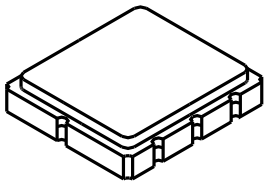
Preliminary

RFM products are now Murata products.

SF2358H

782/751MHz SAW Duplexer Filter

- ***Band ??***
- ***Low Insertion Loss Duplexer SAW Filter***
- ***2.0 x 1.6 mm Surface-mount Case***
- ***Complies with Directive 2002/95/EC (RoHS)***



SM2016-9

Absolute Maximum Ratings

Rating	Value	Units
Maximum Input Power	29	dBm
DC Voltage	0	VDC
Storage Temperature Range in Tape and Reel	-40 to +85	°C
Operating Temperature Range	-30 to +85	°C
Suitable for Lead-free Soldering - Maximum Soldering Profile	260 °C for 10 sec	

Electrical Characteristics

Ant to Rx (782 MHz)		Specifications (+25°C)					
Parameter Description	**Condition**	**Sym**	**Note**	**Min**	**Typ**	**Max**	**Units**
Insertion Loss,	777.0 to 787.0 MHz				1.6	2.5	dB
Ripple	777.0 to 787.0 MHz				0.6	1.5	dB_{p-p}
VSWR of Ant Port	777.0 to 787.0 MHz				1.5	2.0	
VSWR of Rx Port	777.0 to 787.0 MHz				1.7	2.0	
Attenuation							
	10.0 to 716.0 MHZ			30	40		dB
	716.0 ~ 728.0 MHZ			40	44		
	728.0 ~ 746.0 MHZ			30	46		
	746.0 ~ 756.0 MHZ			45	53		
	758.0 ~ 767.5 MHZ			28	31		
	767.5 ~ 768.0 MHZ			15	27		
	869.0 ~ 894.0 MHZ			30	44		
	1554.0 ~ 1565.0 MHZ			45	54		
	1565.0 ~ 1585.0 MHZ			45	55		
	1597.0 ~ 1607.0 MHZ			45	56		
	1805.0 ~ 1880.0 MHZ			30	62		
	1930.0 ~ 1990.0 MHZ			30	60		
	2110.0 ~ 2170.0 MHZ			30	56		
	2331.0 ~ 2361.0 MHZ			20	54		
	2400.0 ~ 2484.0 MHZ			35	53		
	3108.0 ~ 3148.0 MHZ			15	50		
	4990.0 ~ 5850.0 MHZ			20	35		

Case Style	SM2016 2.0 X 1.6 X 0.5 mm Nominal Footprint
Lid Symbolization (Y=year, WW=week, S=shift) dot=pin 1 indicator	5F, YWWS

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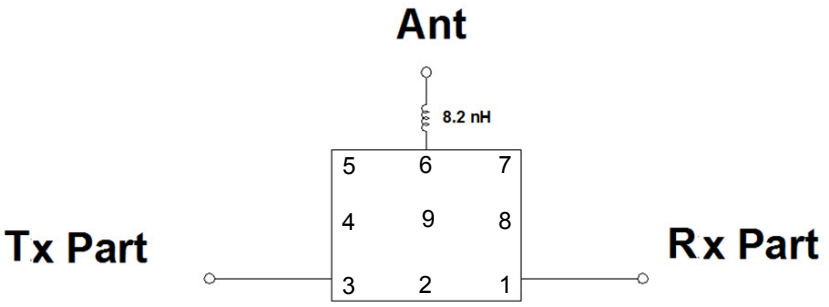
CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

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.

Tx to Ant (715 MHz)							
Parameter Description	**Condition**	**Sym**	**Note**	**Min**	**Typ**	**Max**	**Units**
Insertion Loss	746.0 to 756.0 MHz				2.0	2.5	dB
Ripple	746.0 to 756.0 MHz				0.7	1.0	dB_{p-p}
VSWR of Ant Port	746.0 to 756.0 MHz				1.6	2.0	
VSWR of Tx Port	746.0 to 756.0 MHz				1.9	2.1	
Attenuation							
	1.0 to 686.0 MHz			40	62		dB
	31.0 MHz			50	70		
	686.0 to 728.0 MHz			30	40		
	771.0 to 772.0 MHz			15	20		
	777.0 to 787.0 MHz			50	65		
	787.0 to 6048.0 MHz			40	49		
	1710.0 to 1755.0 MHz			40	56		
	1850.0 to 1910.0 MHz			40	56		
	2238.0 to 2268.0 MHz			40	56		
	2400.0 to 2500.0 MHz			40	56		
	4900.0 to 5950.0 MHz			40	54		
Tx to Rx (with matching network)							
Isolation	777.0 to 787.0 MHz			56	64		dB
	746.5 to 749.0 MHz			50	60		
	749.0 to 752.0 MHz			52	55		
	752.0 to 755.5 MHz			49	51		
	1552.0 to 1574.0 MHz			30	59		
	2328.0 to 2361.0 MHz			30	54		
	3104.0 to 3148.0 MHz			30	53		

Measurement Circuit



Pin Description	
2, 4, 5, 7, 8, 9	Ground
6	Antenna
3	Tx (751 MHz)
1	Rx (782 MHz)

