

SM3030-6

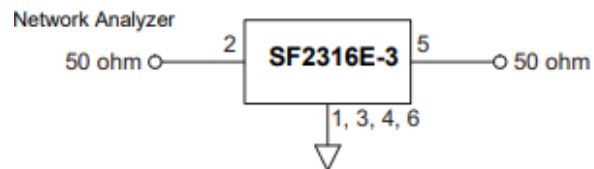
- **Low-loss 1582 MHz SAW Filter**
- **Designed for 50 ohm Source/Load**
- **Operable Temperature Range -45°/125°C**
- **Complies with Directive 2002/95/EC (RoHS)**
- **Moisture Sensitivity Level: 1**
- **AEC-Q200 Qualified**

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 (-40 to +85°C) (-40 to +105°C)	IL			2.0	3.0	dB
				2.0	3.2	
Return Loss				10		dB
GD Ripple, 1560 to 1606 MHz 1573.374 to 1577.466 MHz 1597.551 to 1605.886 MHz				15.0	35.0	ns
				5.0	10.0	
				5.0	17.0	
Amplitude Ripple, 1560 to 1606 MHz (-40 to +85°C) (-40 to +105°C)				0.9	2.0	dB
				0.9	2.5	
Attenuation, 1 to 960 MHz 1427 to 1501 MHz 1501 to 1525 MHz 1626 to 1660 MHz 1710 to 1785 MHz 1850 to 1910 MHz 1920 to 1980 MHz 2110 to 2170 MHz 2400 to 2570 MHz 2570 to 4000 MHz 4000 to 6000 MHz				32	37	dB
				35	45	
				30	37	
				30	43	
				35	40	
				35	41	
				35	42	
				35	44	
				40	46	
				18		
				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

