

AEC-Q200

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

SF1186G-6

• RF filter designed for front end GPS applications

Absolute Maximum Ratings

Operating Temperature Range

• Low Insertion Loss

Input Power Level

Rating

DC Voltage

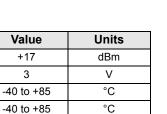
• 2.0 x 2.5 x 0.75 mm Surface Mount Case

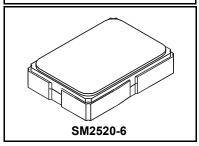
Storage Temperature Range in Tape and Reel

• Complies with Directive 2002/95/EC (RoHS)



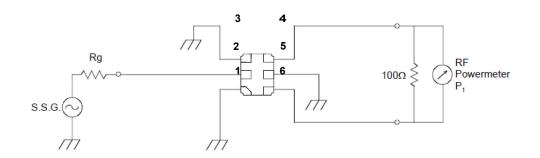
1575.5 MHz **SAW Filter**





Electrical Characteristics

Characteristic	Sym	Notes	Min	Тур	Max	Units
Center Frequency	F _C			1575.42		MHz
Insertion Loss, 1574 to 1577 MHz	IL			1.5	1.9	dB
Amplitude Ripple, 1574 to 1577 MHz				0.2	0.5	ub ub
VSWR, 1574 to 1577 MHz				1.5	1.8	
Amplitude Balance 1574 to 1577 MHz			-1.6	±1.3	+1.6	dB
Phase Balance 1574 to 1577 MHz			170	180±4	190	deg
Attenuation Referenced to 0 dB:						
100 to 1475 MHz			30	47		
1475 to 1525 MHz			15	33		dB
1625 to 1675 MHz			9	22		aB aB
1675 to 3000 MHz			30	33		1
3000 to 6000 MHz			25	30		
Case Style			SM2520-6 N	Nominal Footpri	nt	
Lid Symbolization (Y=year, WW=week, S=shift) dot = pin 1 indicator	5A, YWWS					
Standard Reel Quantity Reel Size 7 Inch	2,000 Pieces/Reel					
-	+					



Reel Size 13 Inch

Connection	Terminals
Input	2
Output	4, 6
Ground	All Others

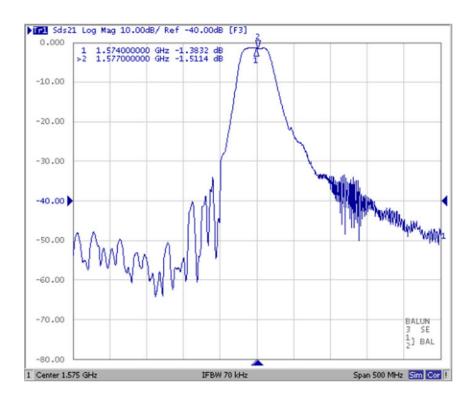
10,000 Pieces/Reel

CAUTION: Electrostatic Sensitive Device. Observe precautions for handling. NOTES:

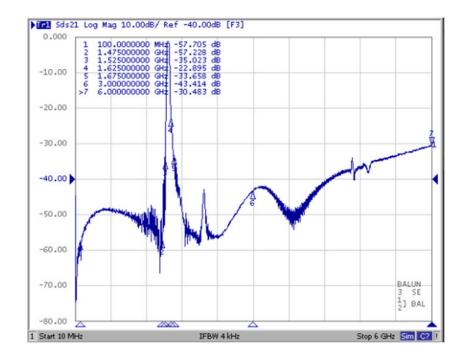
- The design, manufacturing process, and specifications of this device are subject to change.
- US or International patents may apply.

Frequency Characteristics

S21 Response (span 500 MHz)

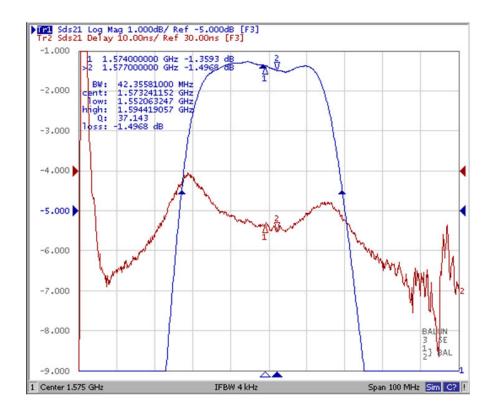


S21 Response (span 6 GHz)

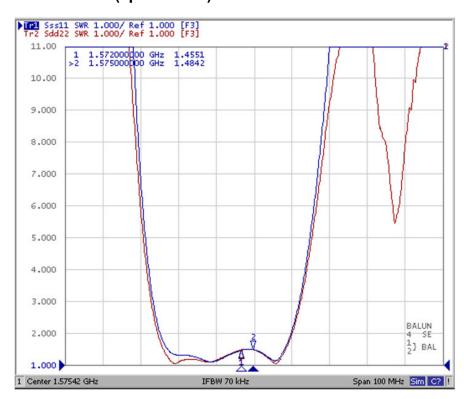


Frequency Characteristics (continued)

S21 Response (span 100 MHz)



S11 and S22 VSWR (span 6 GHz)



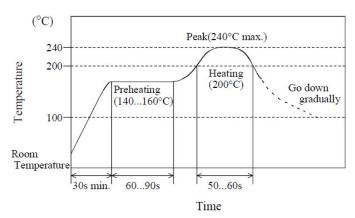
Physical and Environmental Characteristics