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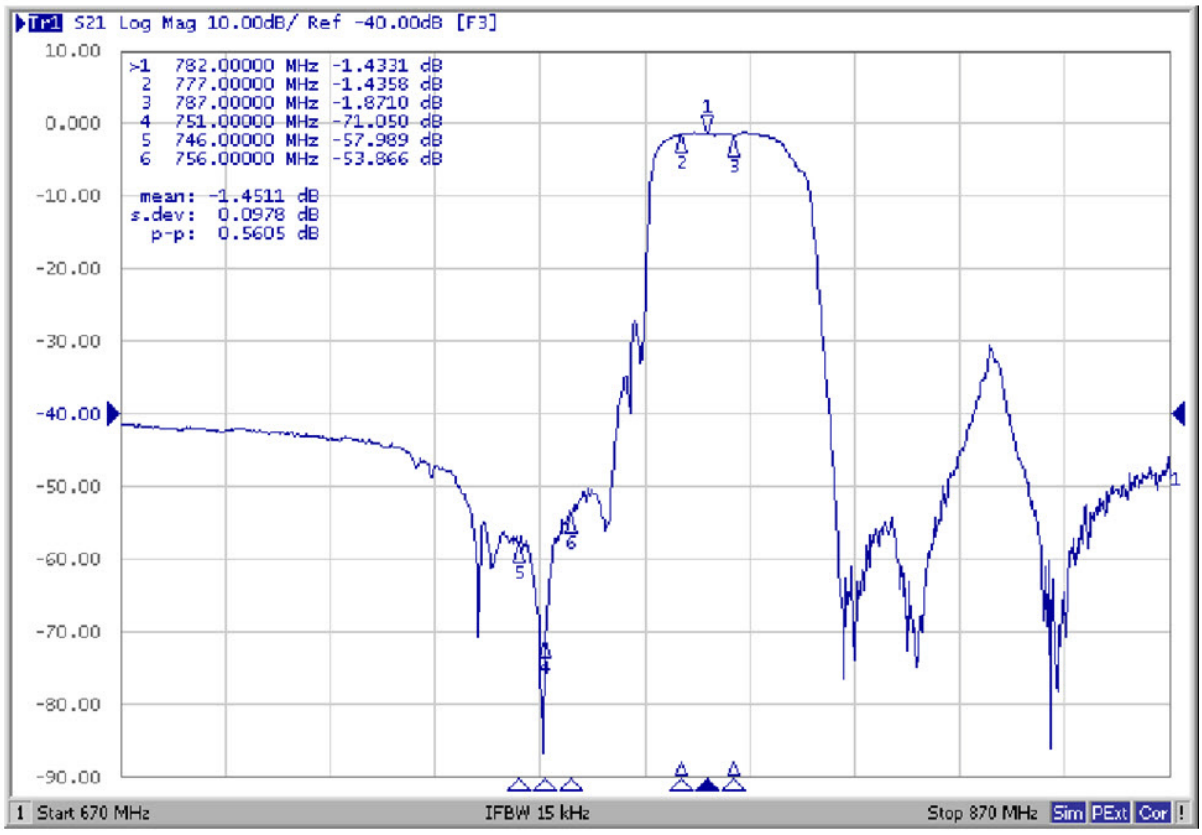
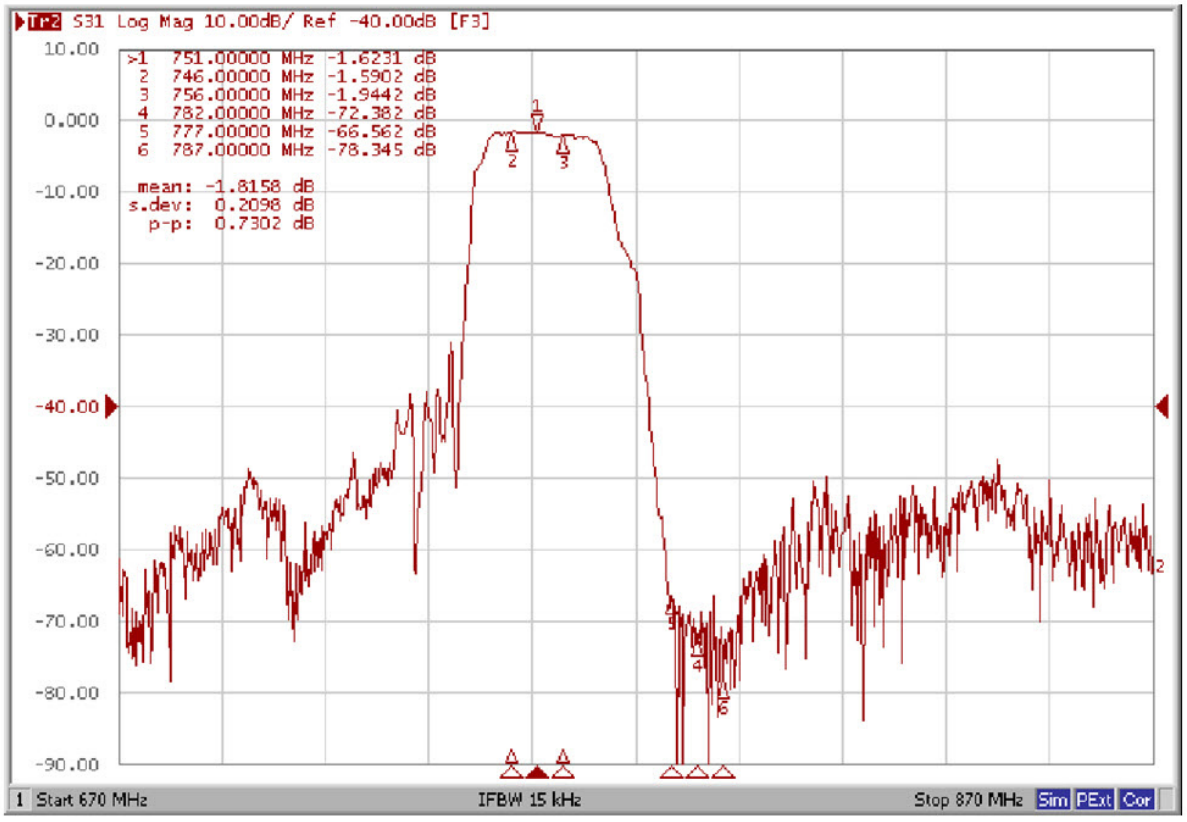
Frequency Characteristics

