



AEC-Q200

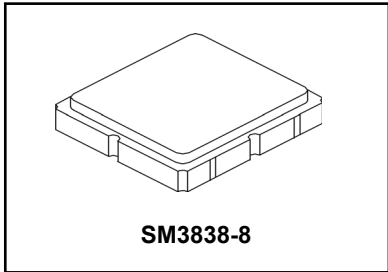
This component was always RoHS compliant from the first date of manufacture.

- Designed for SDARS Receiver IF Application
- Low Insertion Loss
- 3.8 X 3.8 X 1.2 mm Surface-Mount Case
- Differential Input and Output
- Complies with Directive 2002/95/EC (RoHS)

RoHS
Compliant

SF2024D

467.751 MHz
SAW Filter



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	

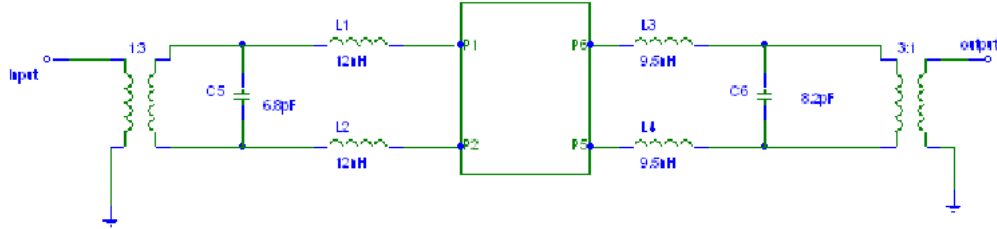
Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	f _C		467.704	467.751	467.798	MHz
Insertion Loss	IL			12	13	dB
Amplitude Ripple (p-p)		fc-6.250 to fc-4.3925 MHz			2.0	dB
		fc-4.3925 to fc-2.535 MHz			2.0	
		fc-2.5350 to fc-0.025 MHz			2.0	
		fc+0.025 to fc+2.535 MHz			2.0	
		fc+2.5350 to fc+4.3925 MHz			2.0	
		fc+4.3925 to fc+6.250 MHz			2.0	
Pass bandwidth of -2.0dB centered at fc				13.0		MHz
Pass bandwidth of -3 dB						
Low Side Attenuation between 455.751 to 457.251 MHz (fc-10.5 MHz)			32			dB
Low Side Attenuation F<455.751 MHz			32			
High Side Attenuation between 476.751 to 479.751 MHz (fc+9.0 MHz)			20			
High Side Attenuation F>479.751 MHz			32			
Temperature Coefficient of frequency					-18	ppm/K
Delay Ripple (p-p)		fc-6.250 to fc-4.3925 MHz			100	ns
		fc-4.3925 to fc-2.535 MHz			100	
		fc-2.5350 to fc-0.025 MHz			120	
		fc+0.025 to fc+2.535 MHz			120	
		fc+2.5350 to fc+4.3925 MHz			100	
		fc+4.3925 to fc+6.250 MHz			100	
Source Impedance	Z _S			150		Ω
Load Impedance	Z _L			150		Ω
Case Style			SM3838-8 3.8 x 3.8 mm Nominal Footprint			
Lid Symbolization (YY=year, WW=week, S=shift)			380 <u>YWWS</u>			