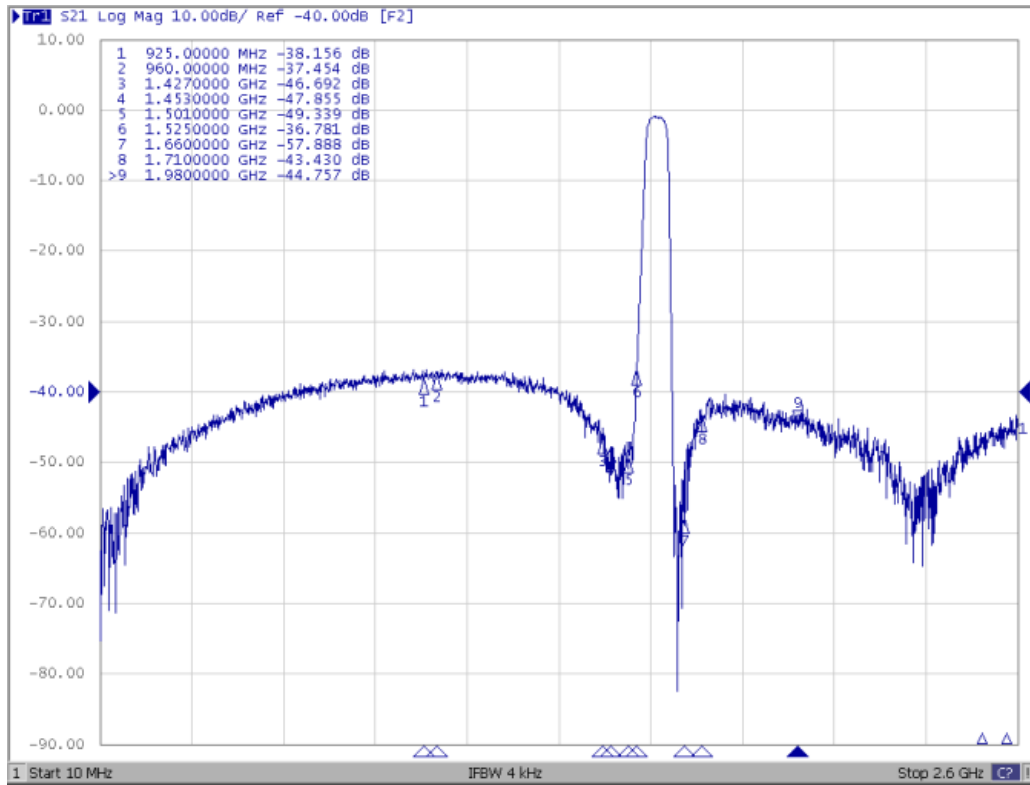


CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

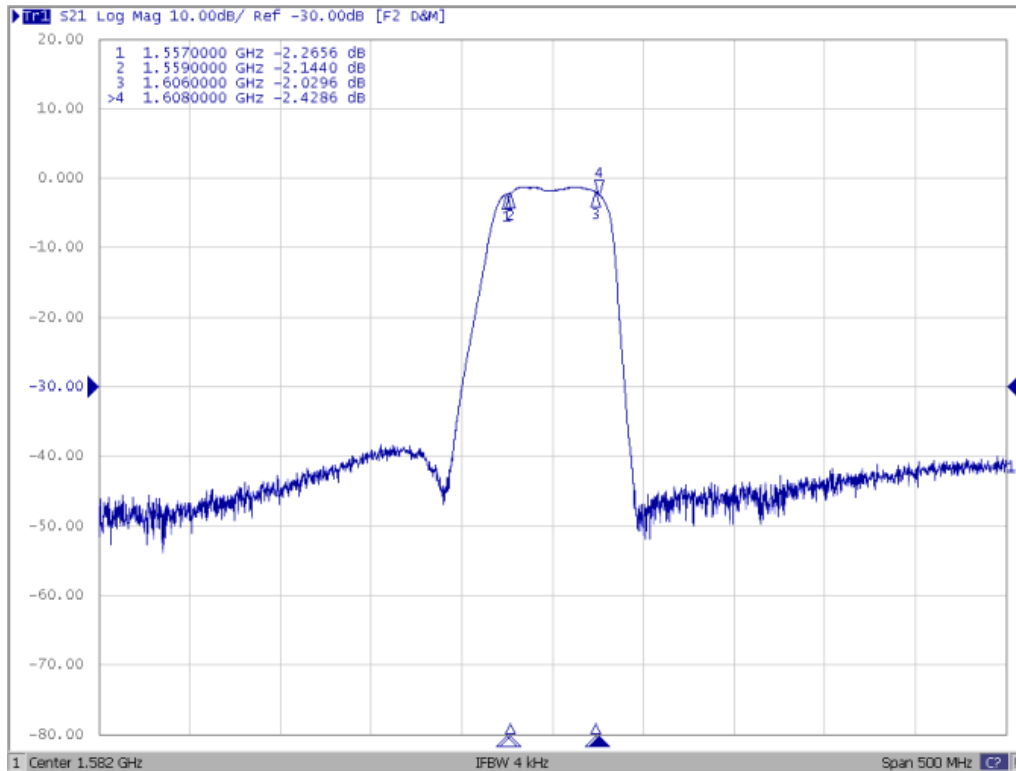
NOTES:

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.

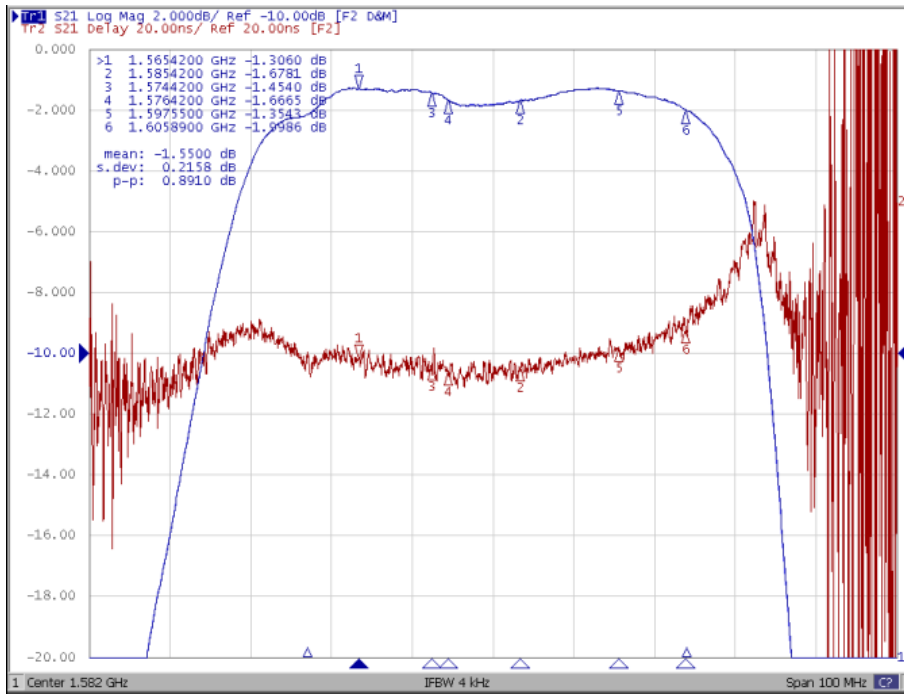
Frequency Characteristics: S21 response: (span 2.6 GHz)