RX



TX



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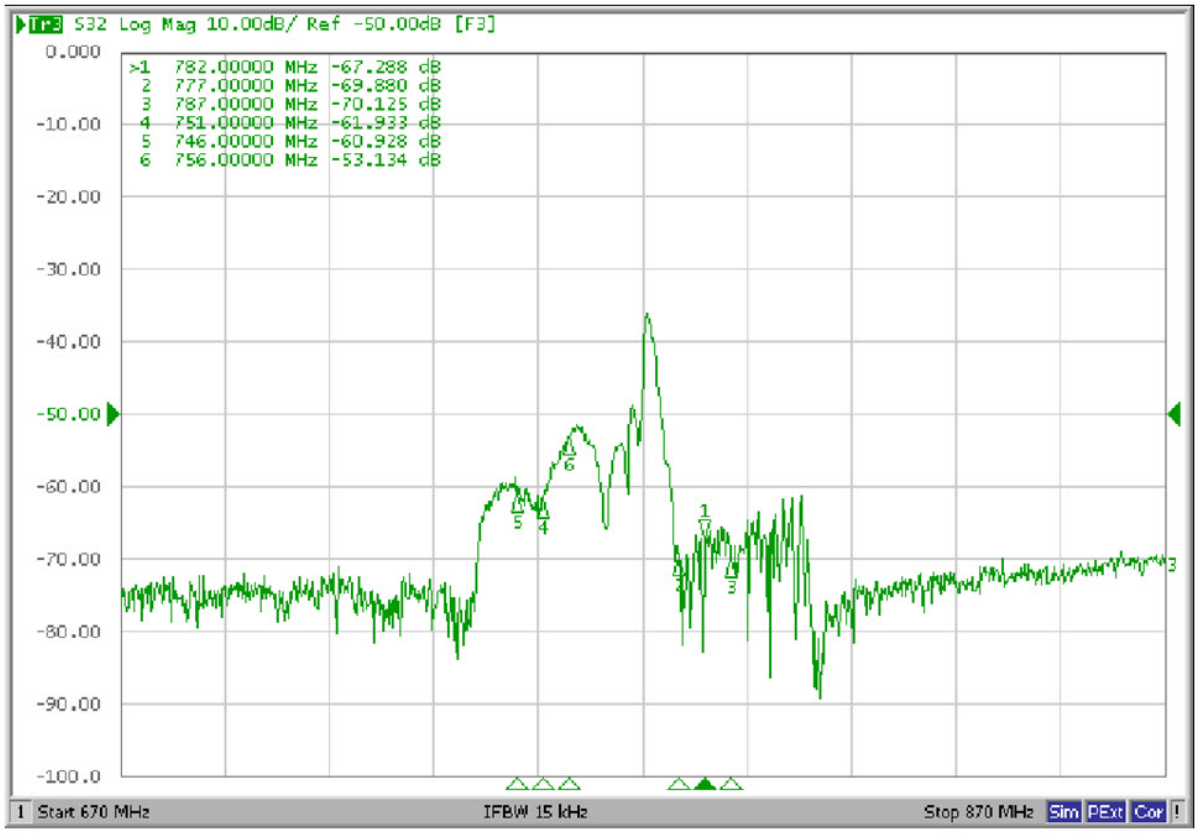
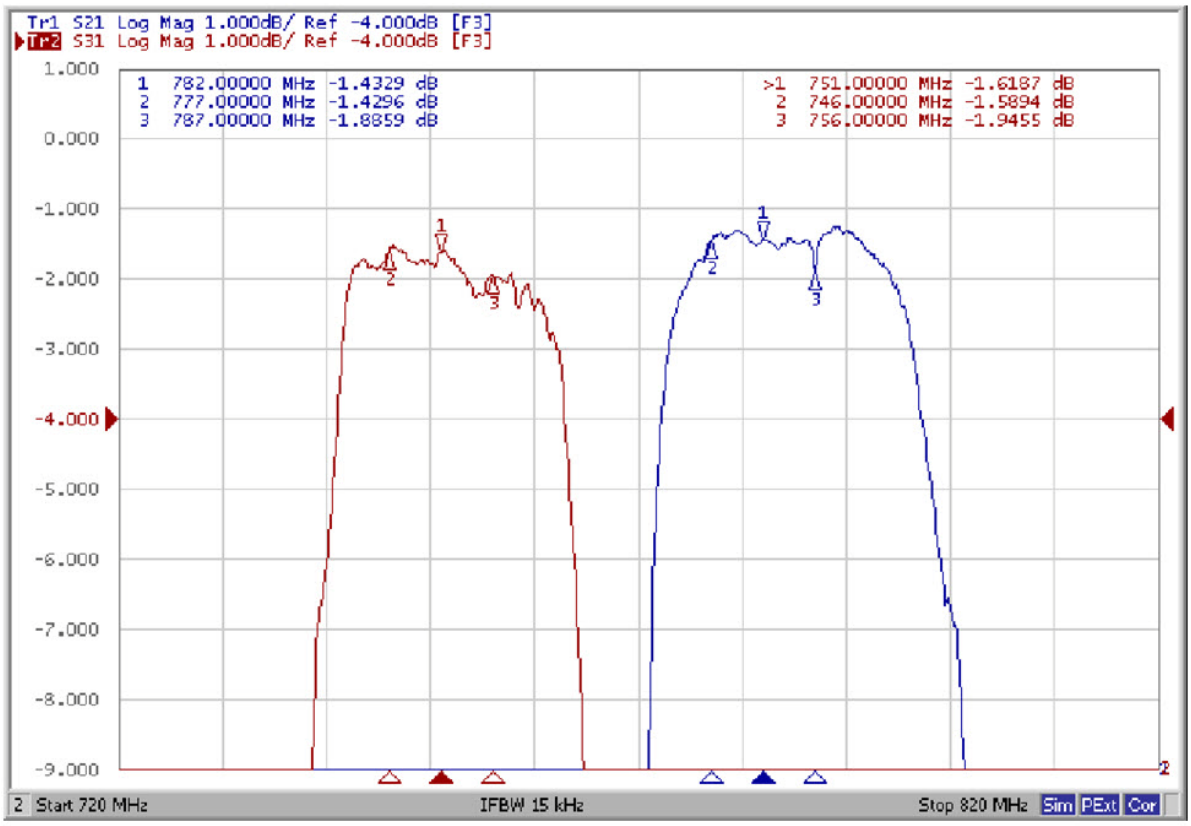
Isolation