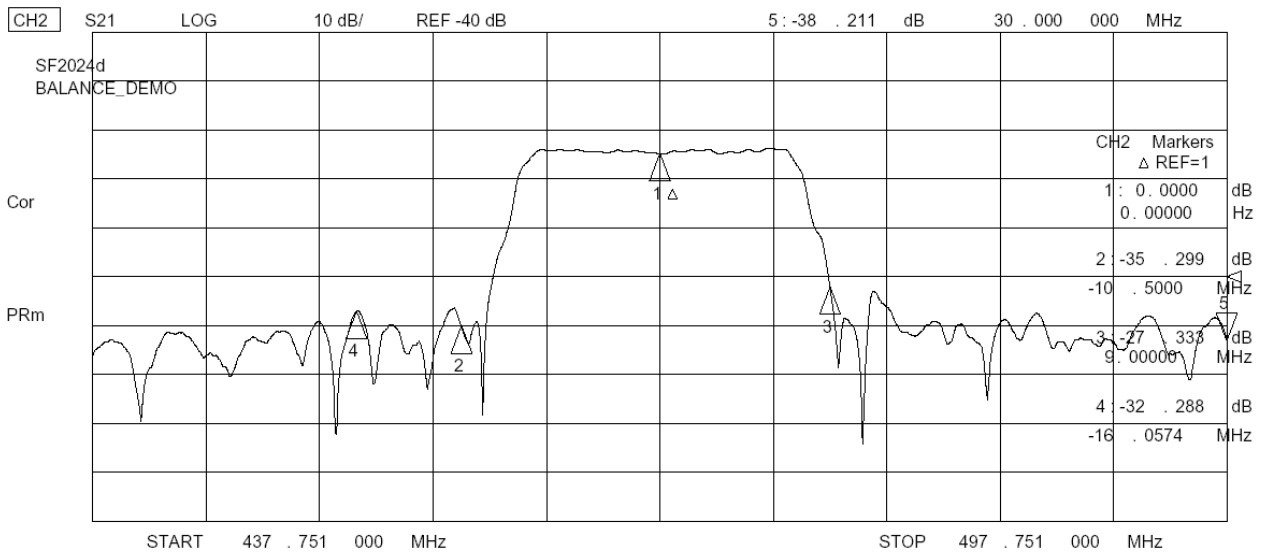
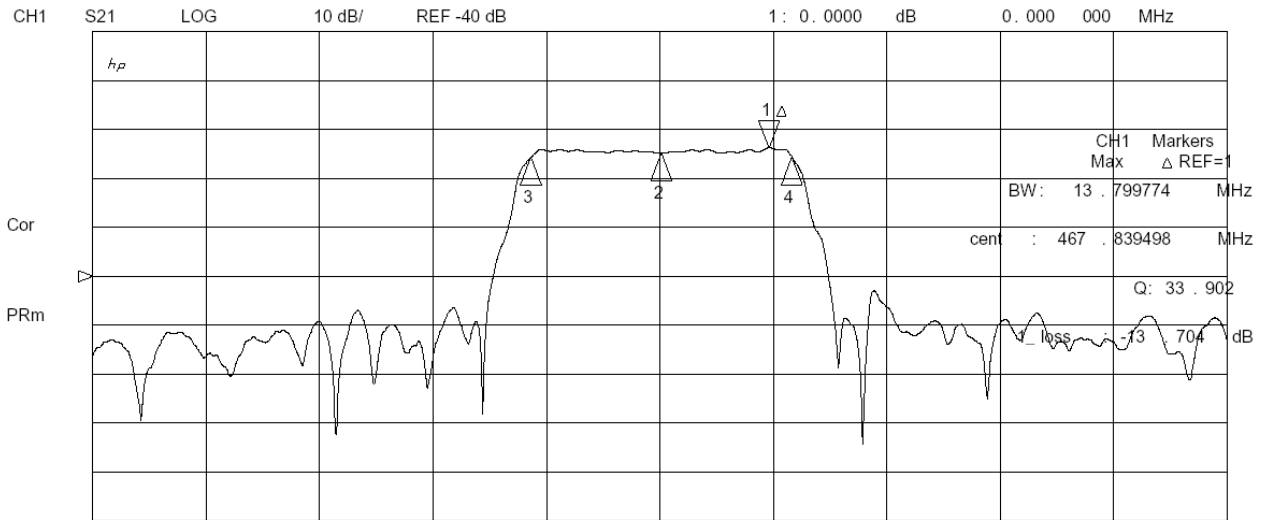
CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

NOTES:

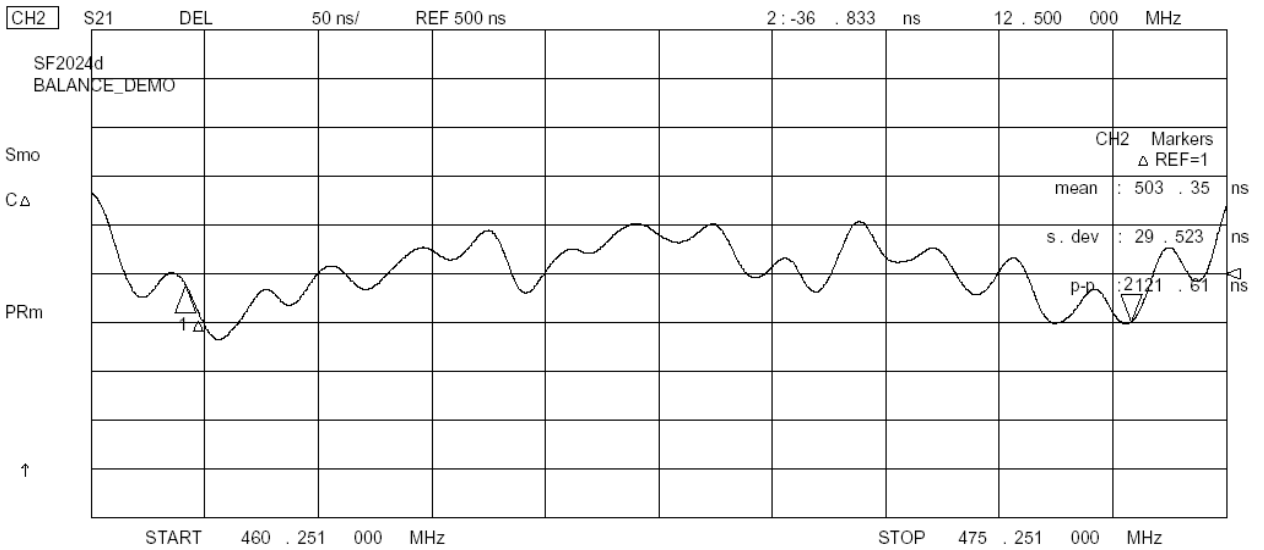
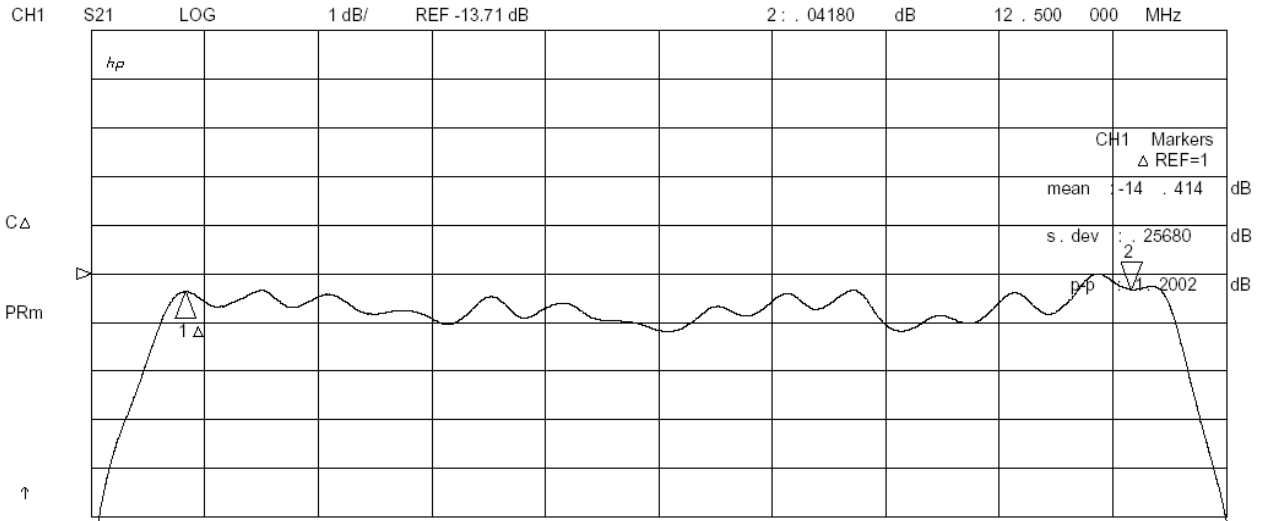
1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.



