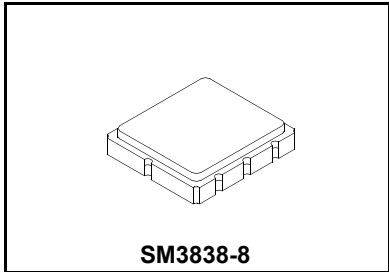


SF2025D

259.861 MHz
SAW Filter



- **Designed for SDARS Receiver IF Application**
- **Low Insertion Loss**
- **3.8 X 3.8 mm Surface-Mount Case**
- **Differential Input and Output**
- **Complies with Directive 2002/95/EC (RoHS)**
- **Moisture Sensitivity Level: 1**
- **AEC-Q200 Qualified**

Absolute Maximum Ratings

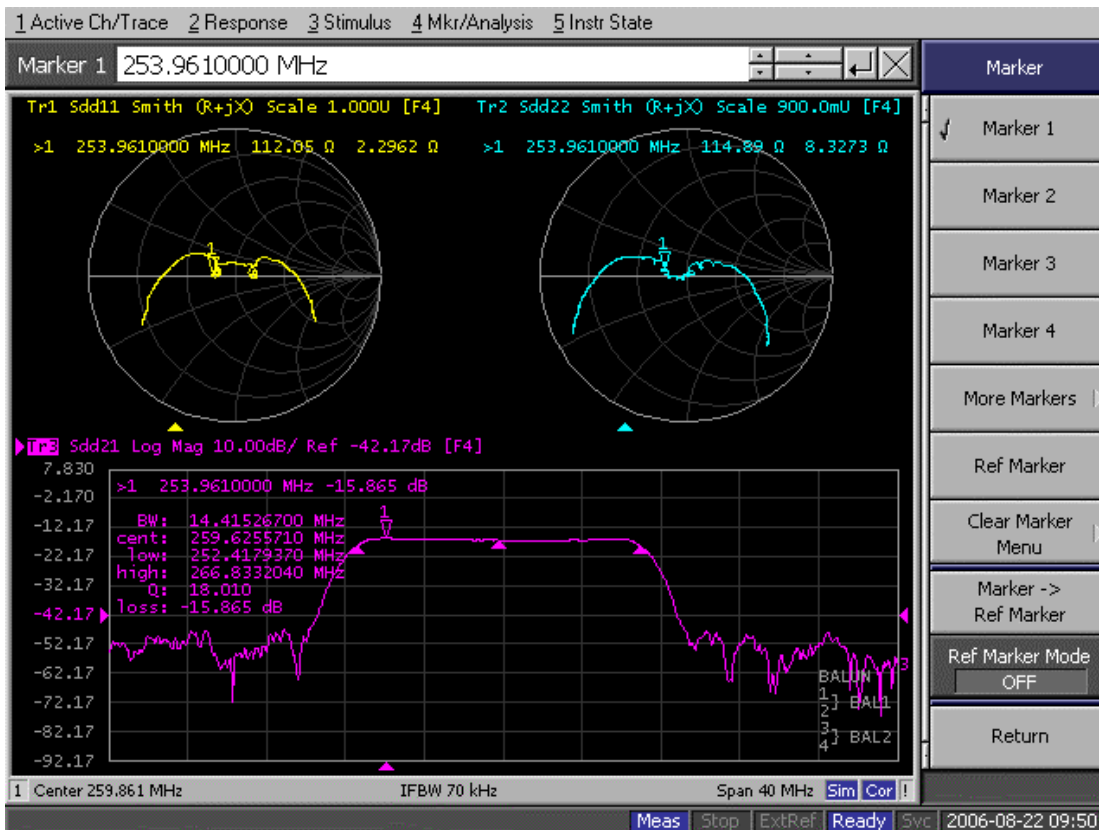
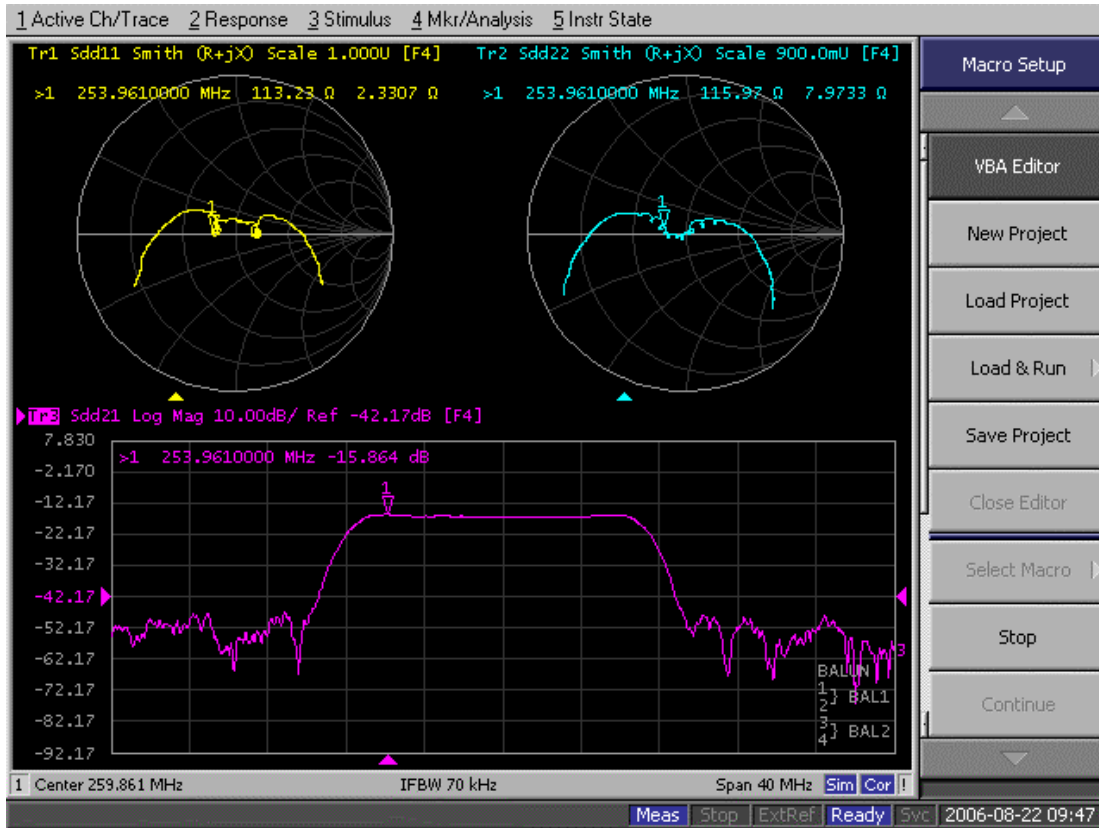
Rating	Value	Units
Maximum Incident Power in Passband	+10	dBm
Max. DC voltage between any 2 terminals	30	VDC
Storage Temperature Range	-40 to +105	°C
Suitable for lead-free soldering - Max Soldering Temperature	260°C for 30 s	