Ripple



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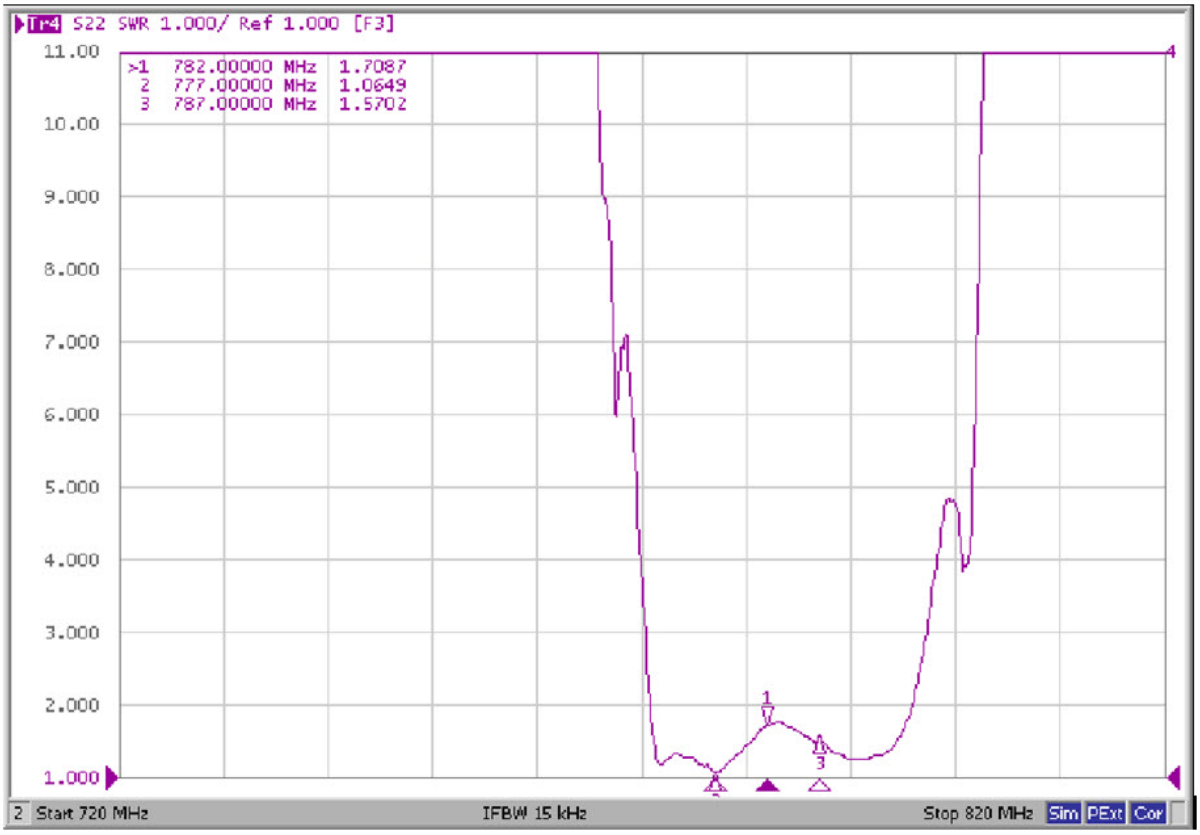
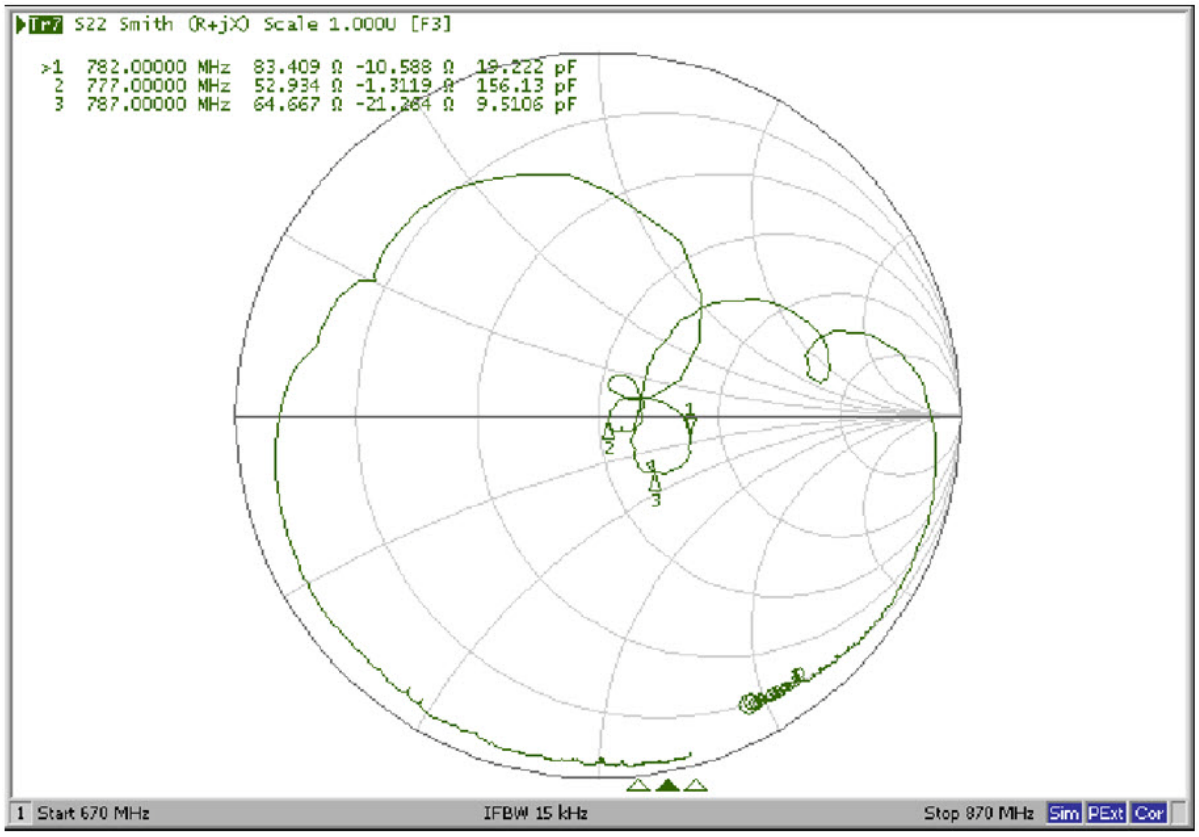
VSWR Rx



