

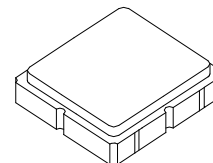
Preliminary



SF2113D

462.5 MHz SAW Filter

- **Low Insertion Loss**
- **3.8 X 3.8 X 1.0 mm Surface Mount Case**
- **Differential Input and Output**
- **Complies with Directive 2002/95/EC (RoHS)**



SM3838-6

Absolute Maximum Ratings

Rating	Value	Units
Maximum Incident Power in Passband	+28	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
Center Frequency	f_o	1		462.5		MHz
Source Impedance (single ended)				50		Ω
Load Impedance (single ended)				50		Ω
Absolute Attenuation	300 kHz to 450 MHz		40	43		dB
	450 MHz to 455 MHz		33	50		
	482.5 MHz to 900 MHz		40	45		
	900 MHz to 1400 MHz		30	35		
	1400 MHz to 2000 MHz		20	30		
Maximum Insertion Loss in 460 MHz -465 MHz				3.1	4.3	dB
Amplitude Variation in 460 MHz -465 MHz				1.6	2.0	dB
Input VSWR in 460 MHz - 465 MHz				1.8:1	2.2:1	
Output VSWR in 460 MHz - 465 MHz				1.8:1	2.2:1	
Power Capacity: CW in 460 MHz -465 MHz					27	dBm
Operating Temperature			-10		+85	°C

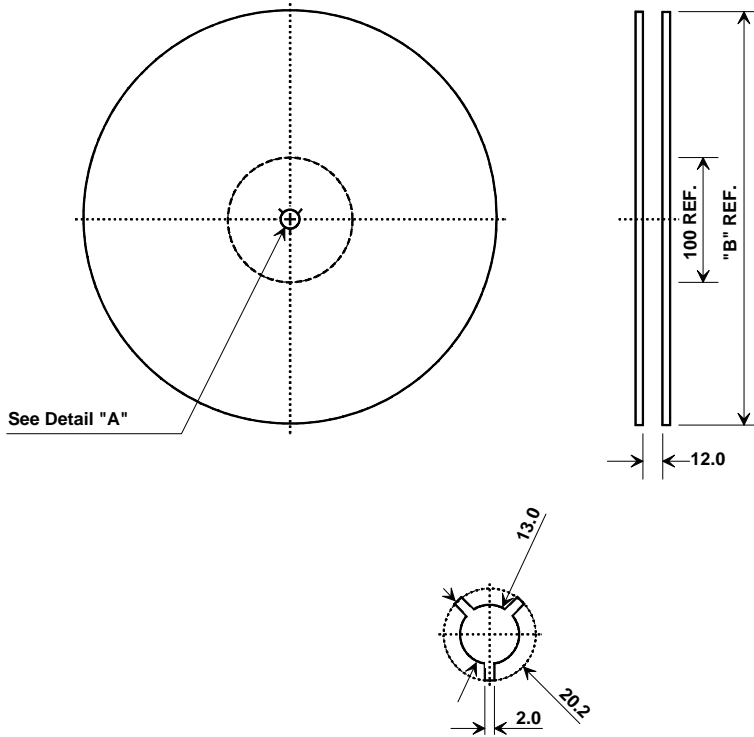
Case Style	SM3838-6 3.8 x 3.8 mm Nominal Footprint	
Lid Symbolization (Y=year, WW=week, S=shift) dot=pin 1 indicator	TBD, YWWS	
Standard Reel Quantity	Reel Size 7 Inch	1000 Pieces/Reel
	Reel Size 13 Inch	3000 Pieces/Reel

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. 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.
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9. Electrostatic Sensitive Device. Observe precautions for handling

