



**THE DATASHEET OF  
SF1186G-6**



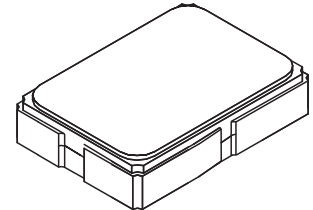
- RF filter designed for front end GPS applications
- Low Insertion Loss
- 2.0 x 2.5 x 0.75 mm Surface Mount Case
- Complies with Directive 2002/95/EC (RoHS)
- Moisture Sensitivity Level: 1
- AEC-Q200 Qualified

**Absolute Maximum Ratings**

Rating	Value	Units
Input Power Level	+17	dBm
DC Voltage	3	V
Operating Temperature Range	-40 to +85	°C
Storage Temperature Range in Tape and Reel	-40 to +85	°C

**SF1186G-6**

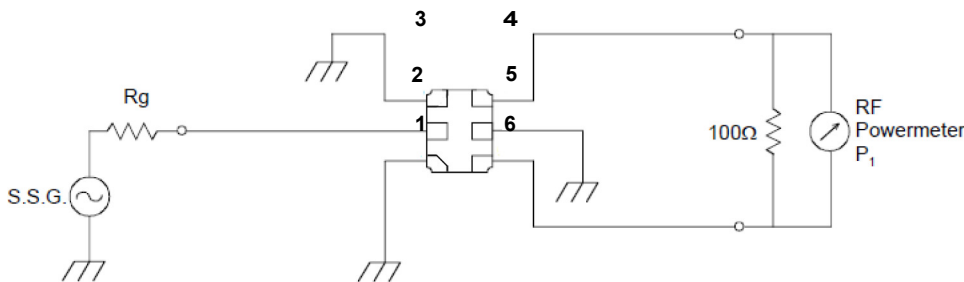
**1575.5 MHz  
SAW Filter**



**SM2520-6**

**Electrical Characteristics**

Characteristic	Sym	Notes	Min	Typ	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	
VSWR, 1574 to 1577 MHz				1.5	1.8	
Amplitude Balance 1574 to 1577 MHz			-1.6	$\pm 1.3$	+1.6	dB
Phase Balance 1574 to 1577 MHz			170	180 $\pm 4$	190	deg
Attenuation Referenced to 0 dB:						dB
100 to 1475 MHz			30	47		
1475 to 1525 MHz			15	33		
1625 to 1675 MHz			9	22		
1675 to 3000 MHz			30	33		
3000 to 6000 MHz			25	30		
Case Style	SM2520-6 Nominal Footprint					
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					10,000 Pieces/Reel



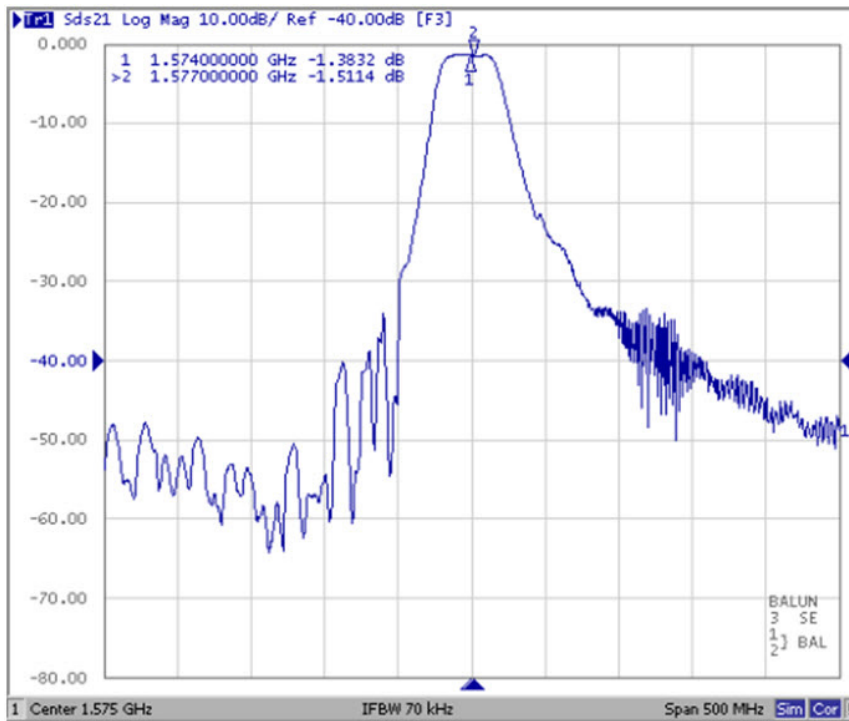
Connection	Terminals
Input	2
Output	4, 6
Ground	All Others