Smith Chart Rx



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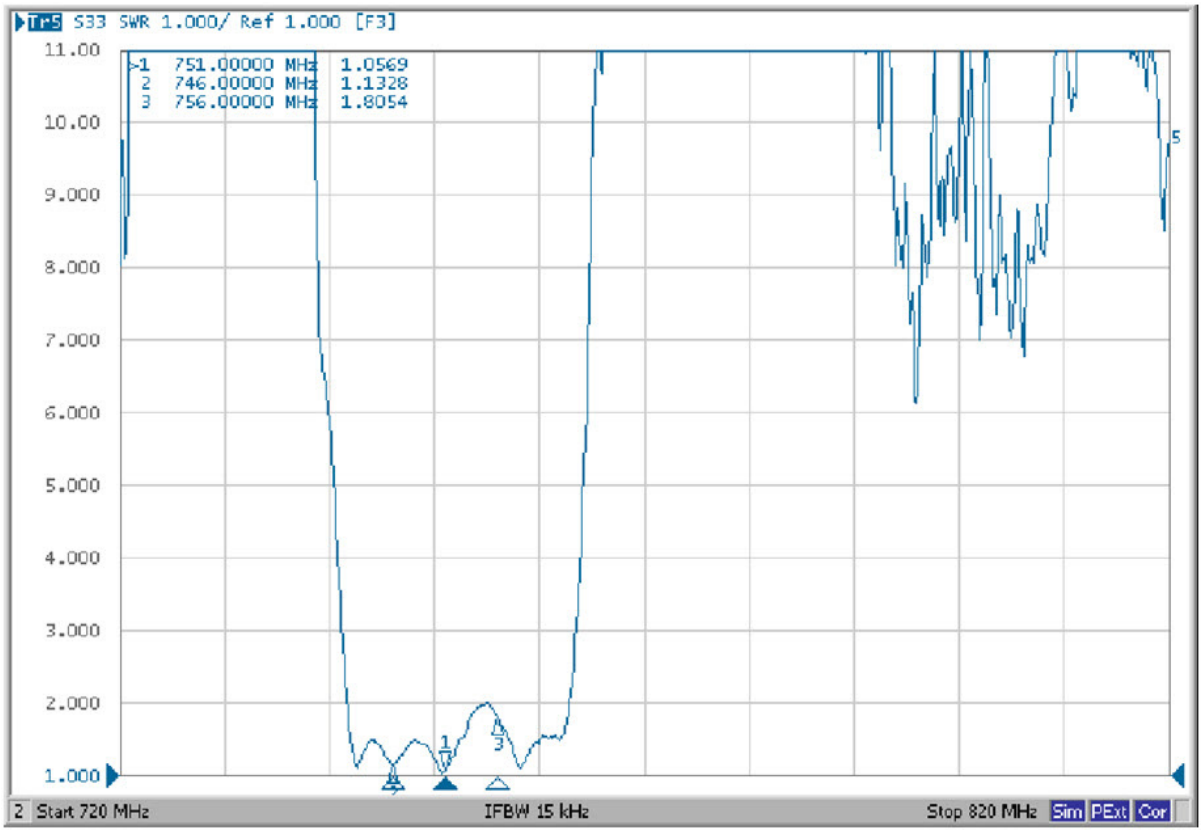
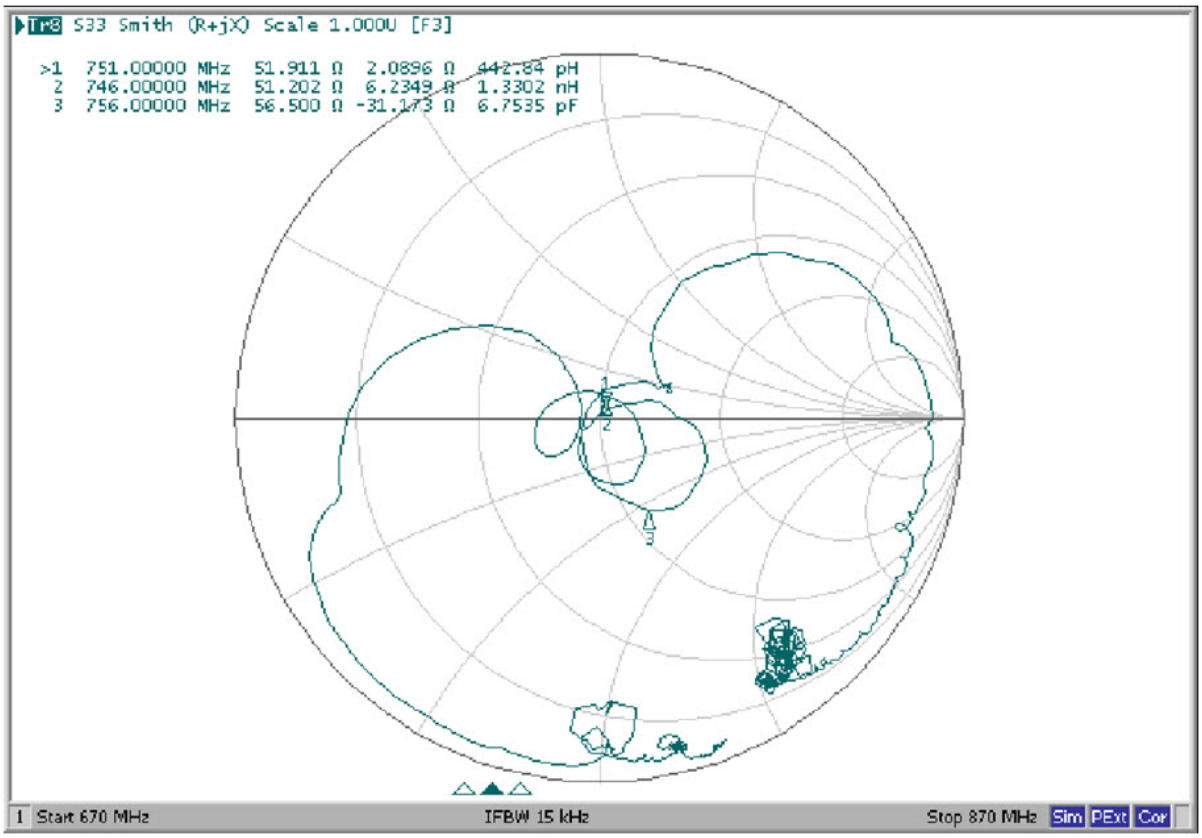
VSWR Tx