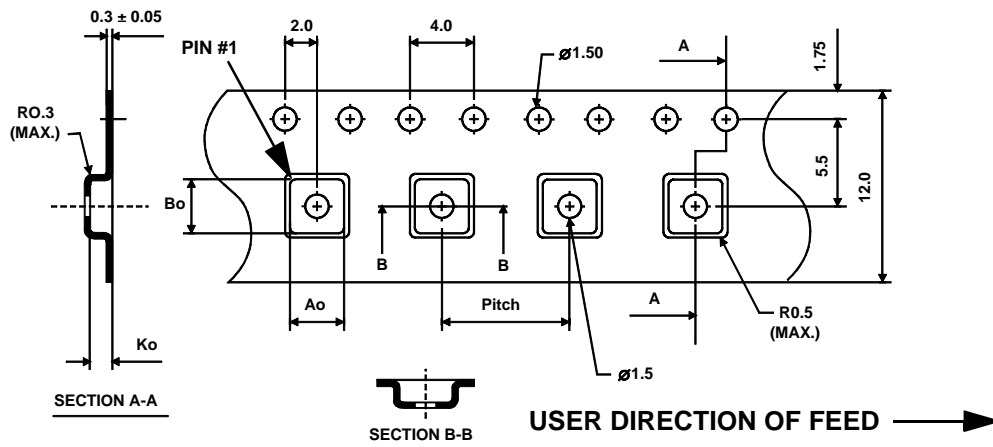
Tape and Reel Specifications



"B"		Quantity Per Reel
Nominal Size		
Inches	millimeters	
7	178	1000
13	330	3000

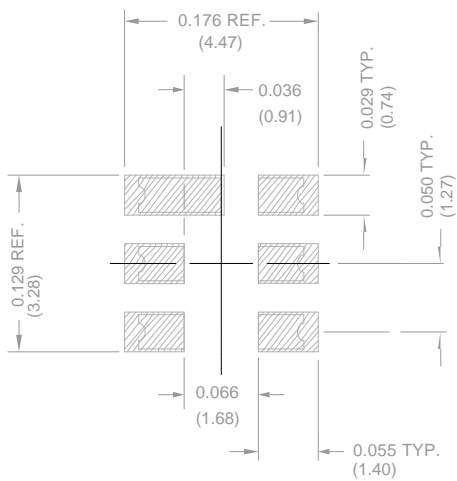
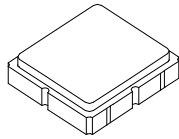
COMPONENT ORIENTATION and DIMENSIONS

Carrier Tape Dimensions	
Ao	4.25 mm
Bo	4.25 mm
Ko	1.30 mm
Pitch	8.0 mm
W	12.0 mm



SM3838-6 Case

6-Terminal Ceramic Surface-Mount Case 3.8 X 3.8 mm Nominal Footprint



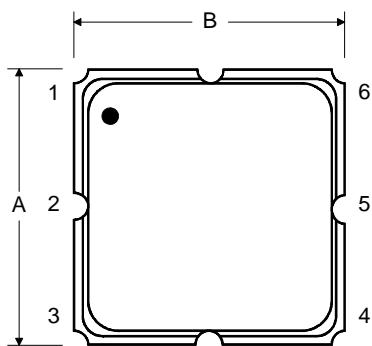
PCB Footprint

Case Dimensions						
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	3.60	3.80	4.0	0.14	0.15	0.16
B	3.60	3.80	4.0	0.14	0.15	0.16
C	1.30	1.50	1.70	0.05	0.06	0.067
D	0.95	1.10	1.25	0.037	0.043	0.05
E	2.39	2.54	2.69	0.090	0.10	0.110
G	0.90	1.0	1.10	0.035	0.04	0.043
H	1.90	2.0	2.10	0.75	0.08	0.83
I	0.50	0.6	0.70	0.020	0.024	0.028
J	1.70	1.8	1.90	0.067	0.07	0.075

Electrical Connections		
Connection	Terminals	
Port 1	Single Ended Input	2
Port 2	Single Ended Output	5
	Ground	All others
Single Ended Operation Only		
Dot indicates Pin 1		

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	

TOP VIEW



BOTTOM VIEW