Characteristic	Sym	Notes	Min	Typ	Max	Units	
Nominal Center Frequency	f_c			259.861		MHz	
Passband	IL	Minimum Insertion Loss		16	18	dB	
		1.5 dB Passband		13.6			MHz
		3 dB Passband		14.3			
Amplitude Ripple from $f_c-6.354$ MHz to $f_c-4.2885$ MHz (-20 to 85°C)				0.5	1	dB _{p-p}	
Amplitude Ripple from $f_c-6.354$ MHz to $f_c-4.2885$ MHz (-40 to -20°C)				0.5	1.5		
Amplitude Ripple from $f_c-4.4965$ MHz to $f_c-2.431$ MHz				0.5	1		
Amplitude Ripple from $f_c-2.639$ MHz to $f_c+0.079$ MHz				0.5	1		
Amplitude Ripple from $f_c-0.079$ MHz to $f_c+2.639$ MHz				0.5	1		
Amplitude Ripple from $f_c+2.431$ MHz to $f_c+4.4965$ MHz				0.5	1		
Amplitude Ripple from $f_c+4.2885$ MHz to $f_c+6.354$ MHz (-40 to 60°C)				0.5	1		
Amplitude Ripple from $f_c+4.2885$ MHz to $f_c+6.354$ MHz (60 to 85°C)				0.5	1.15		
Group Delay Variation over $f_c-6.354$ MHz to $f_c-2.431$ MHz and from $f_c+2.431$ MHz to $f_c+6.354$ MHz	GDV1			90	120	ns _{p-p}	
		Group Delay Variation over $f_c\pm 2.639$ MHz	GDV2		60		120
Rejection		f_c-28 to f_c-12 MHz and f_c+12 to f_c+33 MHz	36	43		dB	
		f_c-12 to $f_c-10.5$ MHz	30	40			
		f_c+9 to f_c+12 MHz	26	36			
Operating Temperature Range	T_A		-40		+85	°C	
Frequency Temperature Coefficient				-18		ppm/°C	
Differential Input and Output Impedance	L & C Match to 150 ohms						
Case Style	SM3838-8 3.8 x 3.8 mm Nominal Footprint						
Lid Symbolization (Y=year, WW=week, S=shift)	634, <u>YWWS</u>						

CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

NOTES:

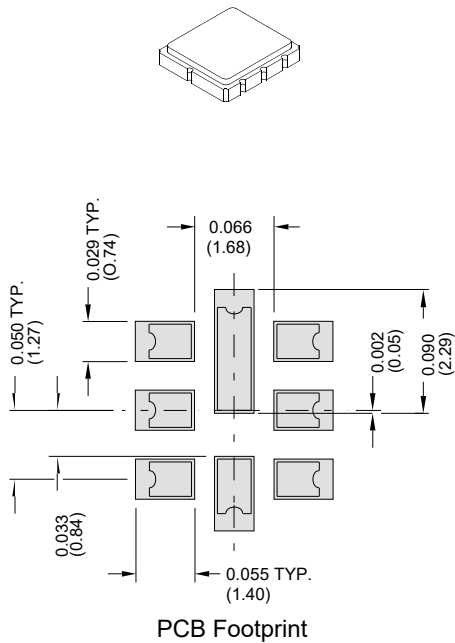
1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.



SM3838-8 Case

8-Terminal Ceramic Surface-Mount Case

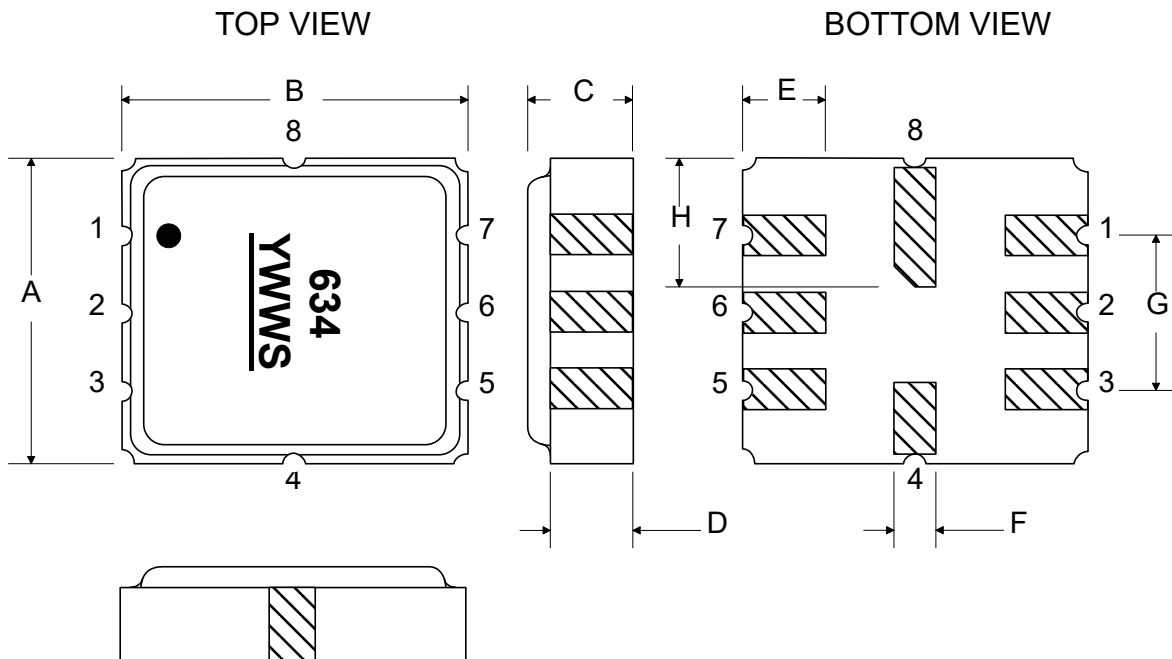
3.8 X 3.8 mm Nominal Footprint



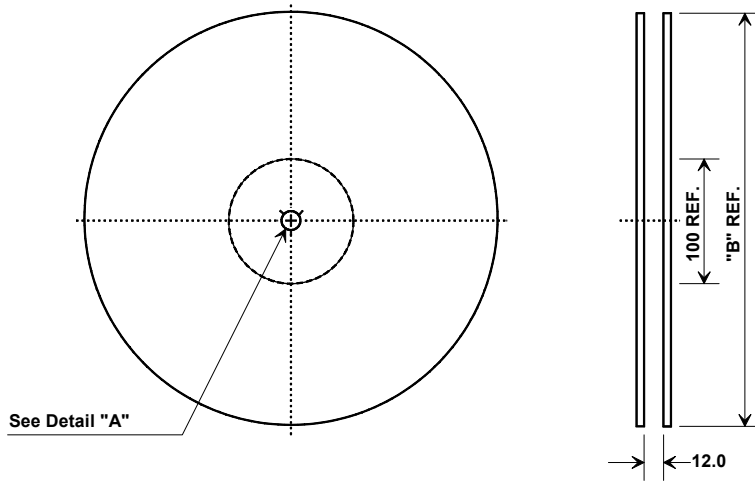
Dimension	Case Dimensions					
	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	3.6	3.8	4.0	0.142	0.150	0.157
B	3.6	3.8	4.0	0.142	0.150	0.157
C	0.95	1.10	1.25	0.037	0.043	0.049
D	0.60	0.85	1.00	0.023	0.033	0.039
E	0.90	1.00	1.10	0.035	0.040	0.043
F	0.50	0.60	0.70	0.020	0.024	0.028
G	2.39	2.54	2.69	0.090	0.100	0.110
H	1.35	1.5	1.65	0.053	0.059	0.065

Electrical Connections		
	Connection	Terminals
Port 1	Differential Input	1, 2
Port 2	Differential Output	5, 6
