

SM3030-6

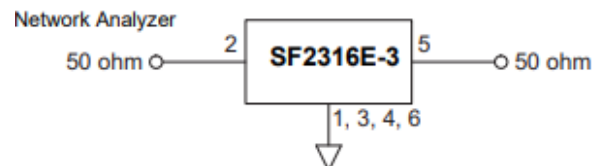
- Low-loss 1582 MHz SAW Filter
- Designed for 50 ohm Source/Load
- Operable Temperature Range -45°/125°C
- Complies with Directive 2002/95/EC (RoHS)
- Moisture Sensitivity Level: 1
- AEC-Q200 Qualified

Absolute Maximum Ratings	Value	Units
Input Power Level	+10	dBm
DC Voltage on any Non-ground Terminal	3	V
Operable Temperature Range	-45 to +125	°C
Specification Temperature Range	-40 to +105	°C
Storage Temperature Range in Tape and Reel	-40 to +85	°C

Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units			
Center Frequency	f_c			1583		MHz			
3db Bandwidth				60					
Insertion Loss, 1560 to 1606 MHz	IL	(-40 to +85°C)		2.0	3.0	dB			
		(-40 to +105°C)		2.0	3.2				
Return Loss				10		dB			
GD Ripple, 1560 to 1606 MHz				15.0	35.0	ns			
				1573.374 to 1577.466 MHz	5.0		10.0		
				1597.551 to 1605.886 MHz	5.0		17.0		
Amplitude Ripple, 1560 to 1606 MHz				0.9	2.0	dB			
				(-40 to +105°C)	0.9		2.5		
Attenuation,						dB			
							1 to 960 MHz	32	37
							1427 to 1501 MHz	35	45
							1501 to 1525 MHz	30	37
							1626 to 1660 MHz	30	43
							1710 to 1785 MHz	35	40
							1850 to 1910 MHz	35	41
							1920 to 1980 MHz	35	42
							2110 to 2170 MHz	35	44
							2400 to 2570 MHz	40	46
							2570 to 4000 MHz		18
4000 to 6000 MHz		4.5							
Case Style	SMD 3.0 x 3.0 mm Nominal Footprint								
Lid Symbolization (Y=year, WW=week, S=shift) dot=pin 1 indicator	9D, <u>YWWS</u>								

Measurement Circuit



Electrical Connections

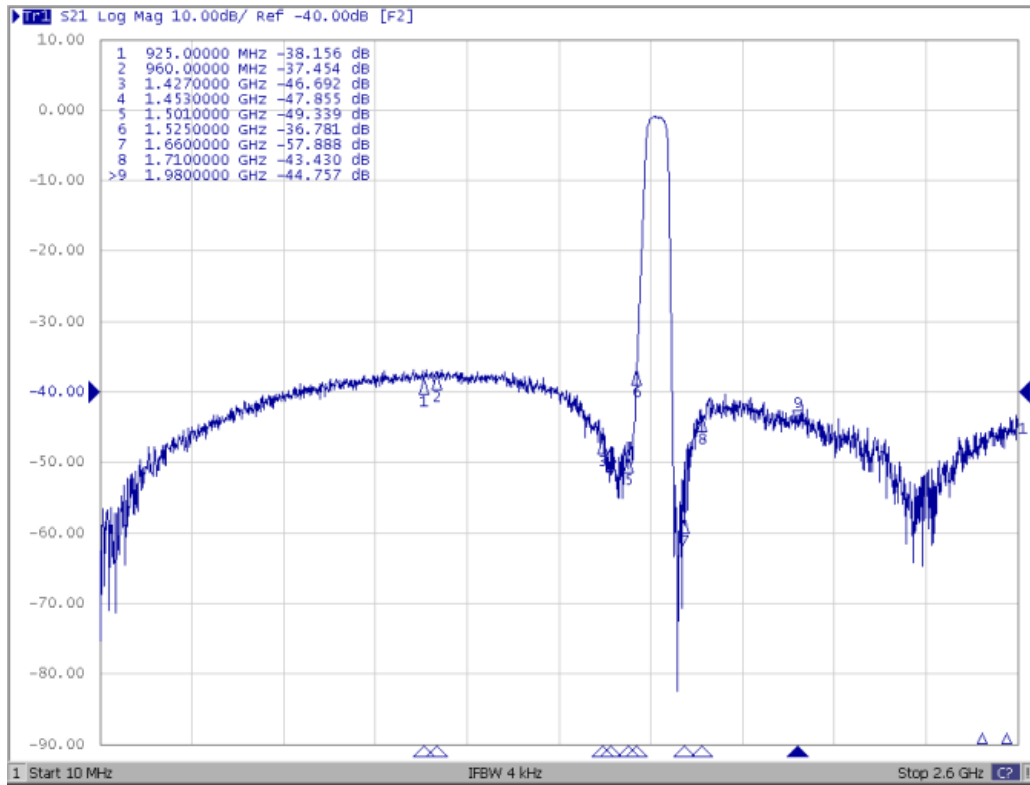
Connection	Terminals
Input	2
Output	5
Ground	All Others

