

# Preliminary



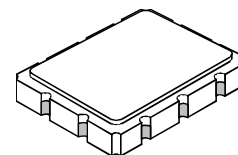
## SF1185B

## 110.6 MHz SAW Filter

- **Designed for DECT & Bluetooth IF Filtering**
- **Low Insertion Loss**
- **Hermetic 9.1 x 7.1 mm Surface-mount Case**
- **Balanced or Single Ended Input and Output**

### Absolute Maximum Ratings

Rating	Value	Units
Maximum Incident Power in Passband	+0	dBm
Max. DC voltage between any 2 terminals	10	VDC
Storage Temperature Range	-40 to +85	°C
Max. Soldering Profile	265°C for 10 s	



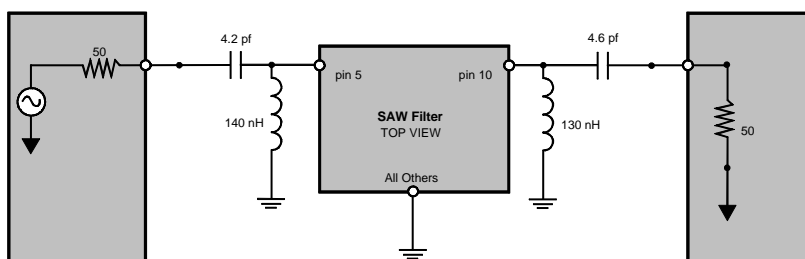
SM9171-10

### Electrical Characteristics

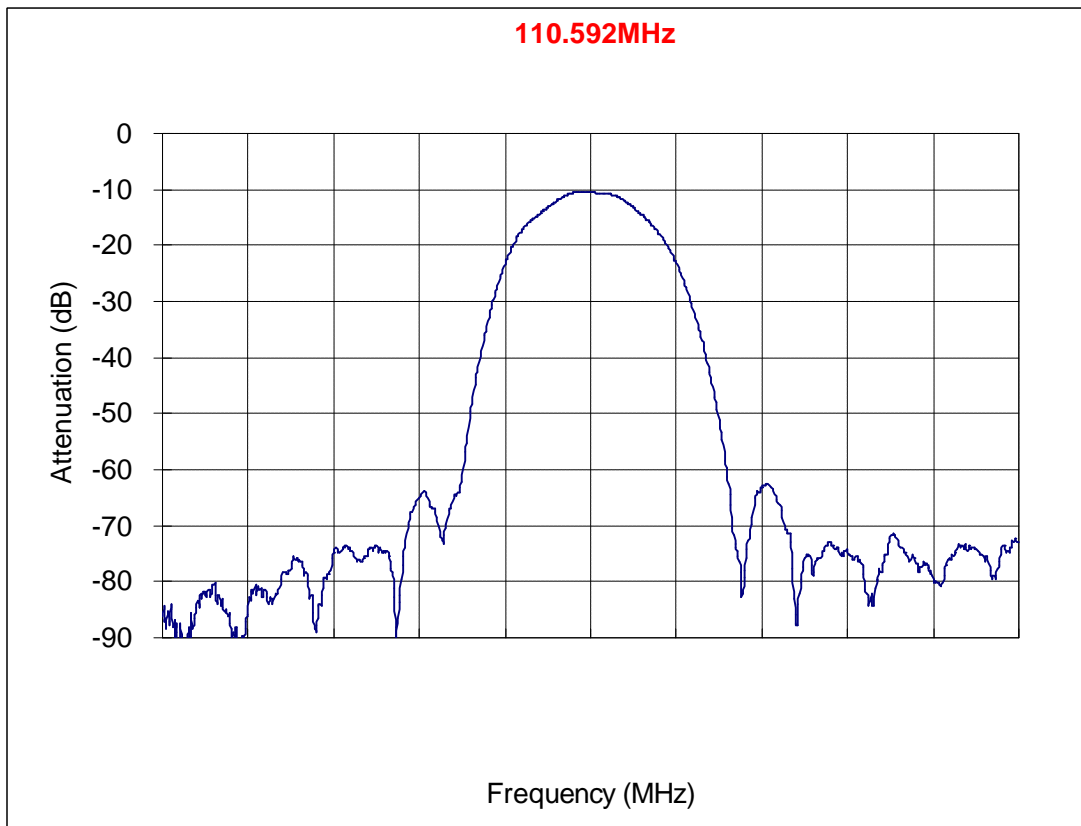
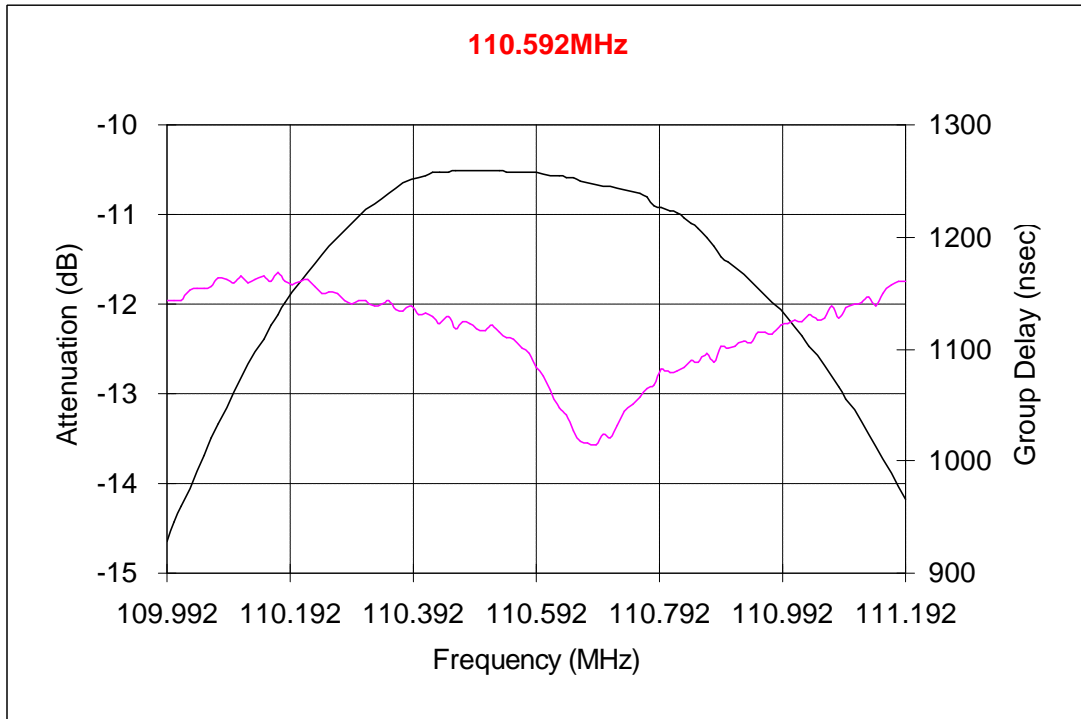
Characteristic	Sym	Notes	Min	Typ	Max	Units
Nominal Frequency	$f_N$	1		110.592		MHz
Passband bandwidth	$B_W$		1.0			MHz
Insertion Loss	$1_L$	1, 2,3		10.5	12	dB
Group Delay Variation	Within $F_c \pm 500$ KHz				300	ns
Attenuation:(Reference level from 0 dB)	Fc-4.608 to -1.960 MHz		45			dB
	Fc-1.960 to -1.738 MHz		35			
	Fc-1.738 to -1.223 MHz		13			
	Fc-1.223 to -1.185 MHz		12			
	Fc+1.185 to +1.223 MHz		12			
	Fc+1.223 to +1.738 MHz		13			
	Fc+1.738 to +1.960 MHz		35			
Fc+1.960 to +4.608 MHz		45				
Operating Temperature		1	-10		+50	°C
Terminating source impedance	after match			50		Ohm
Terminating load impedance	after match			50		Ohm
Impedance Matching to 50 $\Omega$ Unbalanced		10	External L-C			
Case Style	SM9171-10 9.1 x 7.1 mm Nominal Footprint					
Lid Symbolization (YY = year, WW = week)	RFM SF1185B YYWW					

