

- CDMA 450 F-Band RF SAW Filter
- 3.8 x 3.8 x 1.4 mm Surface-mount Package
- Complies with Directive 2002/95/EC (RoHS)

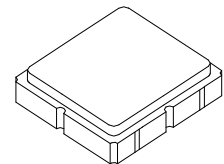


Absolute Maximum Ratings

Rating	Value	Units
Maximum Incident Power in Passband	+30	dBm
Maximum DC Voltage between any Two Terminals	30	VDC
Storage Temperature Range	-40 to +85	°C
Suitable for Lead-free Soldering - Maximum Soldering Profile	260°C for 30 s	

SF1214D

413.7 MHz SAW Filter



SM3838-6

Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Nominal 1 dB Center Frequency	f_c	1		413.7		MHz
Passband Insertion Loss	IL			1.8	2.8	dB
VSWR				1.5:1	2:1	
Rejection		1, 2, 3				dB
0.3 to 400.0 MHz			25	27		
421.6 to 425.9 MHz			30	50		
425.9 to 1700 MHz			23	27		
1700 to 2000 MHz			18	21		
Operating Temperature Range	T_A	1	-30		+80	°C
Impedance at f_c	Source, single ended	50 ohm				
	Load, single ended	50 ohm				

Case Style	SM3838-6 3.8 x 3.8 mm Nominal Footprint	
Lid Symbolization (Y=year, WW=week, S=shift) dot=pin 1 indicator	643, YWWS	
Standard Reel Quantity	Reel Size 7 Inch	1000 Pieces/Reel
	Reel Size 13 Inch	3000 Pieces/Reel

Electrical Connections

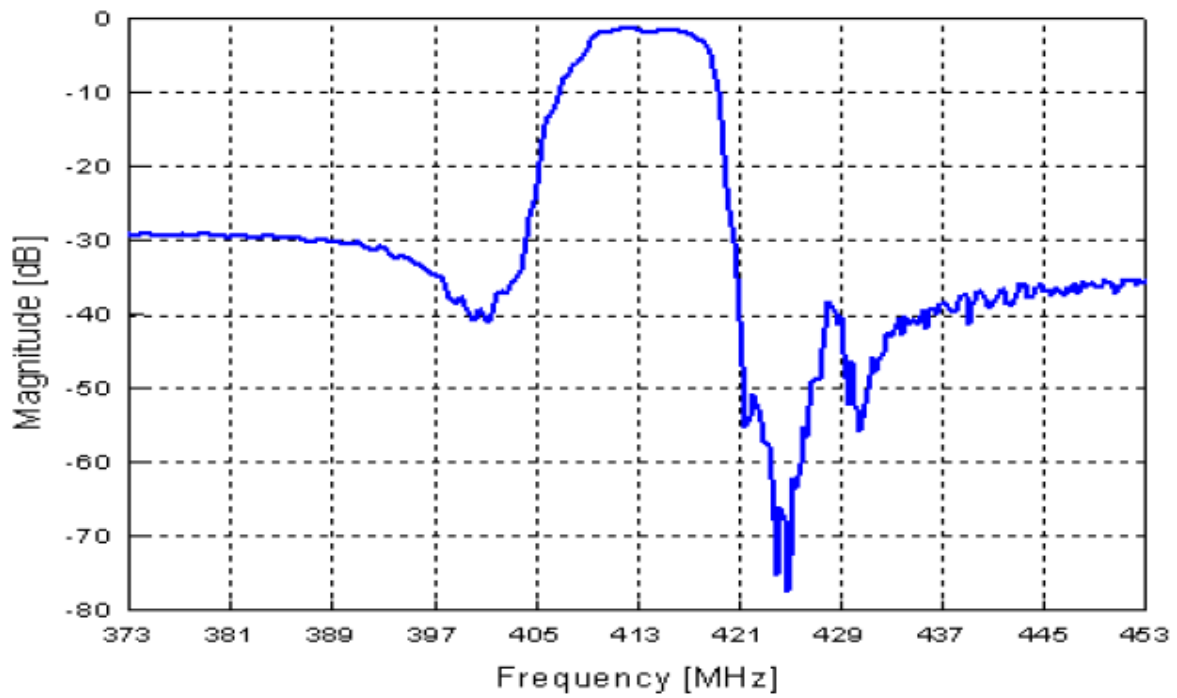
Connection	Terminals
Port 1	2
Port 2	5
Case Ground	All others