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

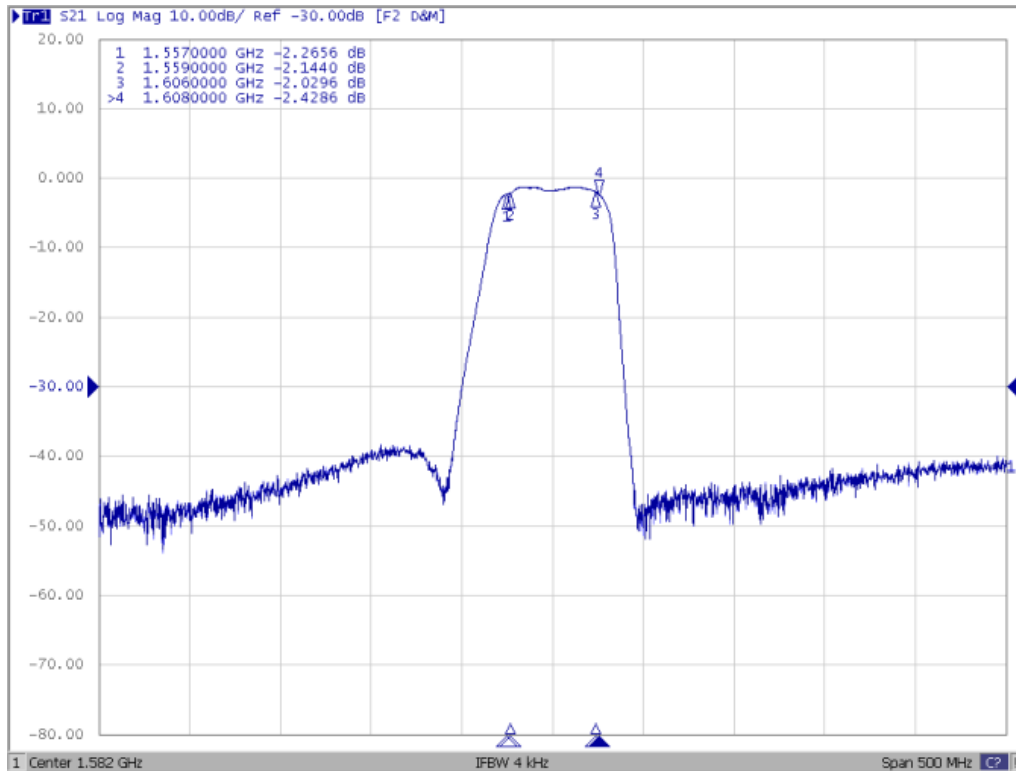
NOTES:

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.