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

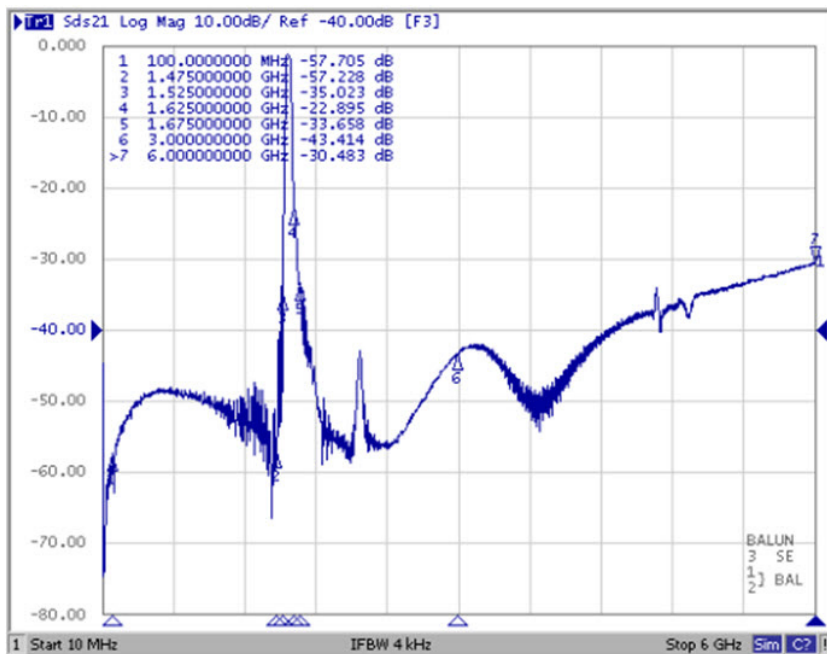
1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