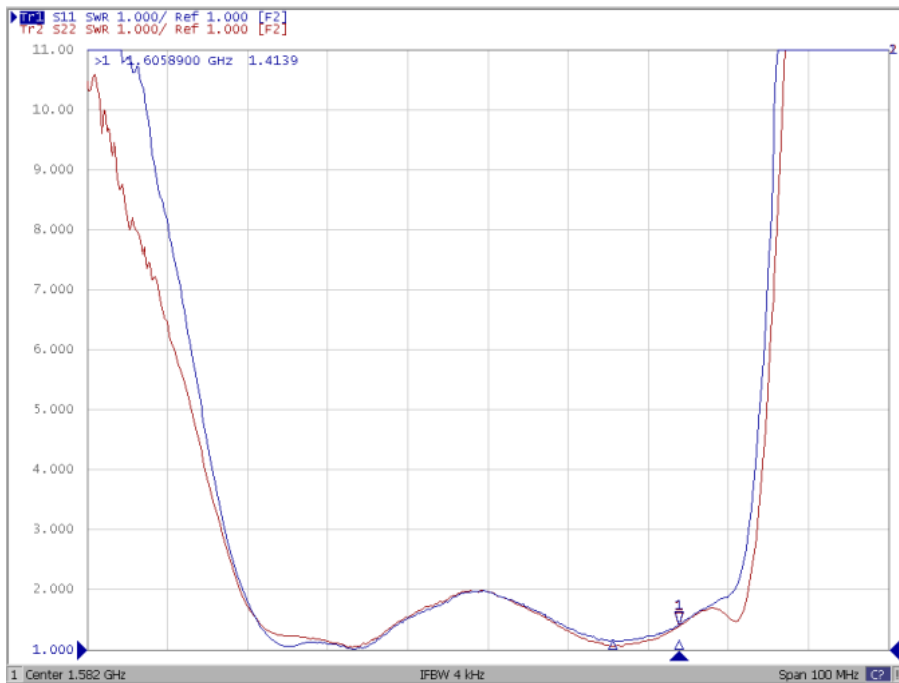
S21 response: (span 500 MHz)