Smith Chart Tx



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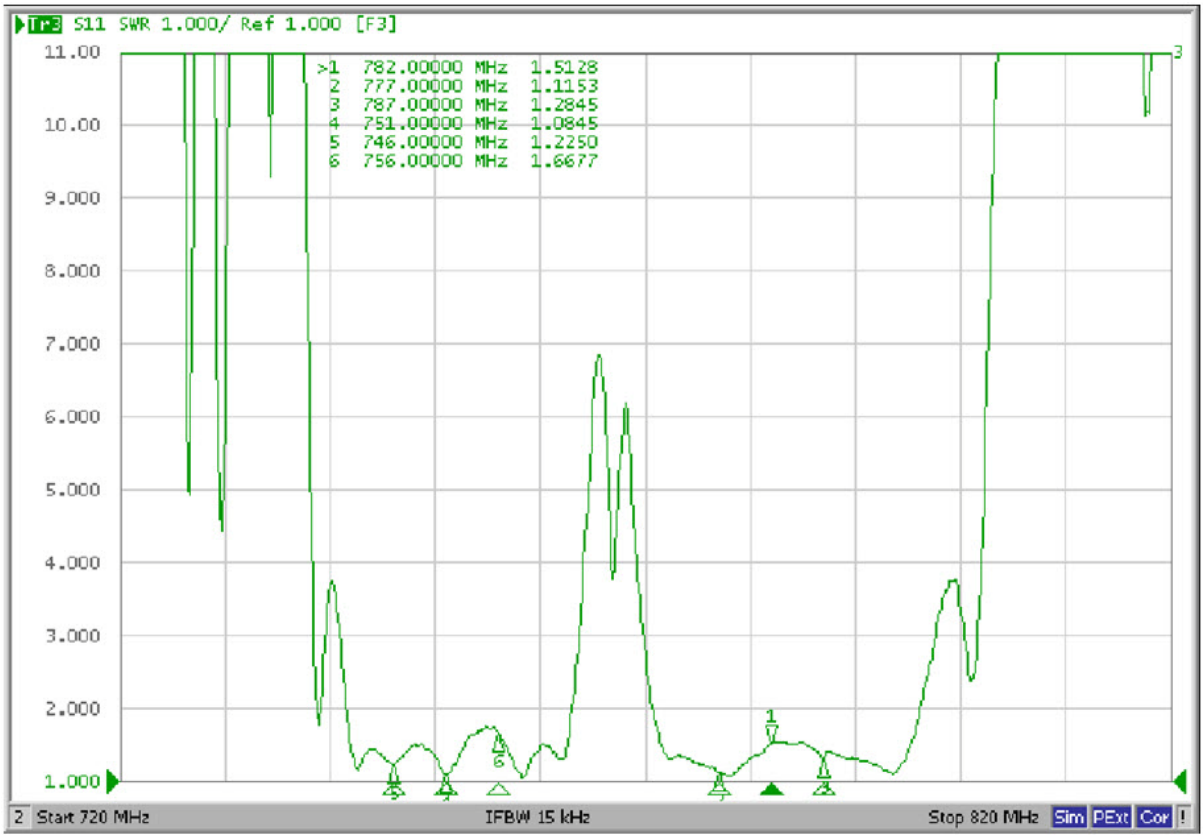
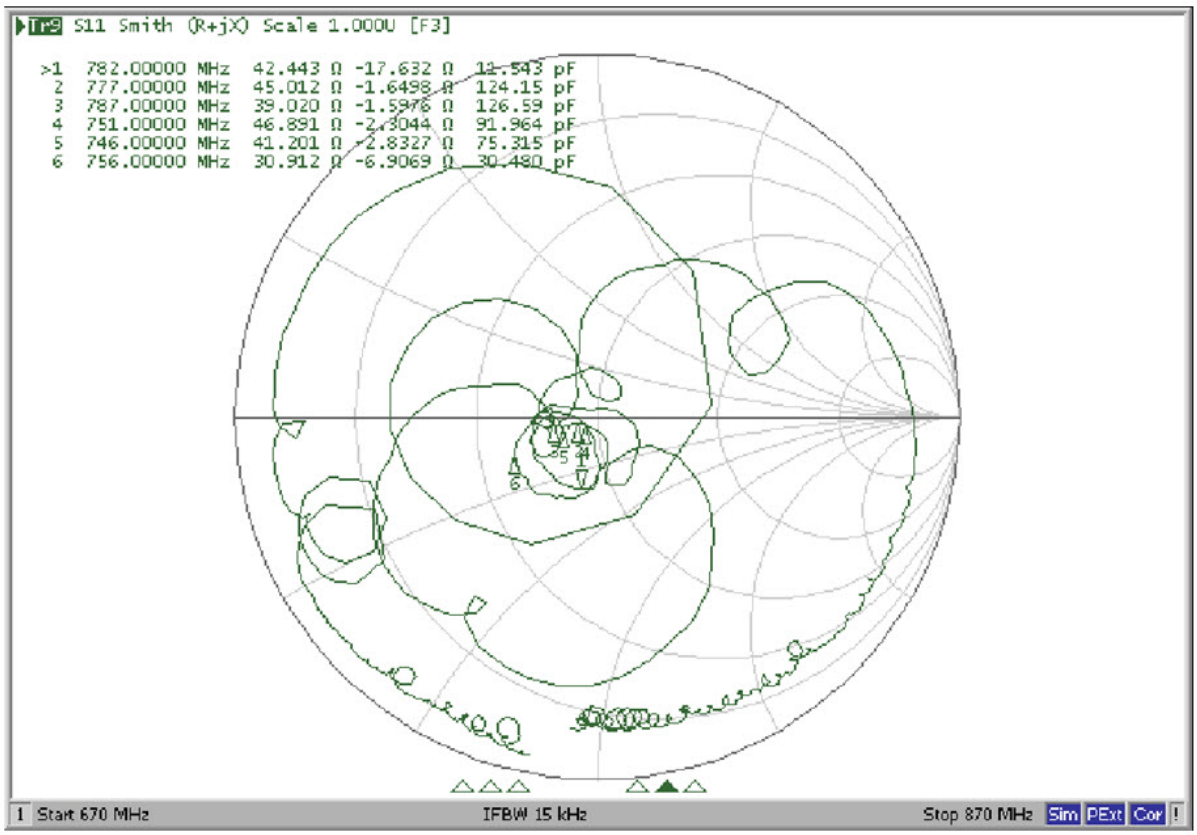
VSWR ANT



Smith Chart ANT Port



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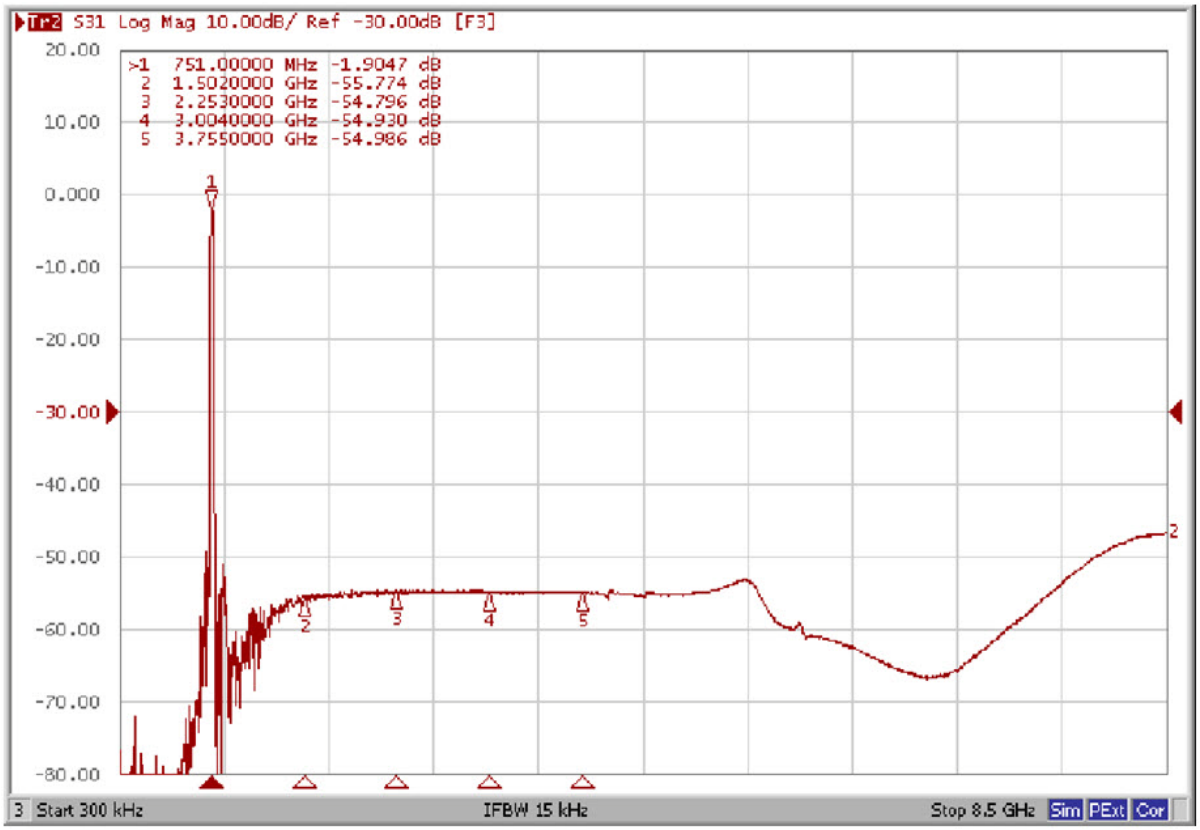
Wide Span - Rx