### Electrical Connections

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

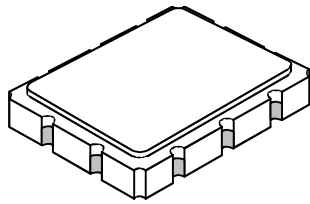


- Notes:**
- Unless noted otherwise, all specifications apply over the operating temperature range with filter soldered to the specified demonstration board with impedance matching to 50  $\Omega$  and measured with 50  $\Omega$  network analyzer.
  - Unless noted otherwise, all frequency specifications are referenced to the nominal center frequency,  $f_c$ .
  - 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.
  - Part to part absolute delay measurement records the absolute delay mean across 1 dB passband.
  - "LRIP" or "L" after the part number indicates "low rate initial production" and "ENG" or "E" indicates "engineering prototypes."
  - The design, manufacturing process, and specifications of this filter are subject to change.
  - 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.
  - US and international patents may apply.
  - Electrostatic Sensitive Device. Observe precautions for handling.
  - Values of L&C are starting point values base upon RFM demonstration board. Final customer values may vary.



# SM9171-10 Case

## 10-Terminal Ceramic Surface-Mount Case 9.1 x 7.1 mm Nominal Footprint



### Case Dimensions

Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	8.86	9.09	9.40	0.349	0.358	0.370
B	6.88	7.11	7.40	0.271	0.280	0.291
C		1.91	2.00		0.075	0.079
D		0.99			0.039	
E		0.79			0.031	
H		1.0			0.039	
P		2.54			0.100	

### Electrical Connections

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

