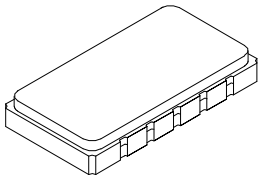
Preliminary

RFM products are now Murata products.

SF2027B

199.0 MHz SAW Filter

- ***GSM BTS Receiver IF Applications***
- ***Hermetic 13.3 X 6.5 mm Surface-mount Case***
- ***Complies with Directive 2002/95/EC (RoHS)***



SMP-53-S

Absolute Maximum Ratings

Rating	Value	Units
Maximum Incident Power in Passband, Matched Input/Output	+10	dBm
Maximum Incident Power in Passband, Input Matched, Ouput Shorted	+18	dBm
Maximum DC Voltage Between any Two Terminals	10	VDC
Operating Temperature Range	-40 to +85	°C
Storage Temperature Range in Tape and Reel	-40 to +85	°C
Maximum Soldering Profile	250 °C for 10 s	

Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Nominal Frequency	f_C	1		199.0		MHz
Passband Insertion Loss with I/O Matched to 200 ohms	IL			7.0		dB
Group Delay Ripple, 198.9 to 199.1 MHz				700		ns_{P-P}
Amplitude Ripple, 198.9 to 199.1 MHz				1.0		dB_{P-P}
Attenuation Relative to Minimum Insertion Loss:						
f_C - 100 kHz to f_C +100 kHz (passband)				0.7		dB
f_C - 300 kHz, f_C +300 kHz				10		
f_C - 500 kHz, f_C +500 kHz				27		
f_C - 600 kHz, f_C +600 kHz				36		
f_C - 700 kHz, f_C +700 kHz				45		
Input Port Operation			Balanced or Unbalanced			
Output Port Operation			Balanced			

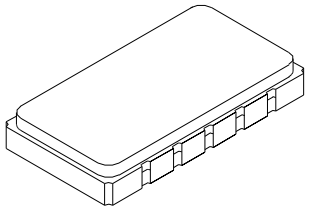
Case Style	SMP-53-S 13.3 X 6.5 mm Nominal Footprint
Lid Symbolization (Y=year, WW=week, S=shift) See note 4	RFM SF2027B YWWS

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. A dB offset exists for Murata because of the loss introduced by using transformers on the Input and Output.
2. 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.
3. "LRIP" or "L" after the part number indicates "low rate initial production" and "ENG" or "E" indicates "engineering prototypes."
4. The design, manufacturing process, and specifications of this filter are subject to change.
5. 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.
6. US and international patents may apply.
7. Murata, stylized Murata logo, and Murata N.A., Inc. are registered trademarks of Murata Manufacturing Co., Ltd..

SMP-53-S 10-Terminal Ceramic Surface-Mount Case
13.3 x 6.5 mm Nominal Footprint



Case Dimensions

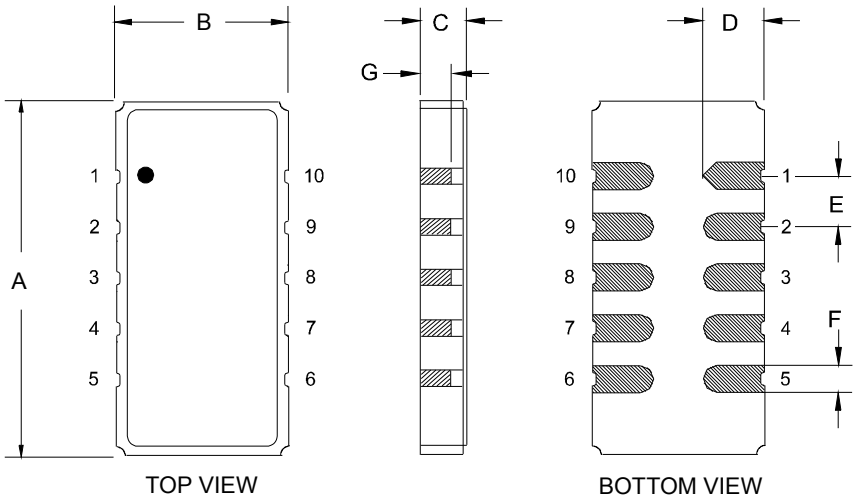
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A		13.3			.524	
B		6.5			.256	
C			2.00			.078
D		2.3			.091	
E		1.91			.075	
F		1.02			.040	
G		1.0			0.039	

Electrical Connections

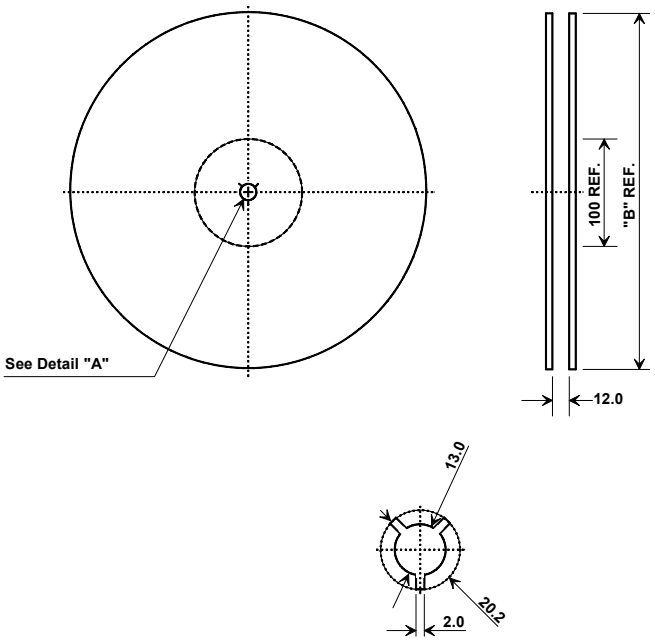
Connection	Terminals
Port 1 Input Hot	1
Port 1 Input Gnd Return	10
Port 2 Output Hot	6
Port 2 Output Gnd Return	5
Case Ground	All others
Single-ended Operation	Return is ground
Differential Operation	Return is hot

Case Materials

Materials	
Solder Pad Plating	0.3 to 1.0 µm Gold over 1.27 to 8.89 µm Nickel
Lid Plating	2.0 to 3.0 µm Nickel
Body	Al_2O_3 Ceramic
Pb Free	

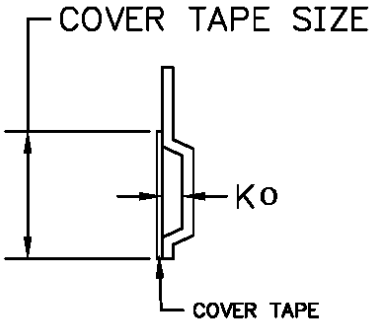


Tape and Reel Specifications



"B" Nominal Size		Quantity Per Reel
Inches	millimeters	
7	178	500
13	330	1000

COMPONENT ORIENTATION and DIMENSIONS



Carrier Tape Dimensions	
Ao	0.274 ± 0.004 in (7.0 mm)
Bo	0.542 ± 0.004 in (13.76 mm)
Ko	0.088 ± 0.004 in (2.2 mm)
P	12 mm
W	24 mm
Tape Length	86 m
Pockets/m	83/m