Wide Span - TX



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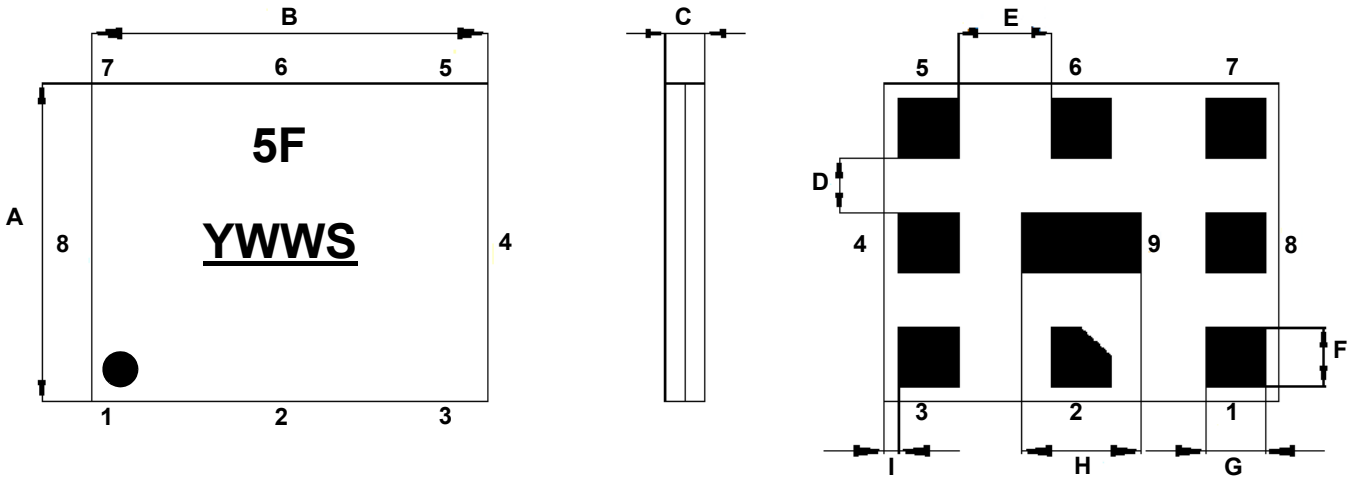
SMD2520-9 Case

Case Dimensions

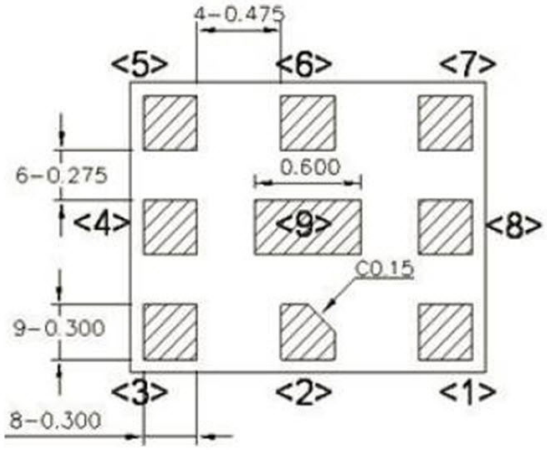
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	-	1.60	-	-	0.062	-
B	-	2.00	-	-	0.078	-
C	-	0.50	-	-	0.019	-
D	-	0.275	-	-	0.010	-
E	-	0.475	-	-	0.018	-
F	-	0.30	-	-	0.011	-
G	-	0.30	-	-	0.011	-
H	-	0.60	-	-	0.023	-
I	-	0.075	-	-	0.002	-

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 **SIDE VIEW** **BOTTOM VIEW**



PCB Footprint



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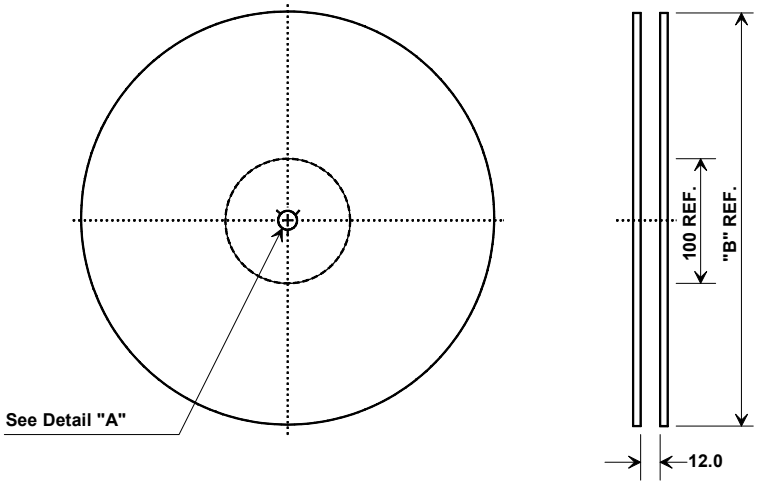
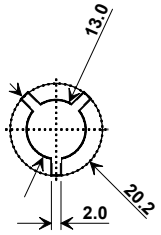
Tape and Reel Specifications