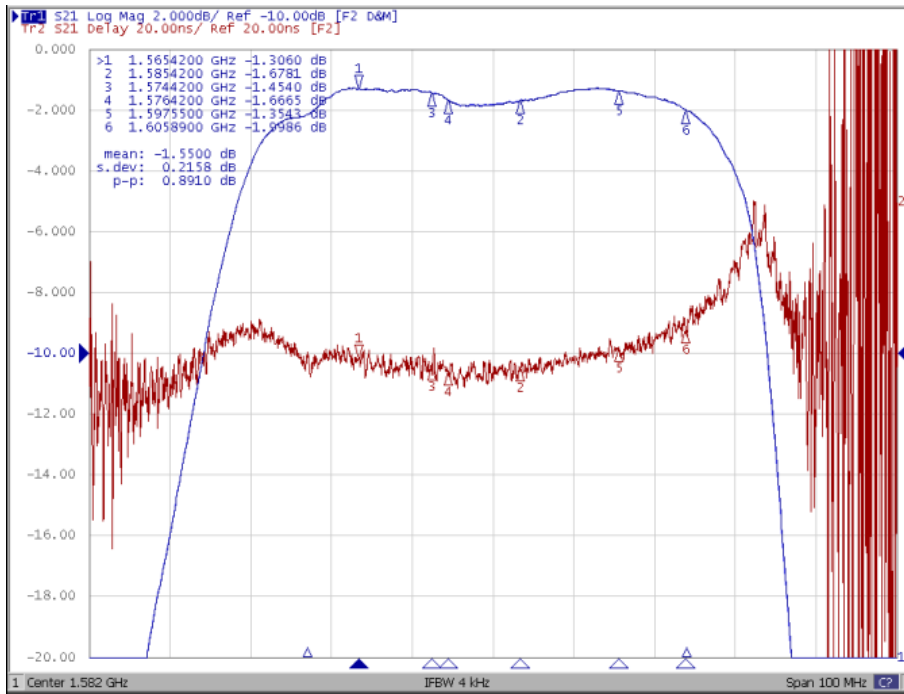
Frequency Characteristics: S21 response: (span 2.6 GHz)



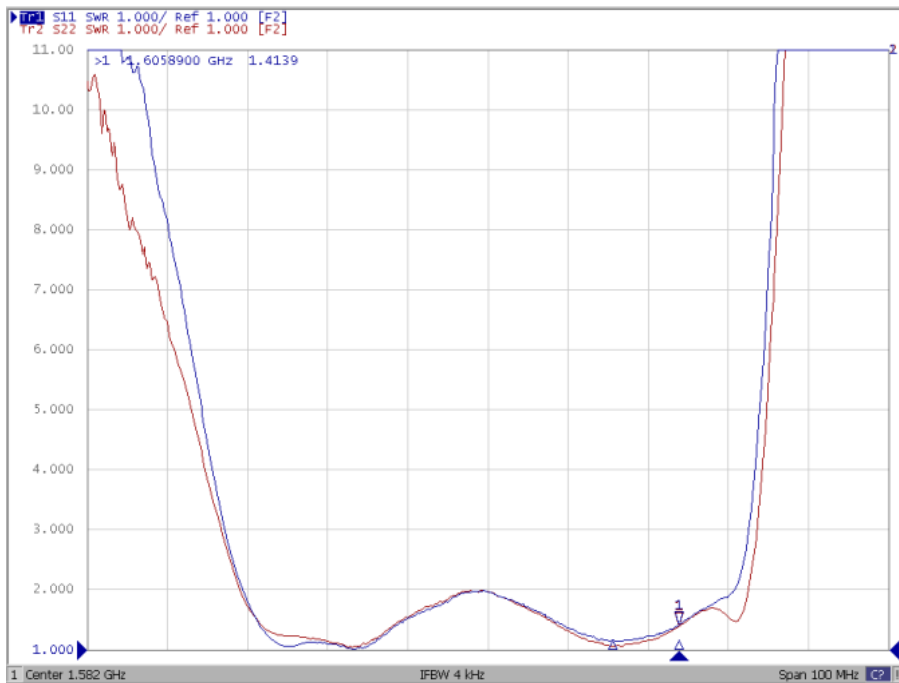
S21 response: (span 500 MHz)