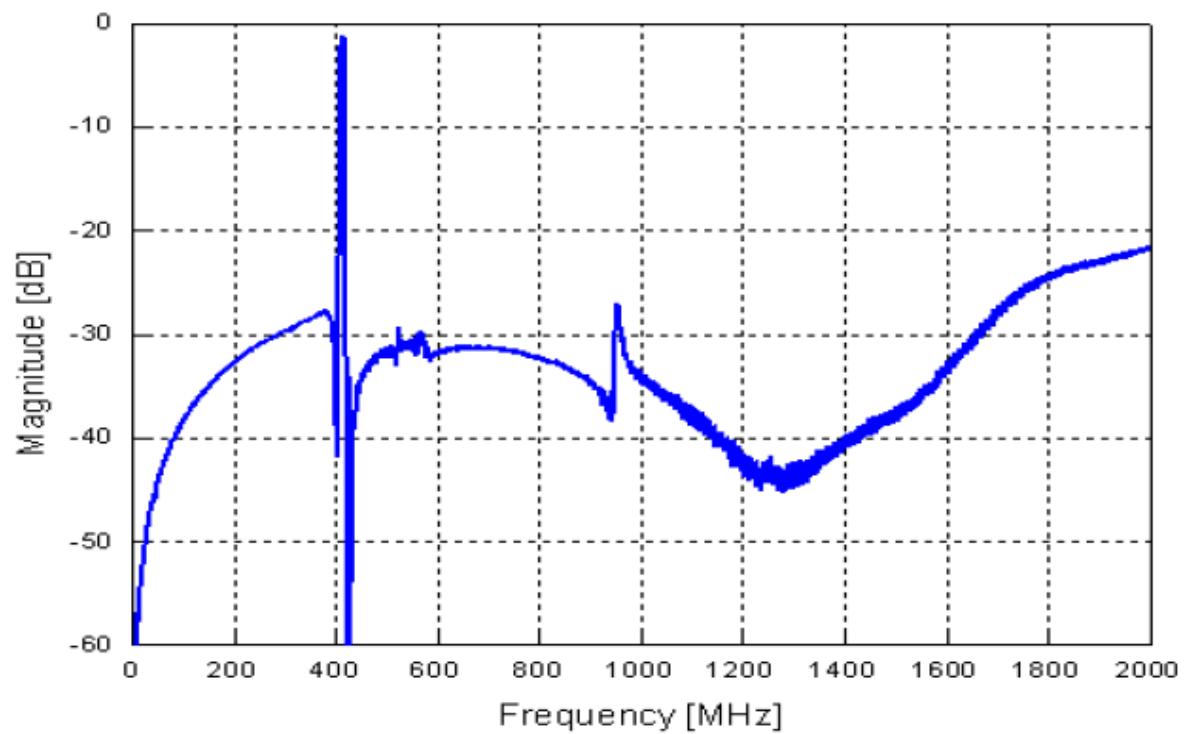
CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

NOTES:

