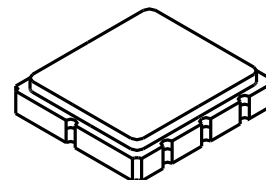


SF2354G

1950/2140 MHz SAW Duplexer Filter



SM2520-9

- **Band 1**
- **Low Insertion Loss Duplexer SAW Filter**
- **2.5 x 2.0 mm Surface-mount Case**
- **Complies with Directive 2002/95/EC (RoHS)**



Absolute Maximum Ratings

Rating	Value	Units
Maximum Input Power	0.8	W
DC Voltage	5	VDC
Storage Temperature Range in Tape and Reel	-40 to +125	°C
Operating Temperature Range	-20 to +85	°C
Suitable for Lead-free Soldering - Maximum Soldering Profile	260 °C for 60 - 150 sec	

Electrical Characteristics (+25°C)

Characteristic	Sym	Note	Min	Typ	Max	Units
Ant to Rx (1950 MHz)						
Insertion Loss, 1920 to 1980 MHz				1.2	1.7	dB
Inband Ripple, 1920 to 1980 MHz				0.3	1.0	dB
Output VSWR, 1920 to 1980 MHz				1.8	2.1	
Absolute Attenuation:						dB
0 to 1000 MHz			28	33		
1500 to 1600 MHz			24	28		
1805 to 1880 MHz			5	17		
2110 to 2170 MHz			40	43		
2400 to 2500 MHz			24	28		
3840 to 3900 MHz			10	14		
Tx to Ant (2140 MHz)						
Insertion Loss, 2110 to 2170 MHz				1.5	2.1	dB
In Band Ripple, 2110 to 2170 MHz				0.5	1.0	
Output VSWR, 2110 to 2170 MHz				1.8	2.2	
Absolute Attenuation						dB
0 to 1900 MHz			31	35		
1920 to 1980 MHz			47	52		
2015 to 2075 MHz			5	20		
2400 to 2500 MHz			40	46		
4220 to 4280 MHz			14	17		
Termination Impedance				50Ω/50Ω (//2.3 nH)		
Tx to Rx						
Isolation in Tx Band 1920 to 1980 MHz			50	54		dB
Isolation in Rx Band 2110 to 2170 MHz			42	48		
Case Style			SM2520-9, 2.5 X2.0 mm Nominal Footprint			
Lid Symbolization (Y=year, WW=week, S=shift) dot=pin 1 indicator			5D, <u>YWW</u> S			
Standard Reel Quantity Reel Size 10 Inch			4000 Pieces/Reel			



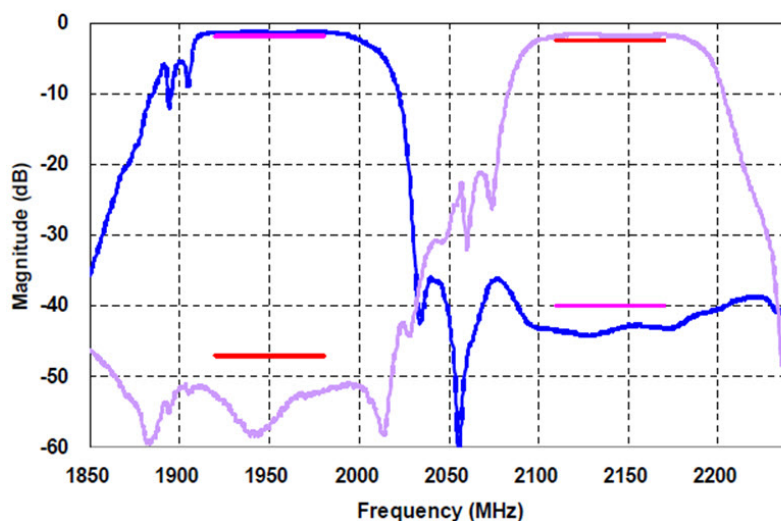
CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

NOTES:

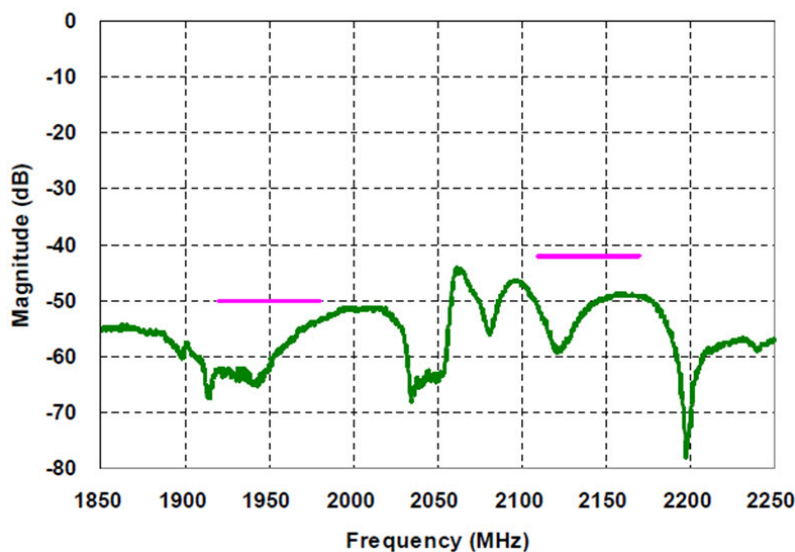
1. Unless noted otherwise, all specifications apply over the operating temperature range with filter soldered to the specified demonstration board with impedance matching to 50 Ω and measured with 50 Ω network analyzer.
2. Unless noted otherwise, all frequency specifications are referenced to the nominal 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. 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.