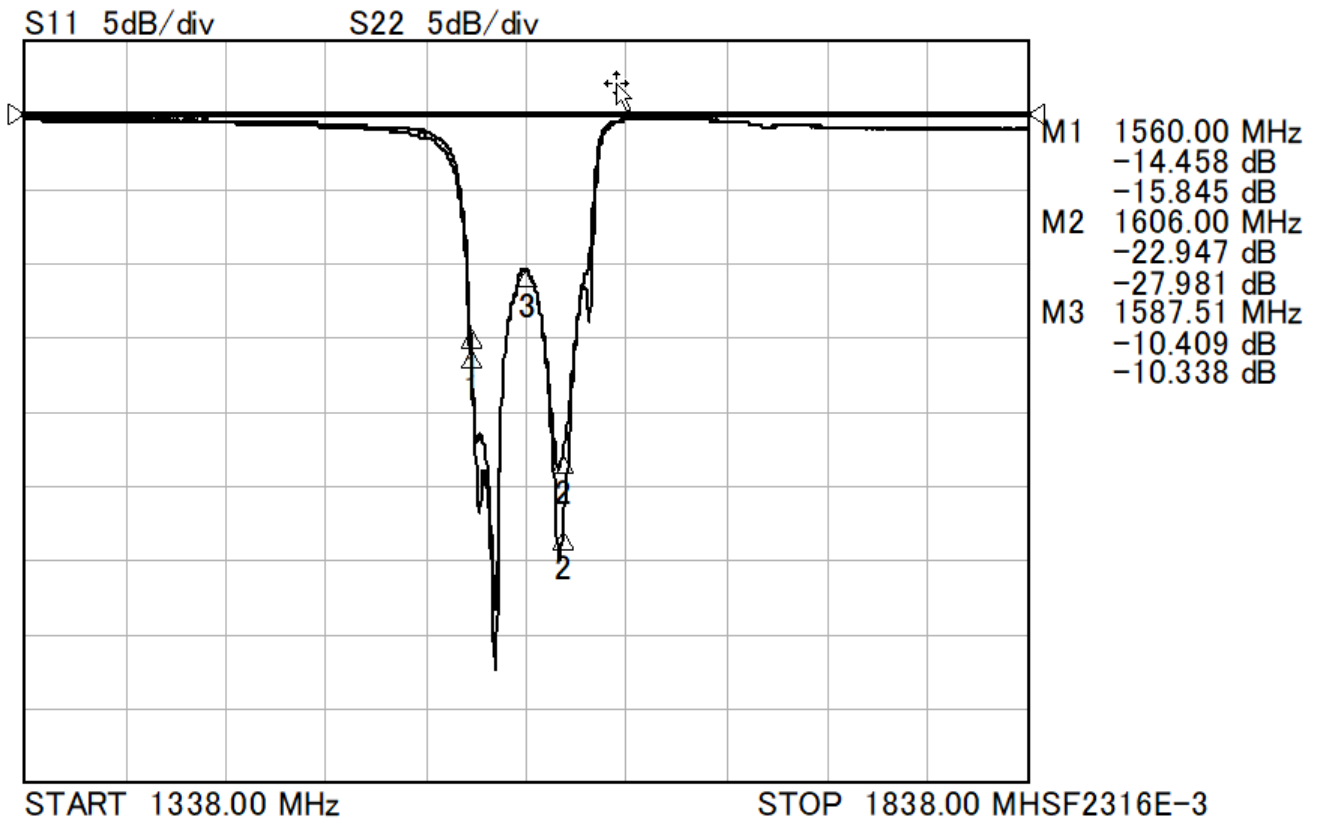
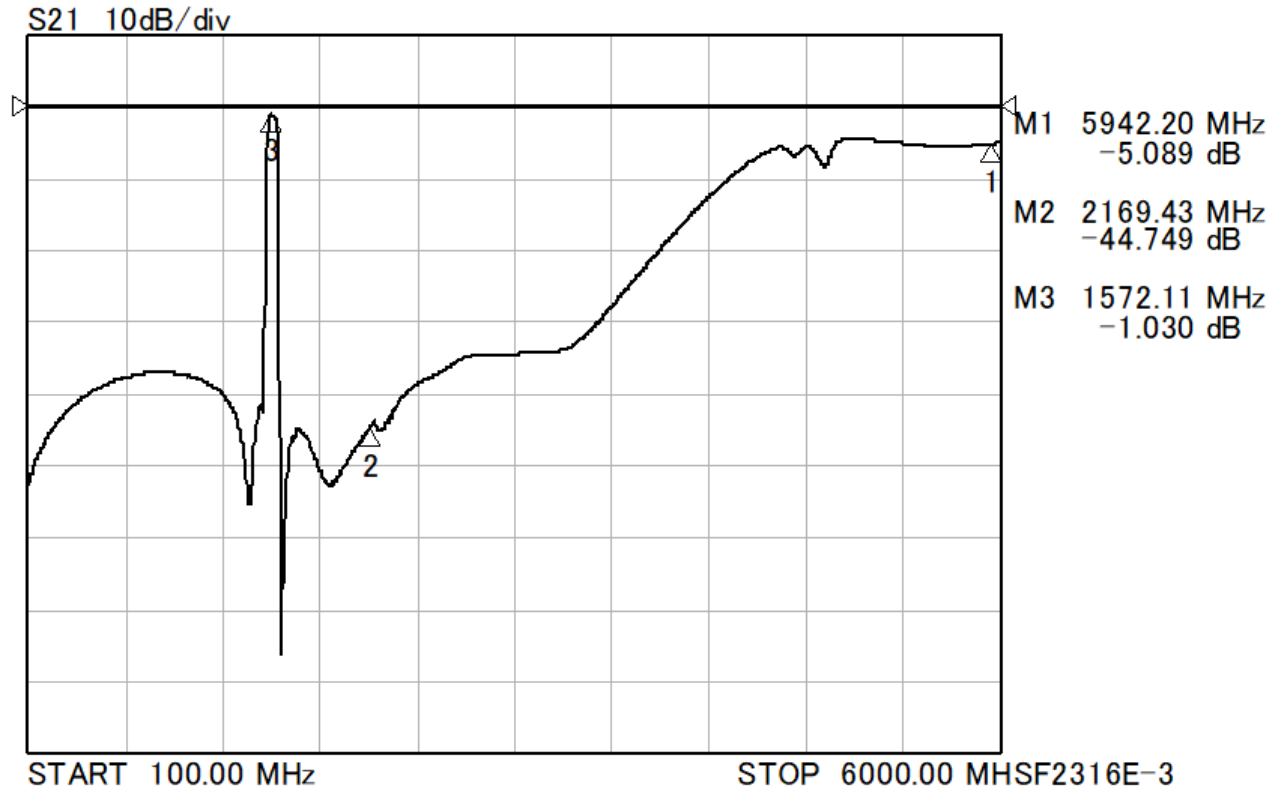