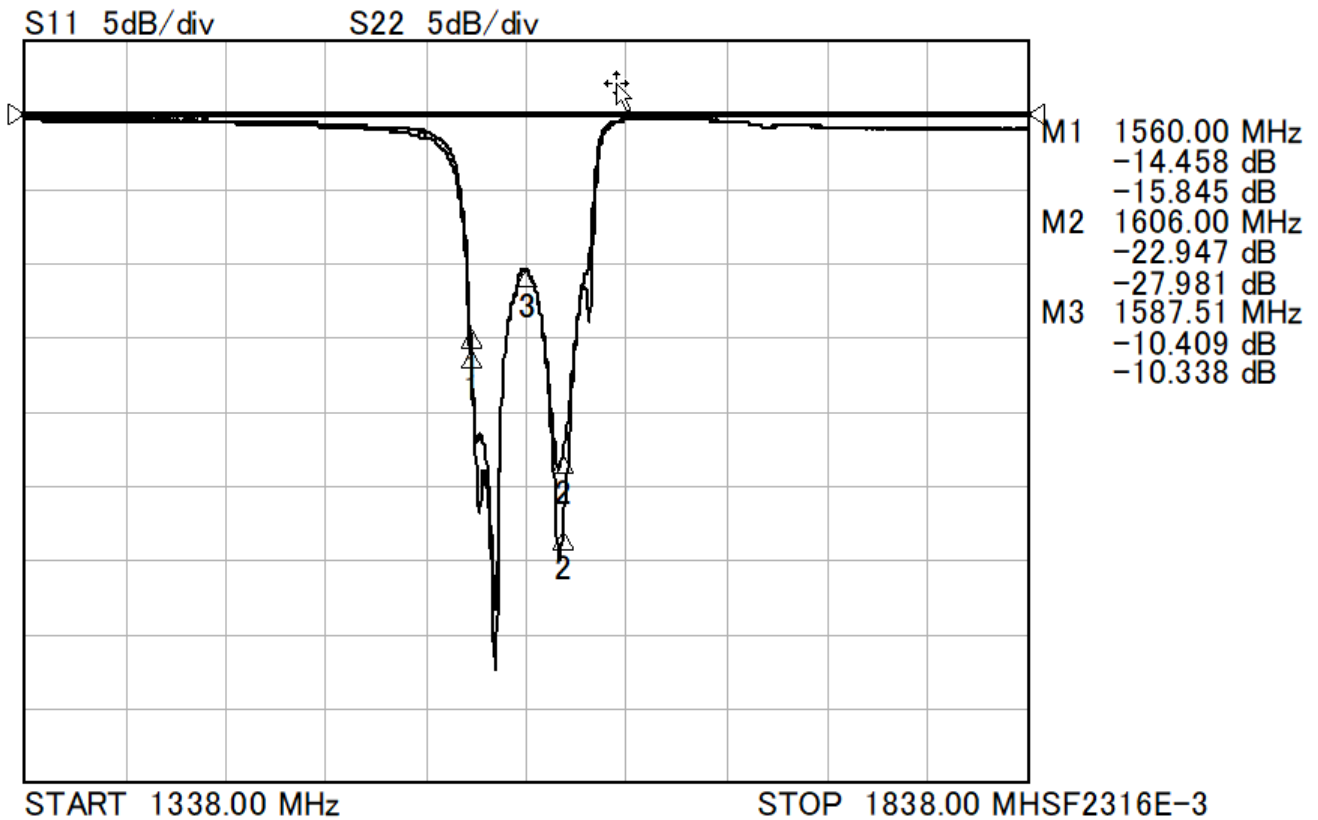
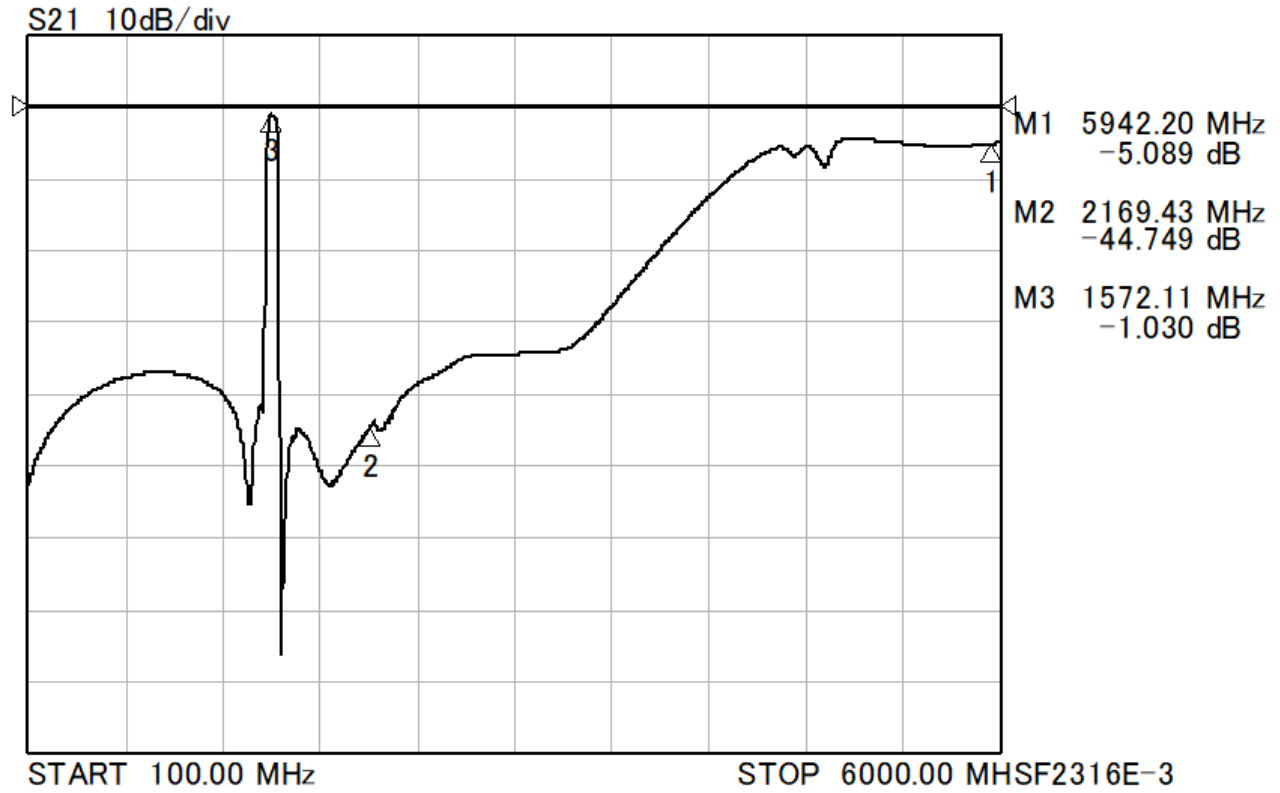


