

- **Designed for DECT and WLAN IF Applications**
- **Low Insertion Loss**
- **Excellent Size-to-Performance Ratio**
- **Hermetic 13.3 X 6.5 mm Surface-Mount Case**
- **Unbalanced Input and Output**
- **Complies with Directive 2002/95/EC (RoHS)**



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
Suitable for lead-free soldering - Max Soldering Profile	260°C for 30 s	

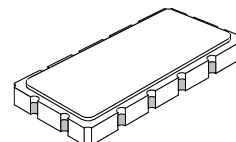
Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Nominal Center Frequency	f_C	1	110.592			MHz
Passband	IL	1, 2		8.5	10.0	dB
Insertion Loss at f_C	BW_3		± 576	± 750		kHz
3 dB Passband	GDV			<150	200	ns _{p-p}
Group Delay Variation over $f_C \pm 576$ kHz		1, 2, 3	28	40		dB
Rejection	$f_C - 3.4$ to $f_C - 1.728$ and $f_C + 1.728$ to $f_C + 3.4$ MHz		40	>45		
DC to $f_C - 3.4$ and $f_C + 3.4$ to 200 MHz	Ultimate			45		
Operating Temperature Range	T_A	1	-10		+60	°C

Impedance Matching to 50 Ω unbalanced	External L-C					
Case Style	SM13365-12 13.3 X 6.5 mm Nominal Footprint					
Lid Symbolization (YY=year, WW=week) See note 4	RFM SF1056A YYWW					

SF1056A

**110.592 MHz
SAW Filter**



SM13365-12

Electrical Connections

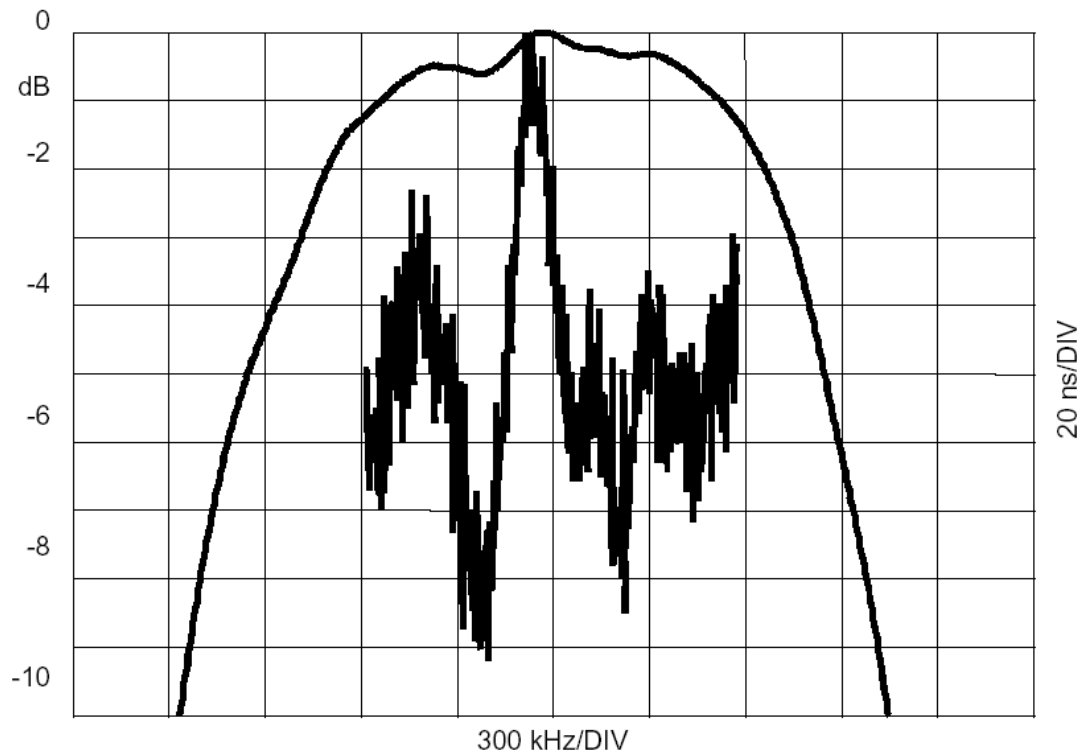
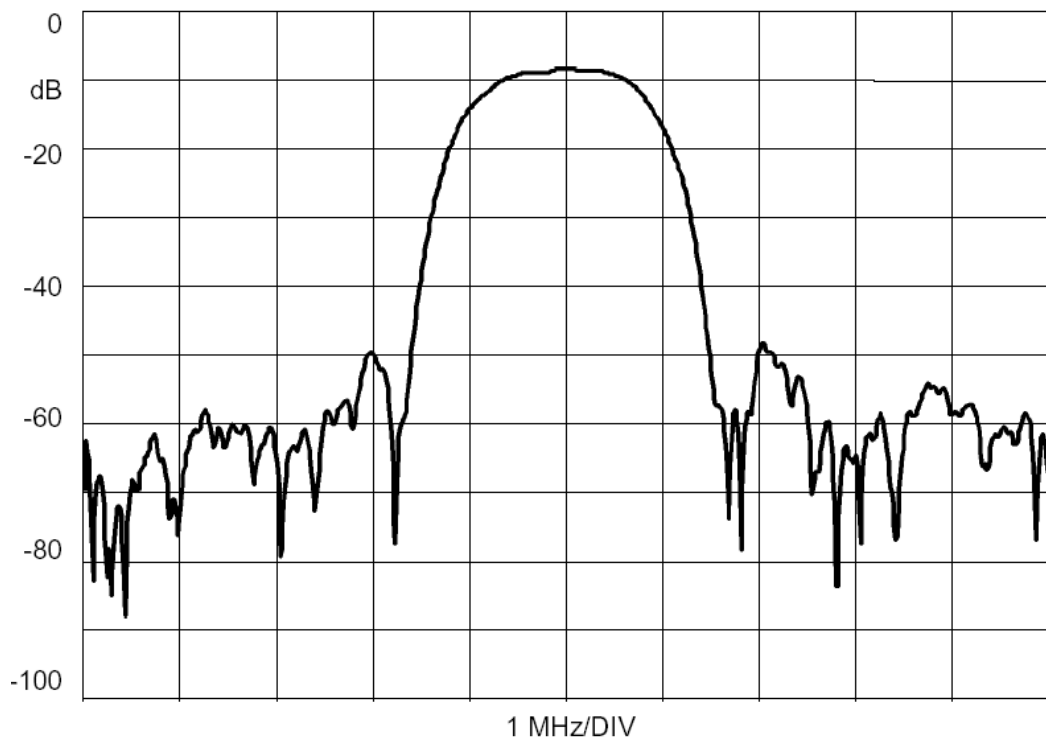
Connection	Terminals
Port 1 Hot	2
Port 1 Gnd Return	3
Port 2 Hot	8
Port 2 Gnd Return	9
Case Ground	All Others