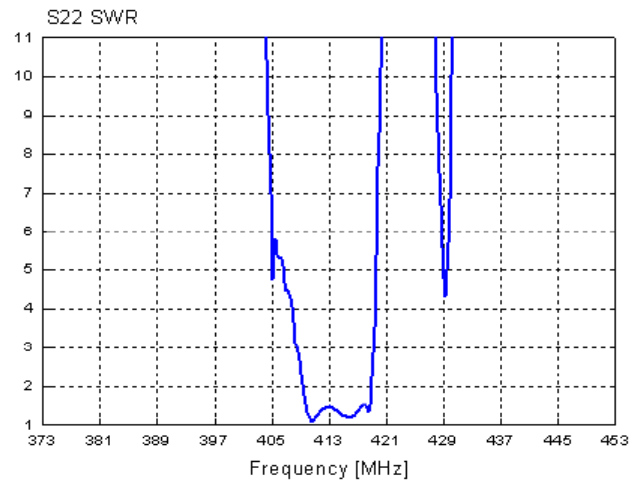
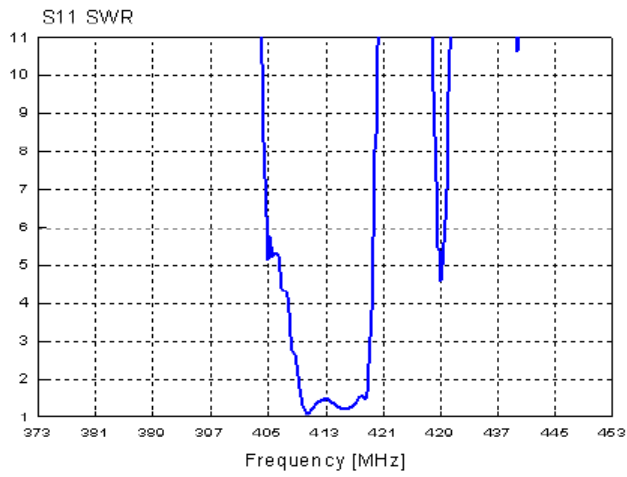
- Unless noted otherwise, all specifications apply over the operating temperature range with filter soldered to the specified demonstration board with impedance matching to 50 Ω and measured with 50 Ω network analyzer.
- Unless noted otherwise, all frequency specifications are referenced to the nominal center frequency, f_c .
- 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.
- "LRIP" or "L" after the part number indicates "low rate initial production" and "ENG" or "E" indicates "engineering prototypes."
- The design, manufacturing process, and specifications of this filter are subject to change.
- 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.
- US and international patents may apply.
- Murata, stylized Murata logo, and Murata N.A., Inc. are registered



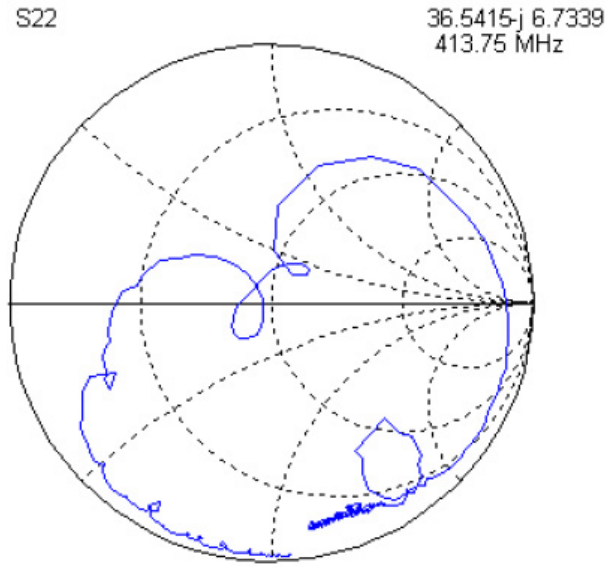
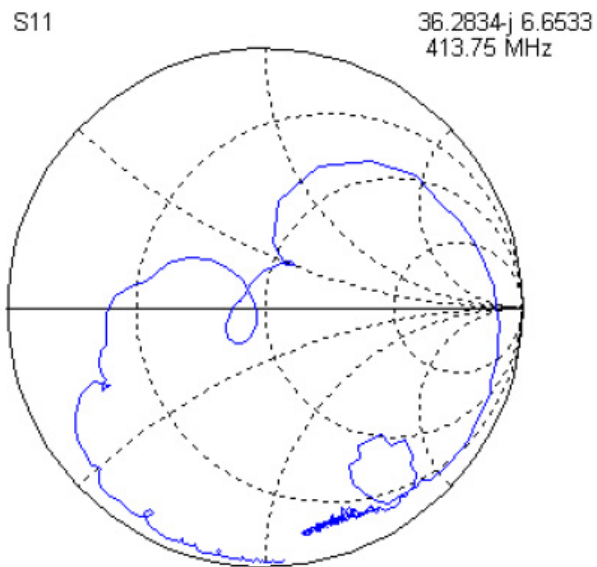
Passband Plot



Wideband Plot



VSWR



S11 and S22 Plots

Technical drawing of a circular component, likely a flange or end plate, showing three views: a top view, a side view, and a detail view.