# Frequency Characteristics

## S21 Response (span 500 MHz)

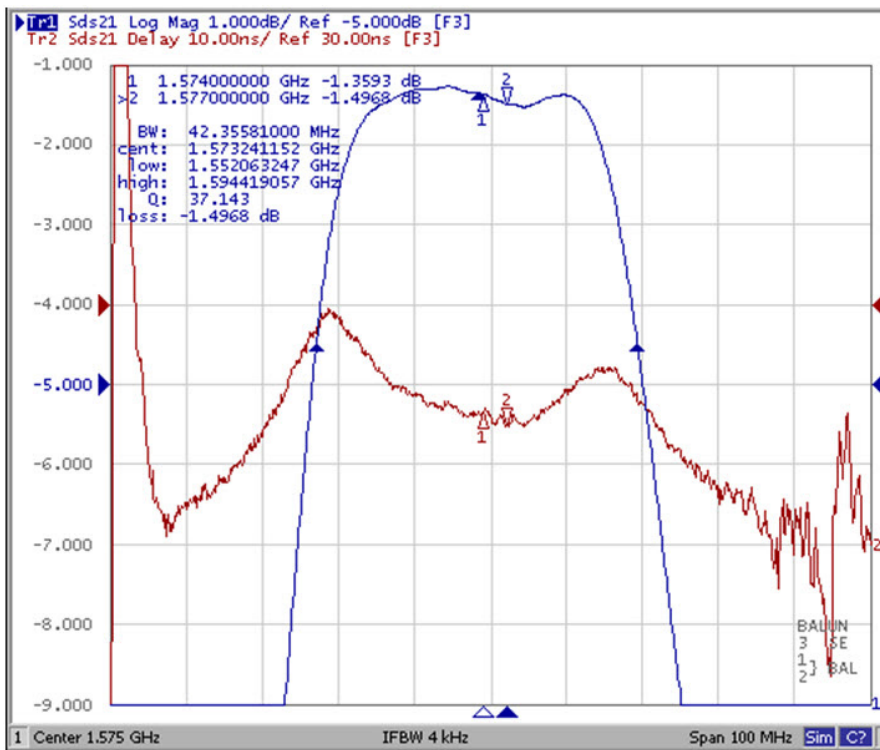


## S21 Response (span 6 GHz)

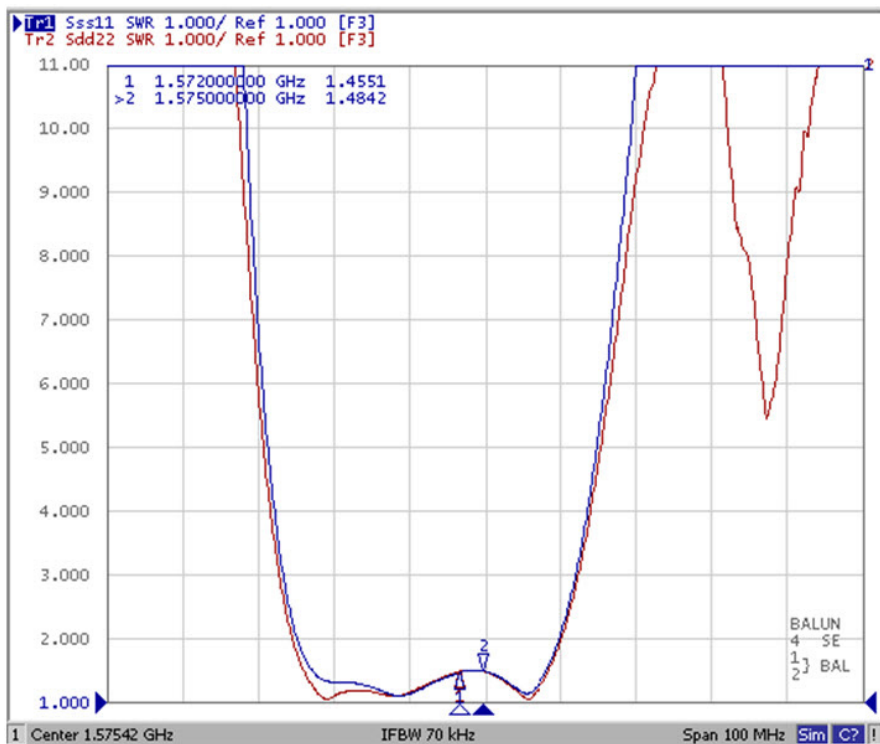


## Frequency Characteristics (continued)

### S21 Response (span 100 MHz)



### S11 and S22 VSWR (span 6 GHz)

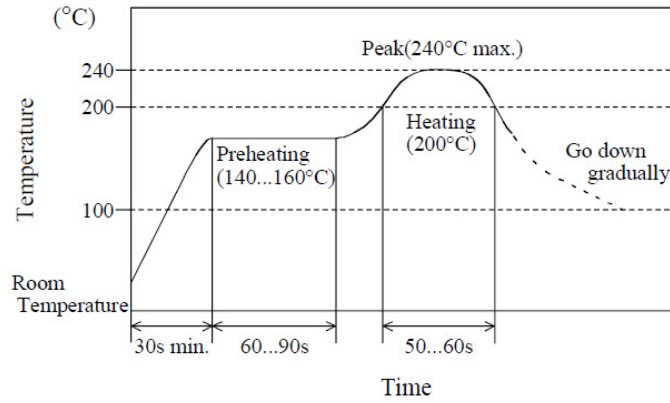




# Reflow Profile

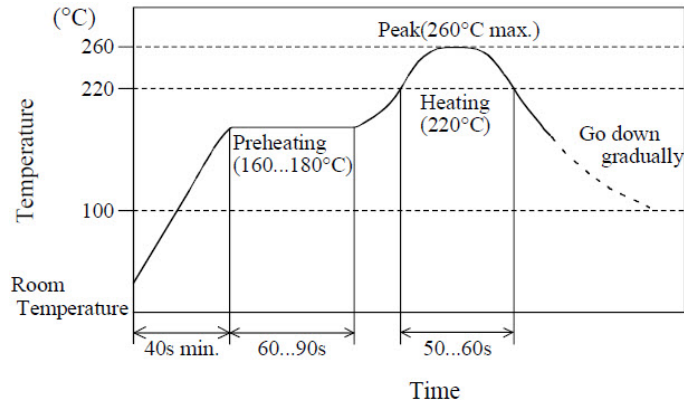
## Profile A

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



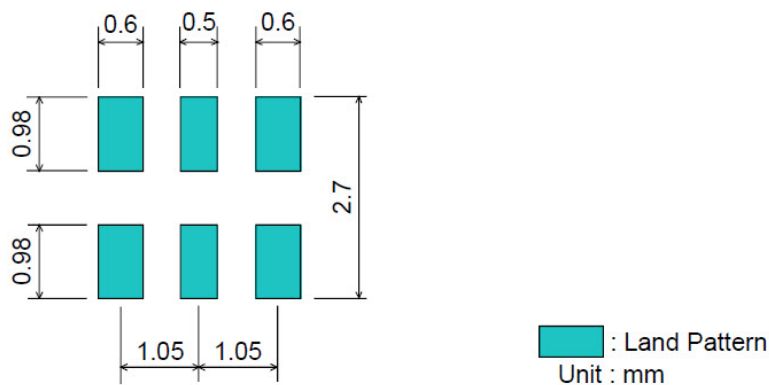
## Profile B

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