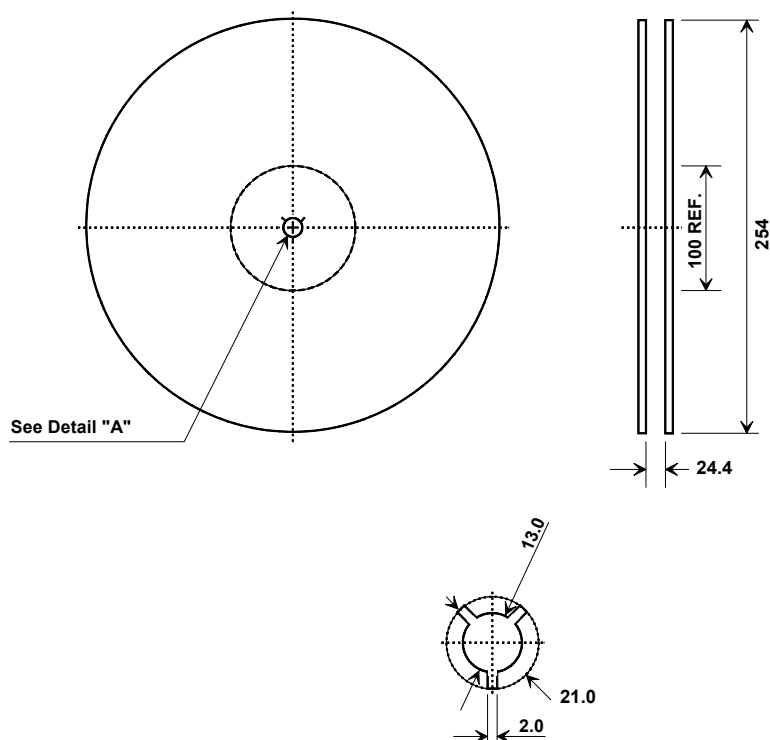
CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

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, f_C .
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. "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. Murata, stylized Murata logo, and Murata N.A., Inc. are registered trademarks of Murata Manufacturing Co., Ltd.



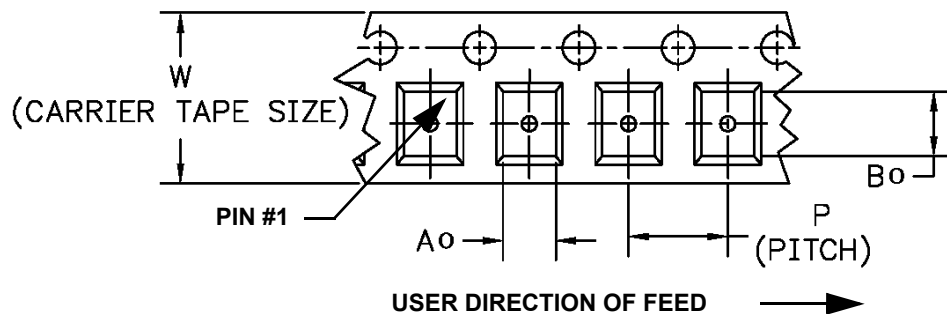
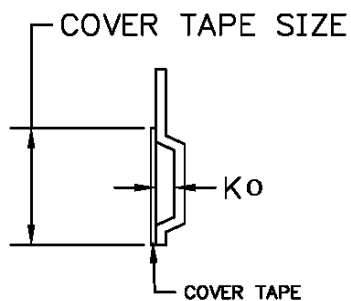
Tape and Reel Specifications



Quantity Per Reel
100 Min
1000 Max

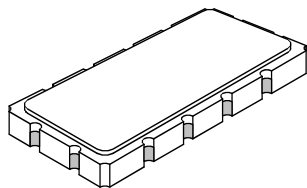
COMPONENT ORIENTATION and DIMENSIONS

Carrier Tape Dimensions	
Ao	7.0 mm
Bo	13.8 mm
Ko	2.0 mm
Pitch	12.0 mm
W	24.0 mm



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	

Materials	
Solder Pad Termination	Au plating 30 - 60 μinches (76.2-152 μm) over 80-200 μinches (203-508 μm) Ni.
Lid	Fe-Ni-Co Alloy Electroless Nickel Plate (8-11% Phosphorus) 100-200 μinches Thick
Body	Al ₂ O ₃ Ceramic
Pb Free	

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

