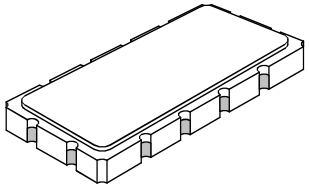
SF1091A

211 MHz SAW Filter

- ***Designed for GSM BTS Transmitter Applications***
- ***Low Insertion Loss***
- ***Excellent Size-to-Performance Ratio***
- ***Hermetic 13.3 X 6.5 mm Surface-Mount Case***
- ***Unbalanced Input and Output***



SM13365-12

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
Max Soldering Profile	265°C for 10 s	

Electrical Characteristics

Characteristic		Sym	Notes	Min	Typ	Max	Units
Nominal Center Frequency		f_C	1		211.000		MHz
Passband	Insertion Loss at fc	IL			7	8.0	dB
	3 dB Passband	BW_3	1, 2	±450	±500		kHz
	Group Delay Variation over fc ±150 kHz	GDV			200	250	ns_{P-P}
Rejection	fc-2.0 to fc-1.05 and fc+1.05 to fc+2.0 MHz		1, 2, 3	10	21		dB
	fc-80 to fc-2.0 and fc+2.0 to fc+80 MHz			30	33		
	n x fc over 291 to 2000 MHz			40	60		
Operating Temperature Range		T_A	1	-10		+85	°C

Impedance Matching to 50 Ω unbalanced	External L-C
Case Style	SM13365-12 13.3 x 6.5 mm Nominal Footprint
Lid Symbolization (XX = 2 character date code)	RFM SF1091A XX

Electrical Connections

Connection	Terminals
Port 1 Hot	11
Port 1 Gnd Return	12
Port 2 Hot	5
Port 2 Gnd Return	6
Case Ground	All others

Notes:

1. Unless noted otherwise, all specitication apply over the operating temperature range with filter soldered to the specified demonstration board with impedanced matching to 50 Ω network analyzer.
2. Unless noted otherwise, all frequency specitications 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 oon 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.

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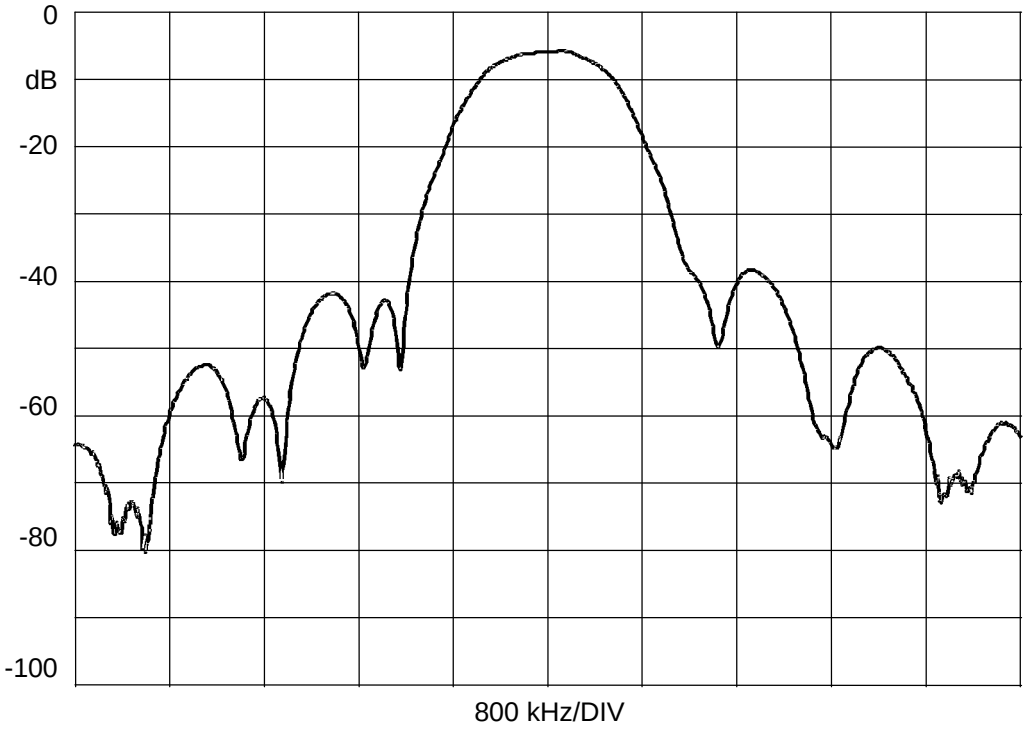
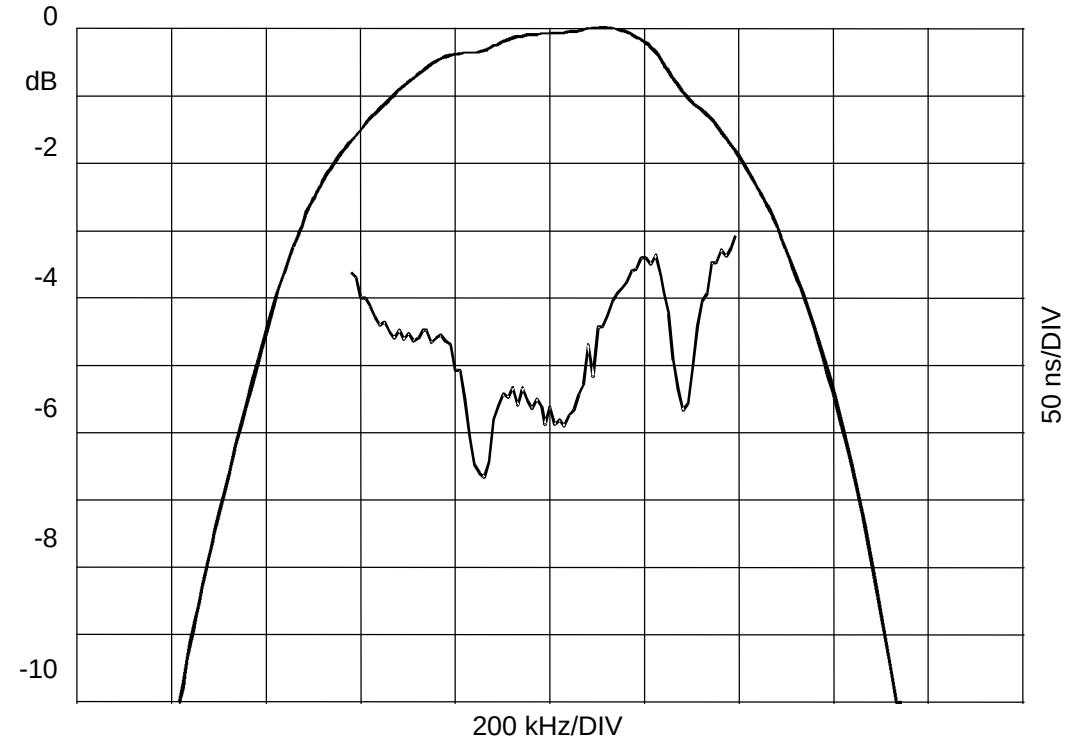
SF1091A 211 MHz SAW Filter