S21 response: (span 100 MHz)

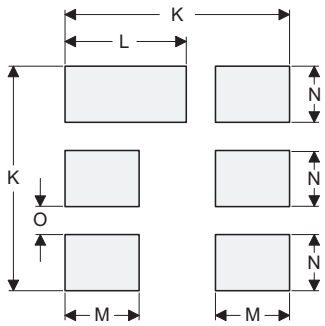
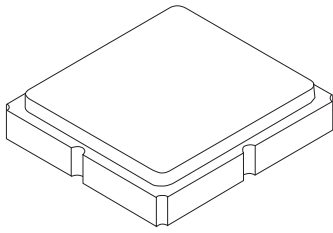


S11 and S22VSWR: (span 100 MHz)





SM3030-6 Ceramic 6-Terminal Surface-Mount Case 3.0 X 3.0 mm Nominal Footprint



PCB Footprint Top View

Case and PCB Footprint Dimensions

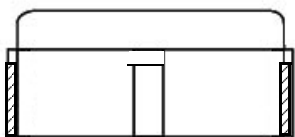
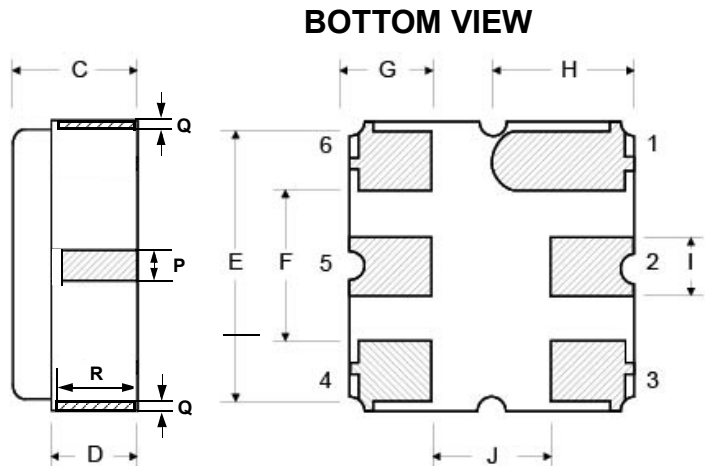
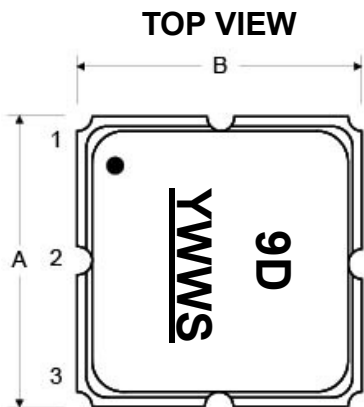
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	2.87	3.00	3.13	0.113	0.118	0.123
B	2.87	3.00	3.13	0.113	0.118	0.123
C	1.12	1.25	1.38	0.044	0.049	0.054
D	0.77	0.90	1.03	0.030	0.035	0.040
E	2.67	2.80	2.93	0.105	0.110	0.115
F	1.47	1.60	1.73	0.058	0.063	0.068
G	0.72	0.85	0.98	0.028	0.033	0.038
H	1.37	1.50	1.63	0.054	0.059	0.064
I	0.47	0.60	0.73	0.019	0.024	0.029
J	1.17	1.30	1.43	0.046	0.051	0.056
K		3.20			0.126	
L		1.70			0.067	
M		1.05			0.041	
N		0.81			0.032	
O		0.38			0.015	
P	0.15	0.30	0.45	0.005	0.011	0.017
Q	0.07	0.20	0.36	0.002	0.007	0.014
R	0.62	0.7	0.78	0.024	0.027	0.030