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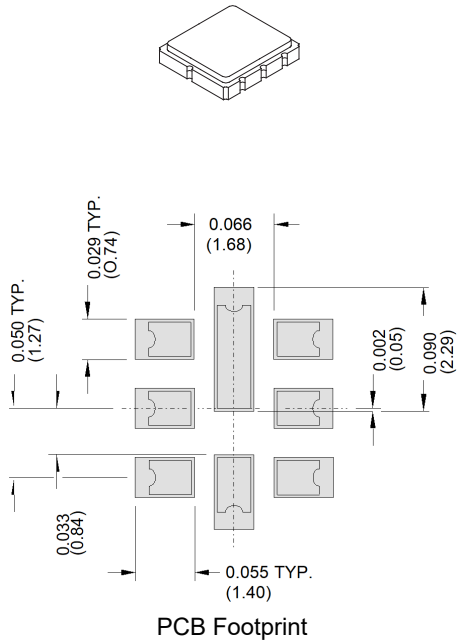
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SM3838-8 Case

8-Terminal Ceramic Surface-Mount Case

3.8 X 3.8 mm Nominal Footprint



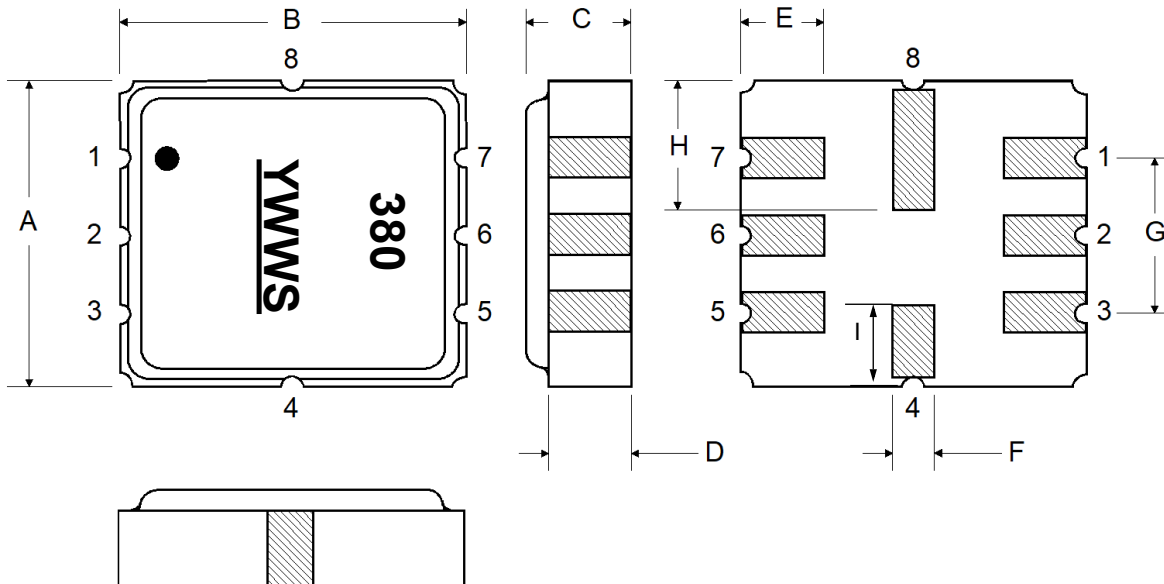
Case Dimensions						
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	3.6	3.8	4.0	0.142	0.150	0.157
B	3.6	3.8	4.0	0.142	0.150	0.157
C	1.05	1.20	1.35	0.041	0.047	0.053
D	0.95	1.10	1.25	0.037	0.043	0.049
E	0.90	1.00	1.10	0.035	0.040	0.043
F	0.50	0.60	0.70	0.020	0.024	0.028
G	2.39	2.54	2.69	0.090	0.100	0.110
H	1.40	1.75	2.05	0.055	0.069	0.080
I	0.90	1.00	1.10	0.035	0.040	0.043

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
Pb Free	

TOP VIEW

BOTTOM VIEW



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.