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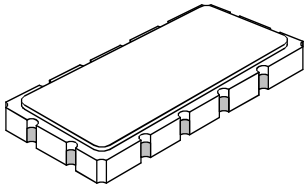
SM13365-12 Case

12-Terminal Ceramic Surface-Mount Case
13.3 x 6.5 mm Nominal Footprint

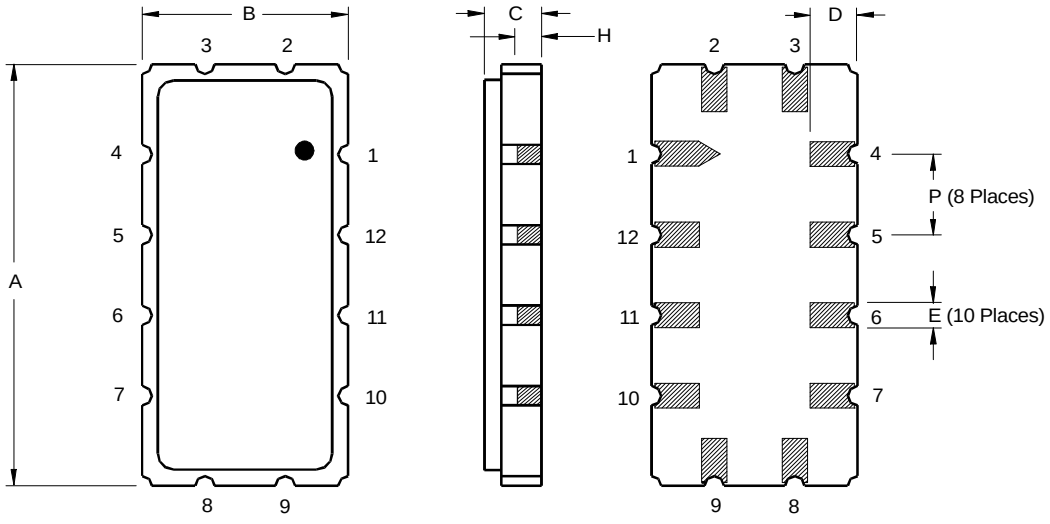


Case Dimensions

Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	13.08	13.31	13.60	0.515	0.524	0.535
B	6.27	6.50	6.80	0.247	0.256	0.268
C		1.91	2.00		0.075	0.079
D		1.50			0.059	
E		0.79			0.031	
H		1.0			0.039	
P		2.54			0.100	

Electrical Connections

Connection		Terminals
Port 1	Input or Return	2
	Return or Input	3
Port 2	Output or Return	8
	Return or Output	9
Ground		All others
Single Ended Operation		**Return is ground**
Differential Operation		**Return is hot**



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