Case Materials

Materials	
Solder Pad Plating	0.3 to 1.0 μm Gold over 1.27 to 8.89 μm Nickel
Lid Plating	2.0 to 3.0 μm Nickel
Body	Al_2O_3 Ceramic

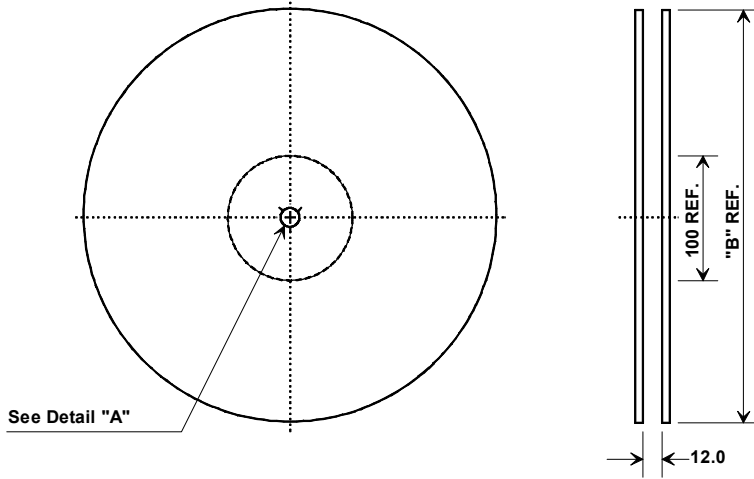
Electrical Connections

Connection	Terminals
Input	2
Output	5
Case Ground	All others

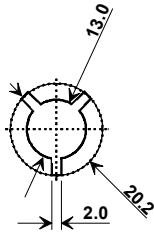


Tape and Reel Specifications

Tape and Reel Standard per ANSI/EIA-481

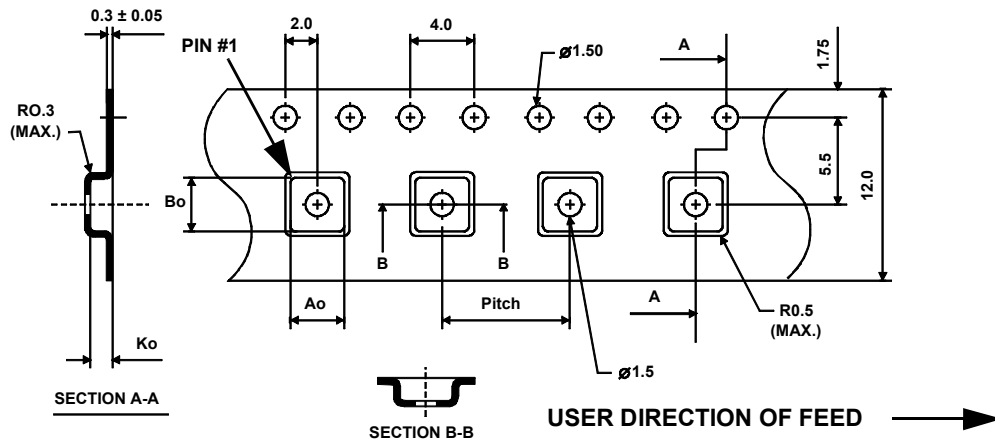


"B"		Quantity Per Reel
Inches	millimeters	
7	178	500
13	330	3000



COMPONENT ORIENTATION and DIMENSIONS

Carrier Tape Dimensions	
Ao	3.35 mm
Bo	3.35 mm
Ko	1.40 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.