Frequency Characteristics

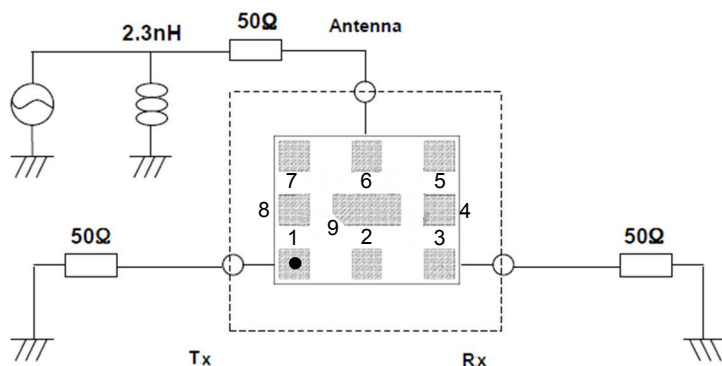
Tx→Ant, Ant→Rx Transmission Characteristics



Tx→Rx Isolation Characteristics



Measurement Circuit

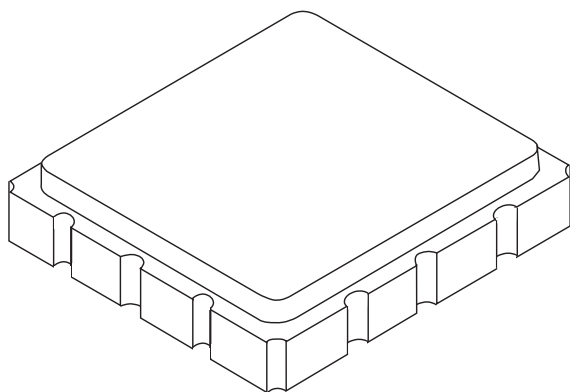


Electrical Connections

Pin	Connection
2, 4, 5, 7, 8, 9	Ground
1	Tx
3	Rx
6	Antenna
Dot Indicates Pin 1	

SMD2520-9 Case

9-Terminal Ceramic Surface-mount Case - 2.5 X 2.0 mm Nominal Footprint



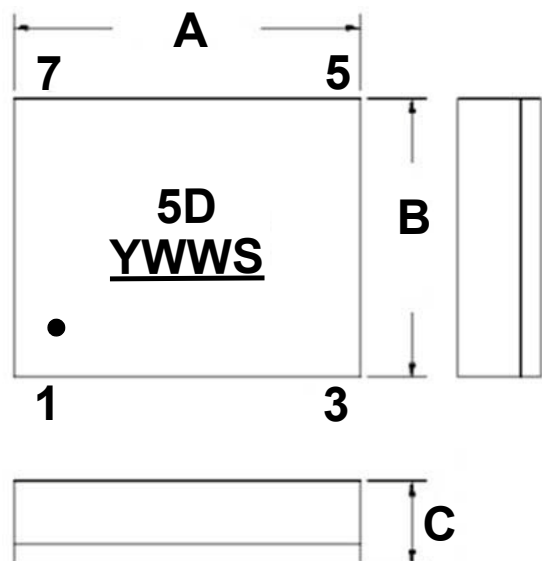
Case Dimensions

Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	2.450	2.500	2.550	0.096	0.098	0.100
B	1.950	2.000	2.050	0.076	0.078	0.080
C	0.620	0.670	0.720	0.024	0.026	0.028
D		0.325			0.012	
E		0.400			0.015	
F		0.575			0.022	
G		0.400			0.015	
H		0.400			0.015	
I		0.075			0.002	
J		0.900			0.035	
K		0.325			0.012	