## Recommended Land Pattern

1. Recommended land pattern is as follows.

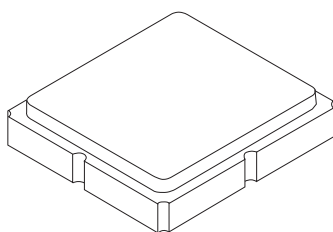


# SM2520-6 Case

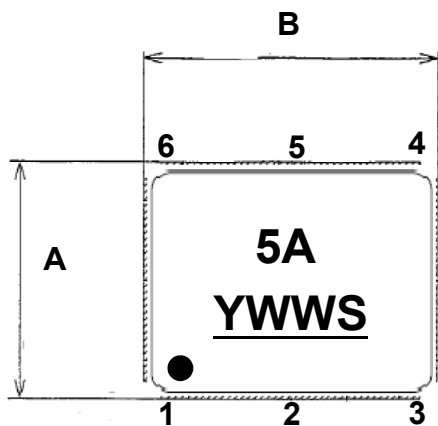
## 6-Terminal Ceramic Surface-Mount Case 2.5 X 2.0 mm Nominal Footprint

Case and PCB Footprint Dimensions

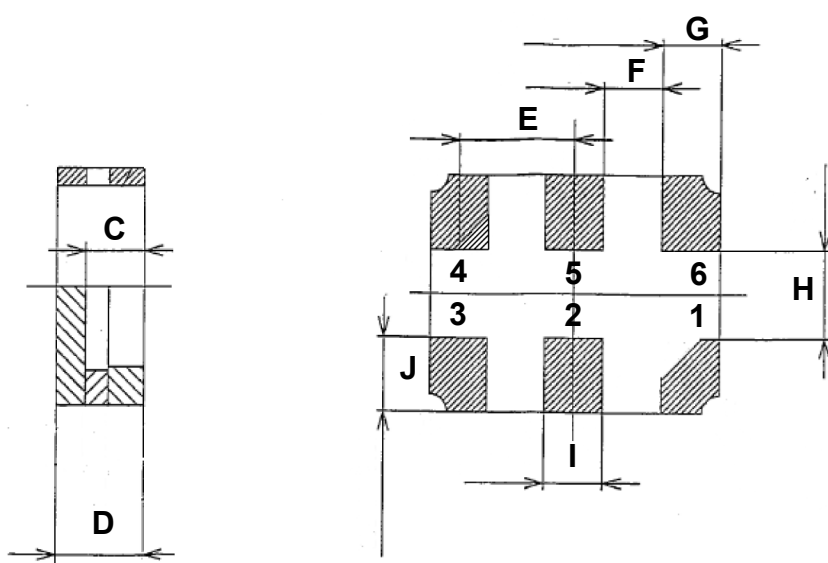
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	-	2.00	-	-	0.078	-
B	-	2.50	-	-	0.098	-
C	-	0.50	-	-	0.029	-
D	-	0.75	-	-	0.019	-
E	-	1.00	-	-	0.039	-
F	-	0.50	-	-	0.019	-
G	-	0.50	-	-	0.019	-
H	-	0.74	-	-	0.029	-
I	-	0.50	-	-	0.019	-
J	-	0.63	-	-	0.024	-



