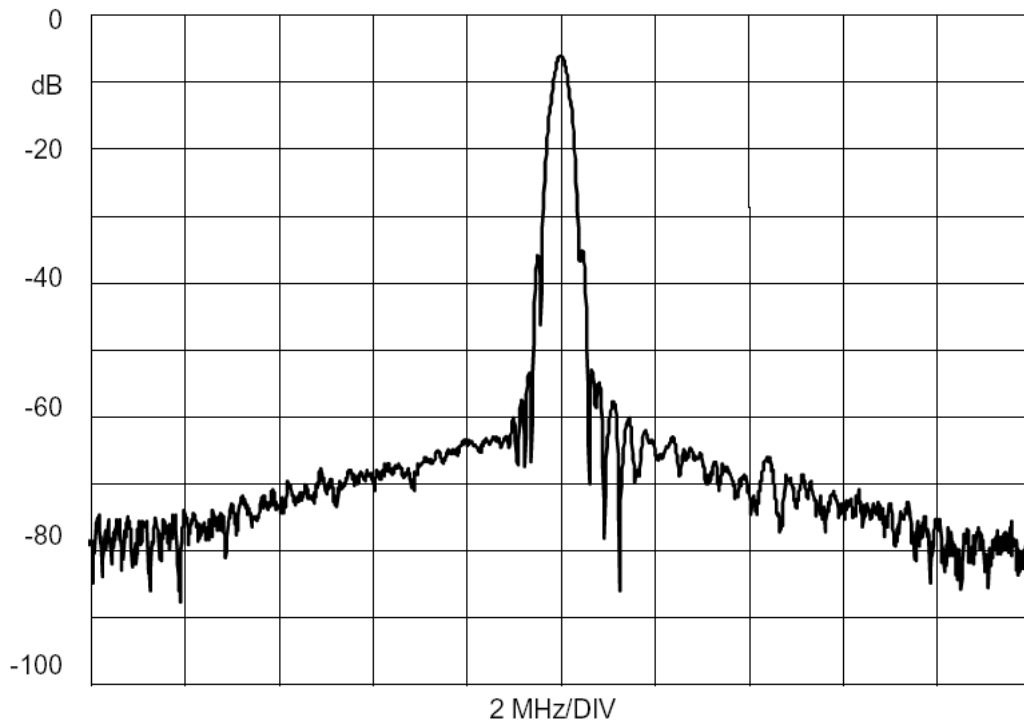
Impedance Matching to 50 Ω unbalanced	External L-C
Case Style	SMP-87 22.1 X 8 mm Nominal Footprint
Lid Symbolization (YY=year, WW=week, S=shift, ##=lot))	RFM SF1081A-1 YYWWS##



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

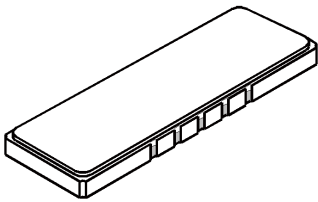
#### NOTES:

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.



# SMP-87 Case

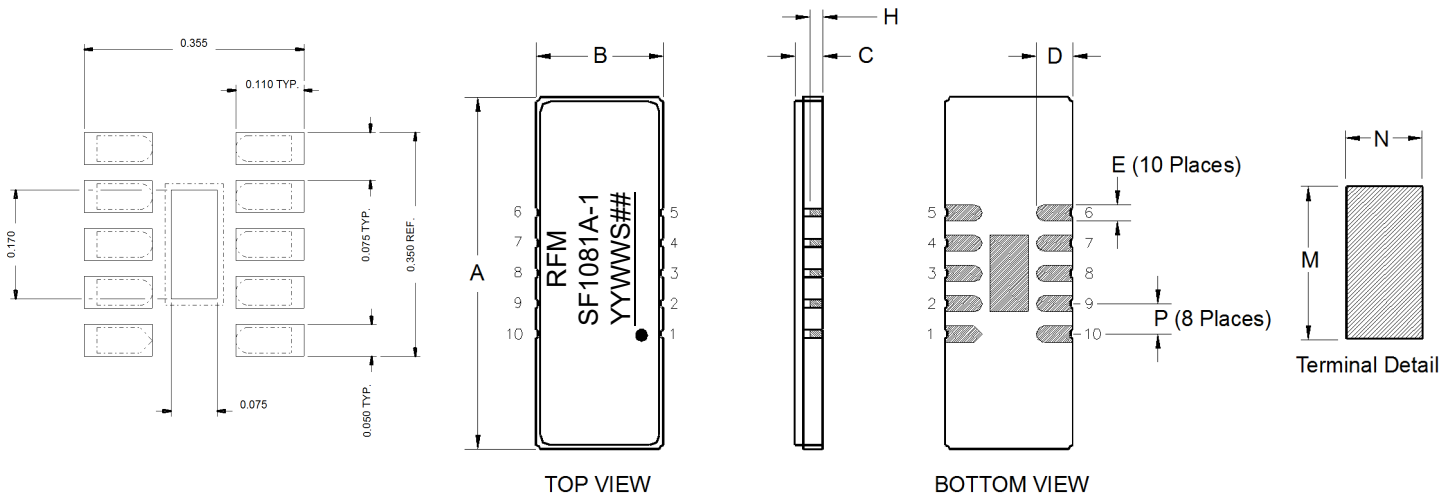
## 10-Terminal Ceramic Surface-Mount Case 22.1 x 8 mm Nominal Footprint



Materials	
Solder Pad Plating	1.015 $\mu\text{m}$ Gold minimum over 2.030 $\mu\text{m}$ Nickel
Lid Plating	2.0 to 3.0 $\mu\text{m}$ Nickel
Body	$\text{Al}_2\text{O}_3$ Ceramic

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	

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



## 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.