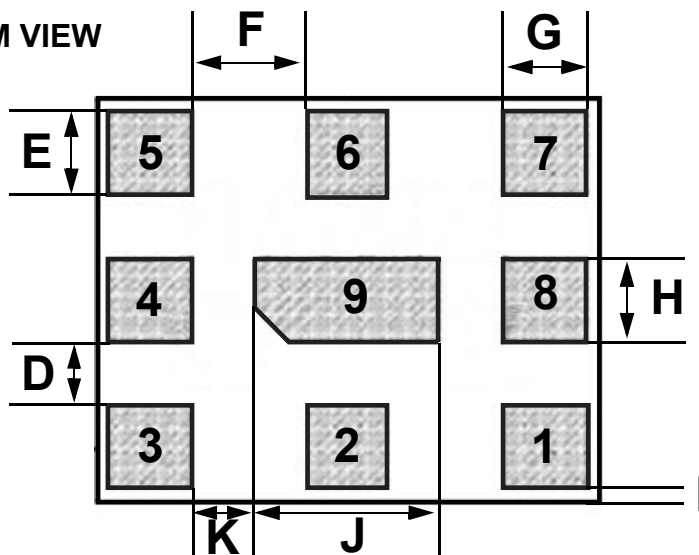
Materials

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	

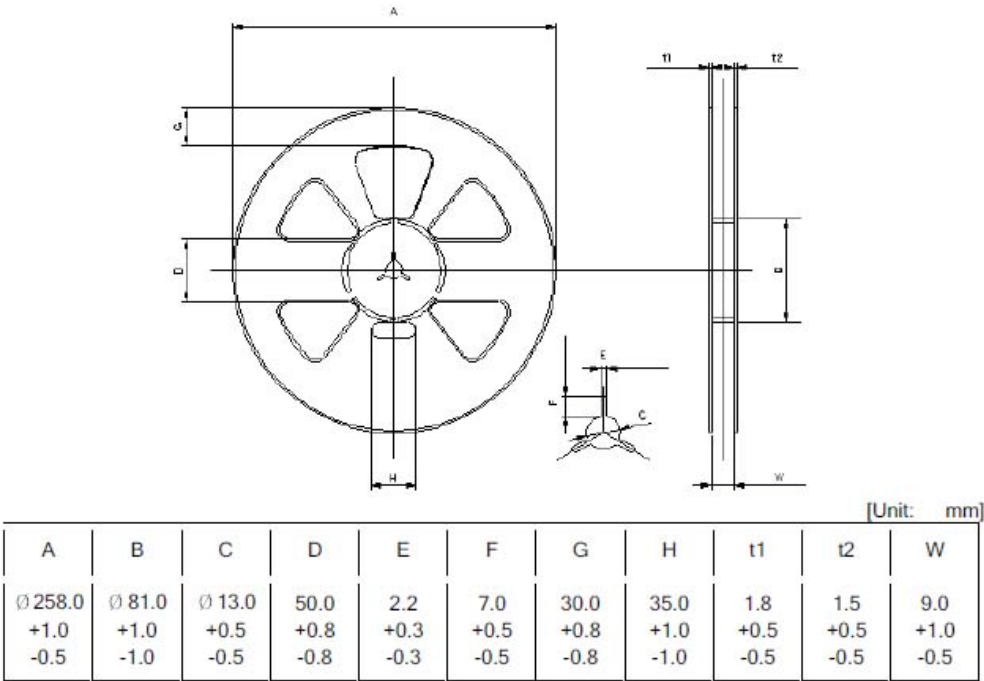
TOP VIEW



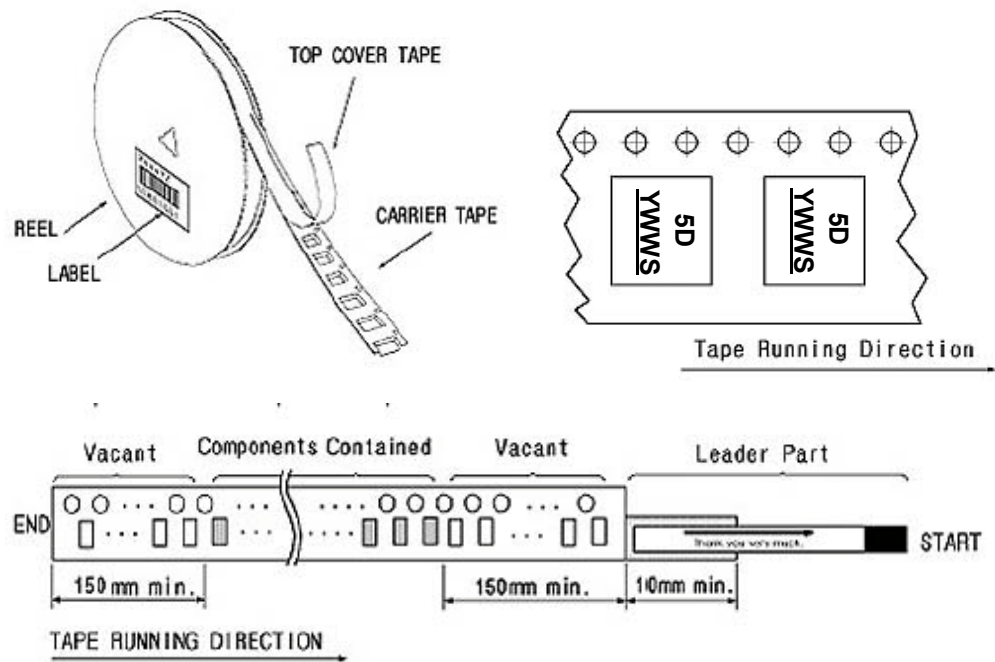
BOTTOM VIEW



Tape and Reel Specifications



Component Orientation and Dimensions



Recommended Reflow Profile