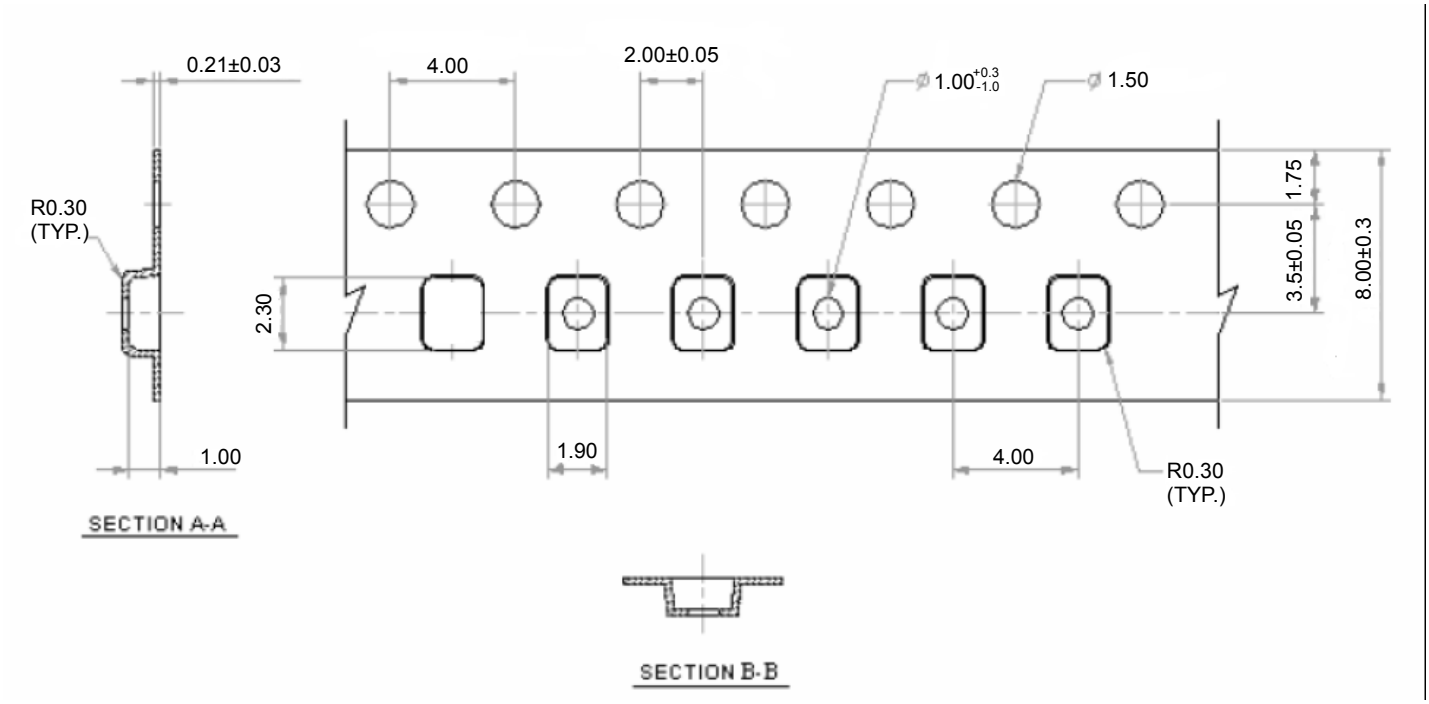


"B"	
Inches	millimeters
7	178
13	330

Detail A



Component Orientation and Dimensions



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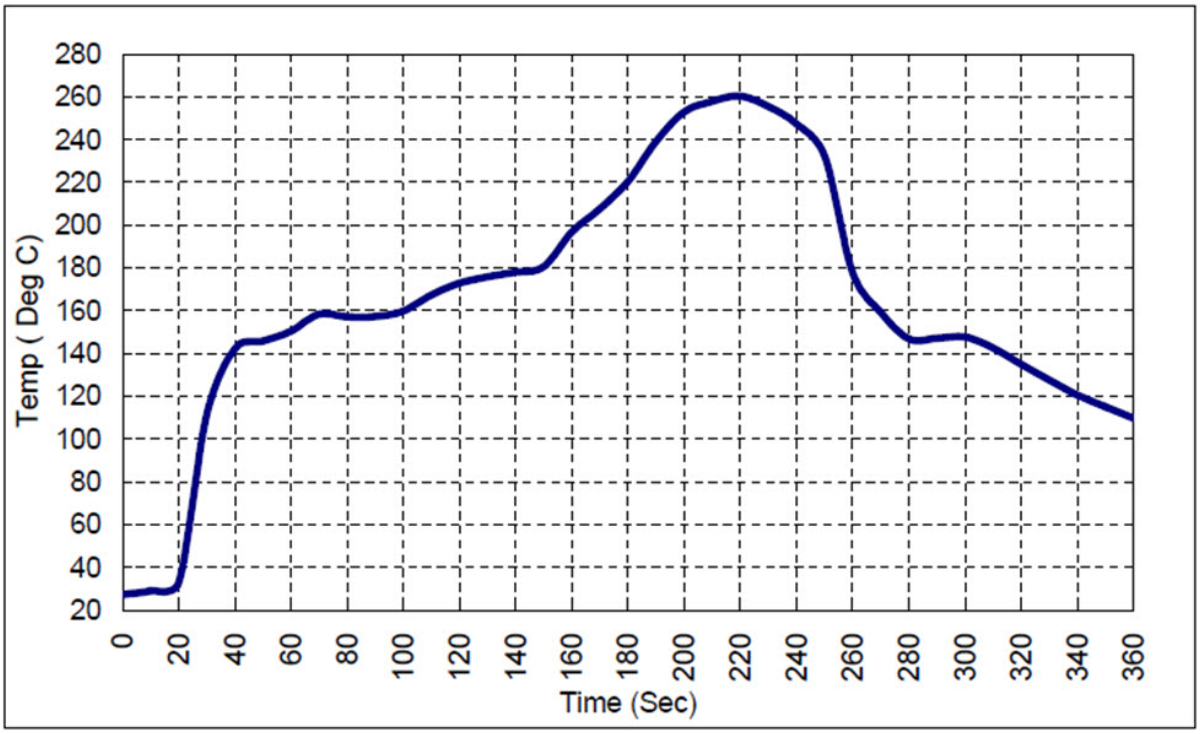
Recommended Reflow Profile



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