Test Item	Test Condition	Criteria
PCB Bend Strength	Filter is soldered onto the center of 0.8mm thickness PCB which is laid on the two small supporters spaced 90mm as shown in below figure. PCB is deflected to 2mm below from horizontal level by the pressing stick. The force is supplied for 1 second - 5 times repeatedly. Pressing Stick Unit:mm PCB At 10 PCB	No visible damage should be induced.
Vibration	The electrical performance is measured after being applied vibration of amplitude of 1.5mm with 10 to 55Hz of vibration frequency to each of 3 perpendicular directions for 2 hours.	
Drop Test	The electrical performance is measured after dropping with housing (around 100g) from a height of 150cm onto the concrete plate 3 times in each of 6 perpendicular directions.	
Solderability	Terminals are immersed in rosin flux (concentration 2025%, solvent: ethanol 7580%) for 5 seconds, then immersed in soldering bath at 230±5°C (solder: JIS-Z-3282 H63A, H60A or Sn-3.0Ag-0.5Cu) for 5±0.5 seconds.	90% minimum of the immersed surface should be covered with solder.
Resistance to Soldering Heat	Filter is preheated at 170±10°C for 90 seconds, immersed whole electrode in soldering bath at 255±5°C for 3±1seconds, then measured after being placed in standard atmospheric conditions for 2 hours.	
Humidity	The electrical performance is measured after being placed in a chamber with 9095% R.H. at 60°C for 500 hours and then being placed in standard atmospheric conditions for 2 hours.	
Life Test (High Temperature)	The electrical performance is measured after being placed in a chamber with 85°C for 500 hours and then being placed in standard atmospheric conditions for 2 hours.	
Life Test (Low Temperature)	The electrical performance is measured after being placed in a chamber with -40°C for 500 hours and then being placed in standard atmospheric conditions for 2 hours.	
Thermal Shock	After temperature cycling of -55°C for 30 minutes to +85°C for 30 minutes performed 100 times, filter shall be returned to room temperature. And the electrical performance is measured after being placed in standard atmospheric conditions for 2 hours.	
Resistance to Reflow Soldering	The electrical performance is measured after being soldered by reflow 2 times with the following reflow profile A or B and then being placed in standard atmospheric conditions for 24 hours.	

Reflow Profile

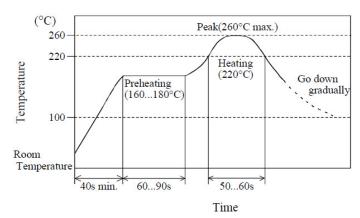
Profile A

- Preheating shall be fixed at 140...160°C for 60...90 seconds. Ascending time to preheating temperature 150°C shall be 30 seconds minimum. Heating shall be fixed at 200°C for 50...60 seconds and at 230±10°C peak.



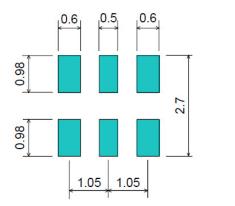
Profile B

- Preheating shall be fixed at 160...180°C for 60...90 seconds. Ascending time to preheating temperature 170°C shall be 40 seconds minimum. Heating shall be fixed at 220°C for 50...60 seconds and at 255 \pm 5°C peak. 2. 3.



Recommended Land Pattern

Recommended land pattern is as follows.



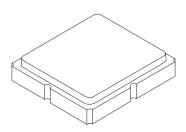
: Land Pattern

Unit: mm

SM2520-6 Case

6-Terminal Ceramic Surface-Mount Case 2.5 X 2.0 mm Nominal Footprint



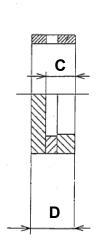


Dimension	mm			Inches			
Difficusion	Min	Nom	Max	Min	Nom	Max	
Α	-	2.00	-	-	0.078	-	
В	-	2.50	-	-	0.098	-	
С	-	0.50	-	-	0.029	-	
D	-	0.75	-	-	0.019	-	
E	-	1.00	-	1	0.039	1	
F	-	0.50	-	-	0.019	-	
G	-	0.50	-	-	0.019	-	
Н	-	0.74	-	-	0.029	-	
ı	-	0.50	-	-	0.019	-	
J	-	0.63	-	-	0.024	-	

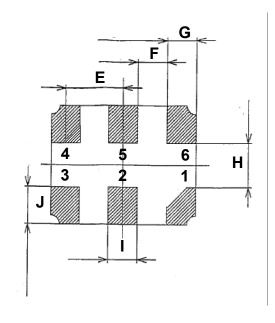
TOP VIEW

6 5 4
A 5A
YWWS

1 2 3

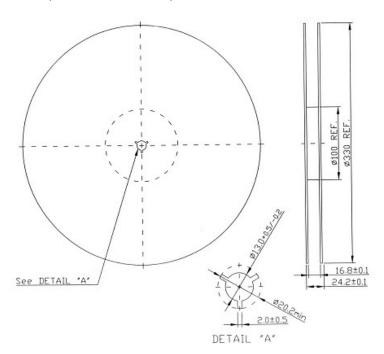


BOTTOM VIEW



Tape and Reel Specifications

Tape and Reel Standard per ANSI/EIA-481



"	'B"	Quantity Per Reel		
Inches millimeters		a.u.u.iu.y i oi iiooi		
7	178	2000		
13	330	10000		

COMPONENT ORIENTATION and DIMENSIONS