TOP VIEW

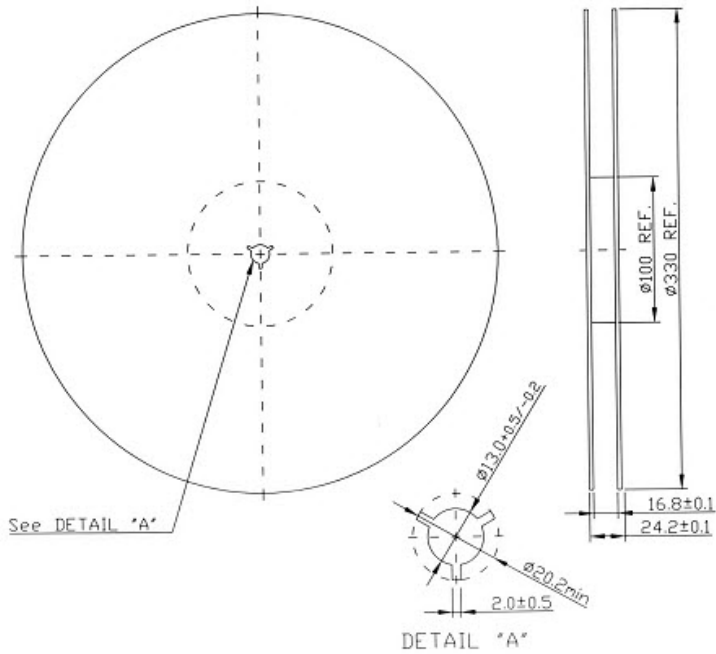


BOTTOM VIEW



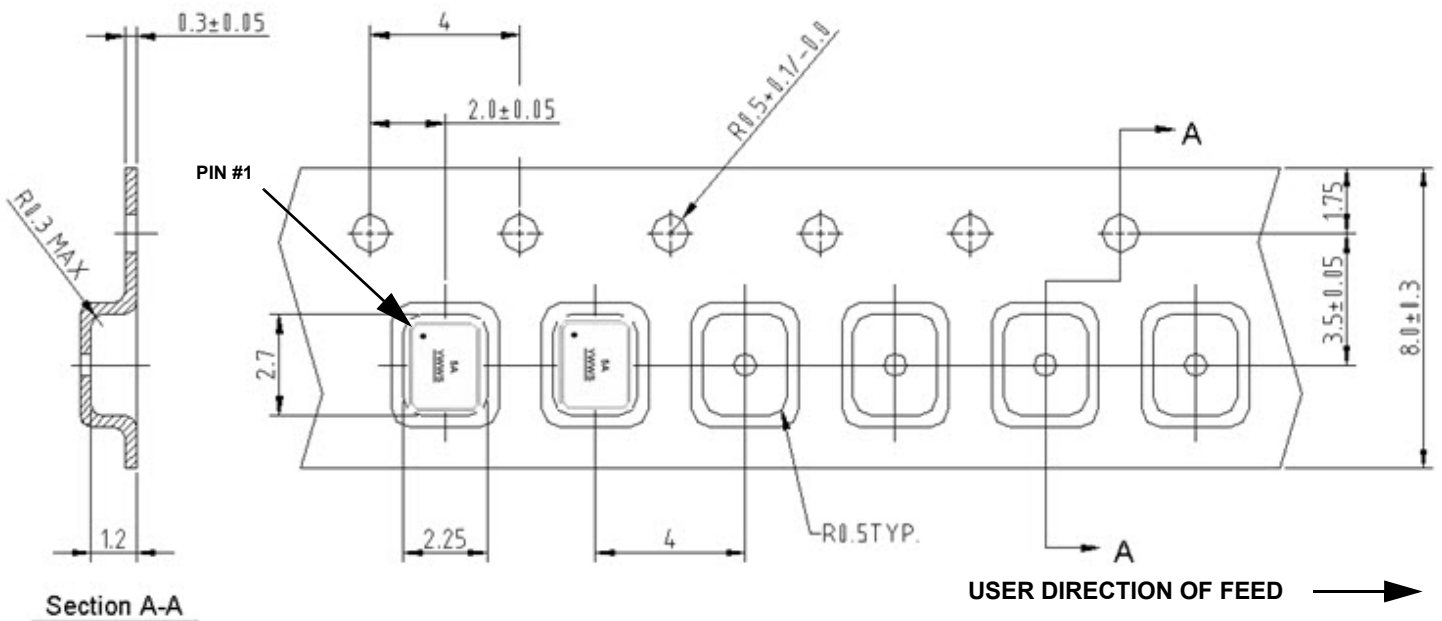
## Tape and Reel Specifications

Tape and Reel Standard per ANSI/EIA-481



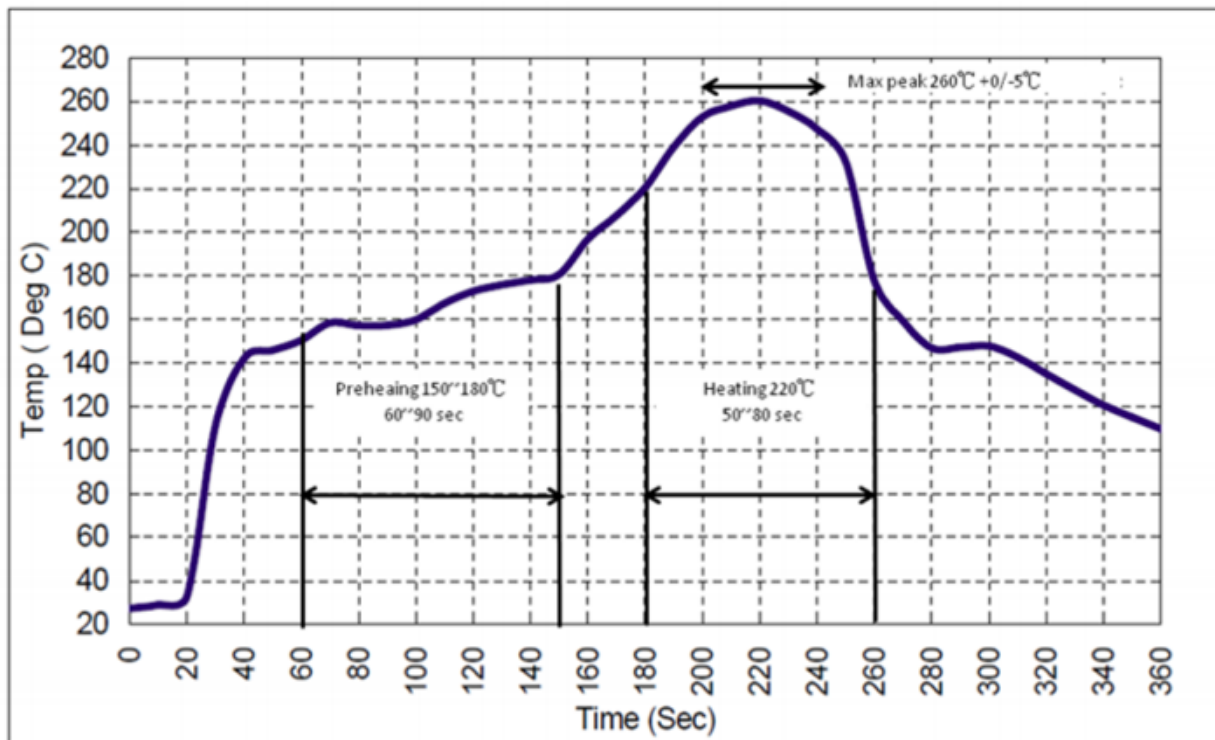
"B"		Quantity Per Reel
Inches	millimeters	
7	178	2000
13	330	10000

### COMPONENT ORIENTATION and DIMENSIONS





## 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.



## Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

-  [View SF1186G-6 on WIN SOURCE](#)
-  [RF Monolithics, Inc Information](#)

## Optimize Your Supply Chain with WIN SOURCE Solutions

-  Global Sourcing Solution
-  Obsolete Management
-  Cost Control Management
-  Shortage Management
-  Alternative Solution
-  Excess Inventory Management