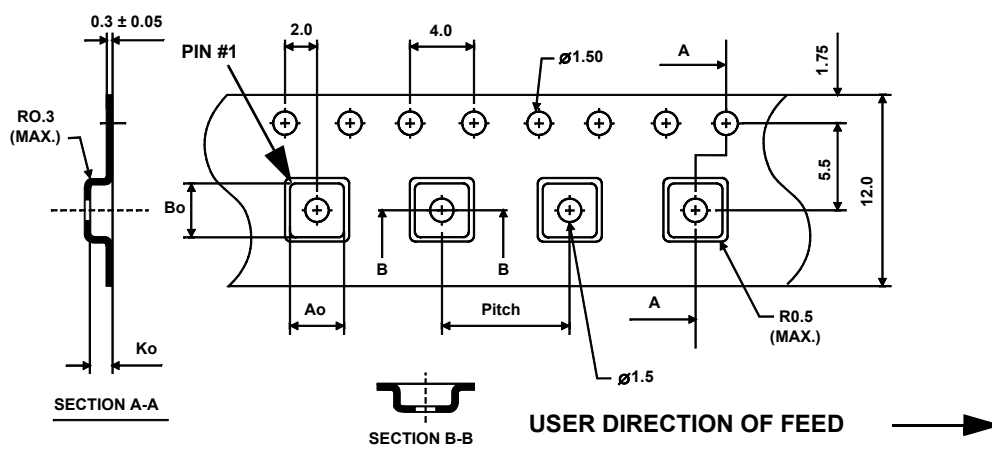
Top View: A large circle with a smaller concentric circle in the center. A crosshair indicates the center. A dimension line points from the center to the text "See Detail 'A'".

Side View: A vertical cross-section showing the thickness of the component. The total thickness is dimensioned as 12.0. The inner hole has a diameter of 100 REF. The outer diameter is dimensioned as "B" REF.

Detail View (Detail 'A'): A cross-section of the central hole. It shows a circular hole with a diameter of 20.2. The hole is surrounded by a ring with a thickness of 2.0. The outer diameter of this ring is 13.0.

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

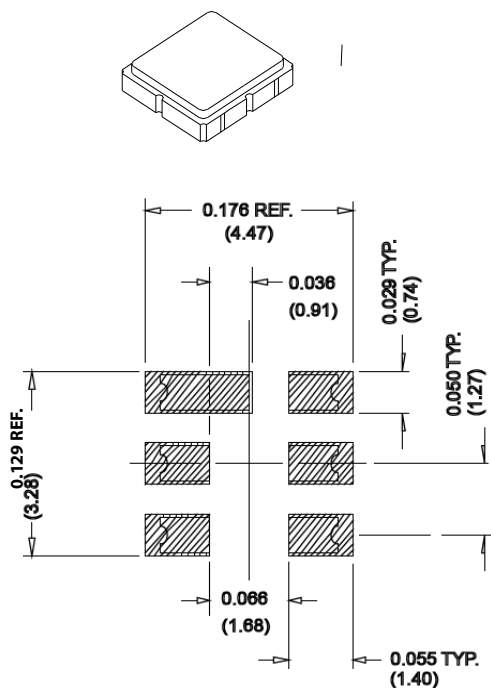
Carrier Tape Dimensions	
Ao	4.25 mm
Bo	4.25 mm
Ko	1.30 mm
Pitch	8.0 mm
W	12.0 mm



SM3838-6 Case

6-Terminal Ceramic Surface-Mount Case

3.8 X 3.8 mm Nominal Footprint



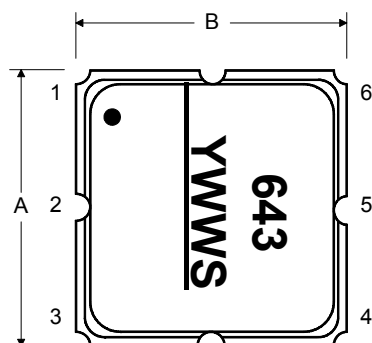
PCB Footprint

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