	Ground	All Others
Single Ended Operation		Return is Ground
Differential Operation		Return is Hot
Dot Indicates Pin 1		

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

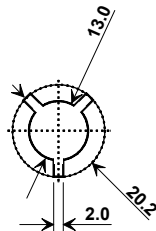


Tape and Reel Specifications



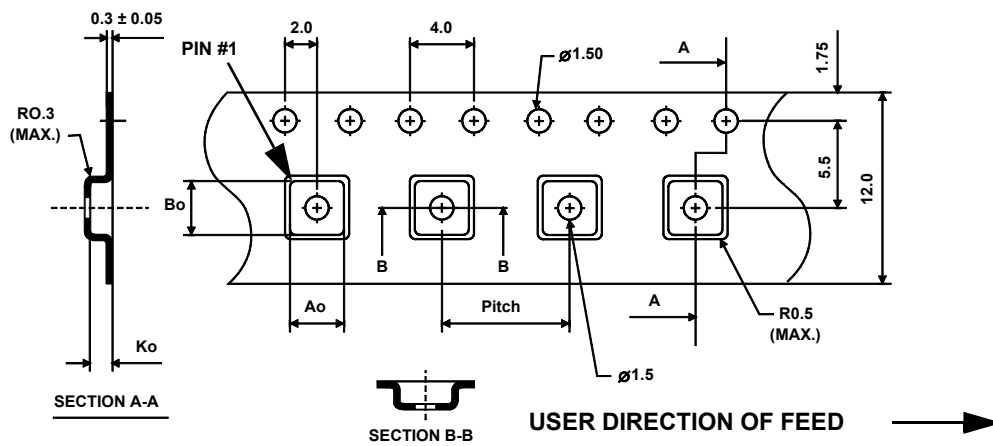
Tape and Reel Standard per ANSI/EIA-481

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



COMPONENT ORIENTATION and DIMENSIONS

Carrier Tape Dimensions	
Ao	4.25 mm
Bo	4.25 mm
Ko	1.60 mm
Pitch	8.0 mm
W	12.0 mm



Recommended Reflow Profile

1. Preheating shall be fixed at 150~180°C for 60~90 seconds.
2. Ascending time to preheating temperature 150°C shall be 30 seconds min.
3. Heating shall be fixed at 220°C for 50~80 seconds and at 260°C +0/-5°C peak (10 seconds).
4. Time: 5 times maximum.