S21 response: (span 100 MHz)

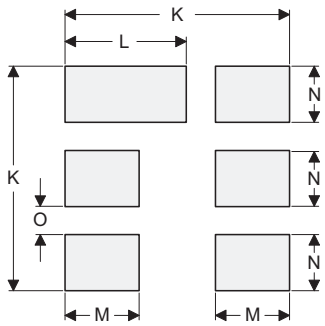
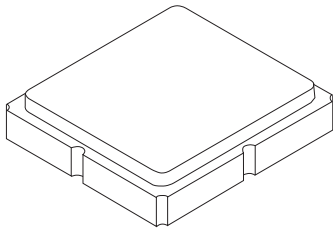


S11 and S22VSWR: (span 100 MHz)





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

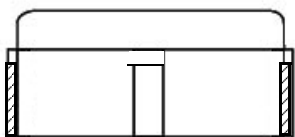
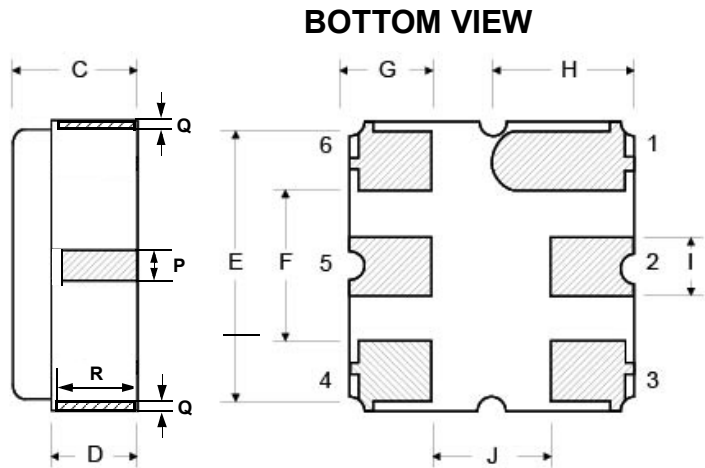
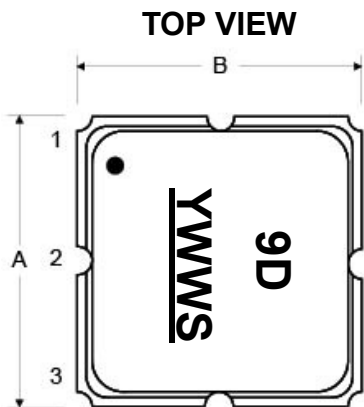
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	2.87	3.00	3.13	0.113	0.118	0.123
B	2.87	3.00	3.13	0.113	0.118	0.123
C	1.12	1.25	1.38	0.044	0.049	0.054
D	0.77	0.90	1.03	0.030	0.035	0.040
E	2.67	2.80	2.93	0.105	0.110	0.115
F	1.47	1.60	1.73	0.058	0.063	0.068
G	0.72	0.85	0.98	0.028	0.033	0.038
H	1.37	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

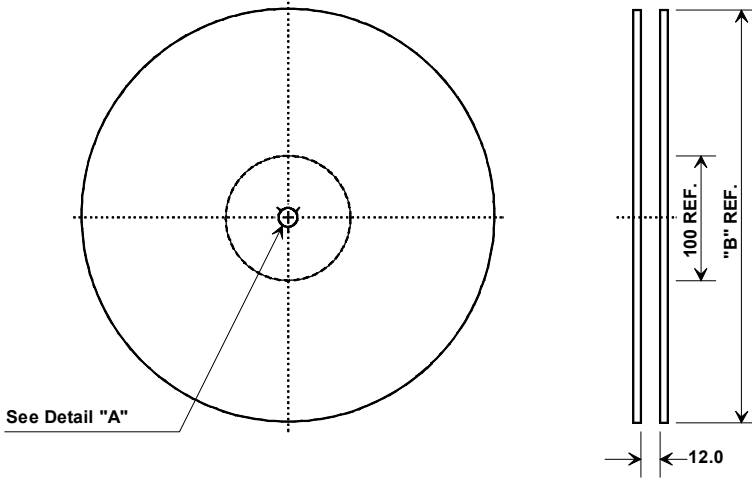
Electrical Connections

Connection	Terminals
Input	2
Output	5
Case Ground	All others

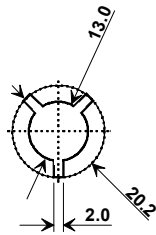


Tape and Reel Specifications

Tape and Reel Standard per ANSI/EIA-481

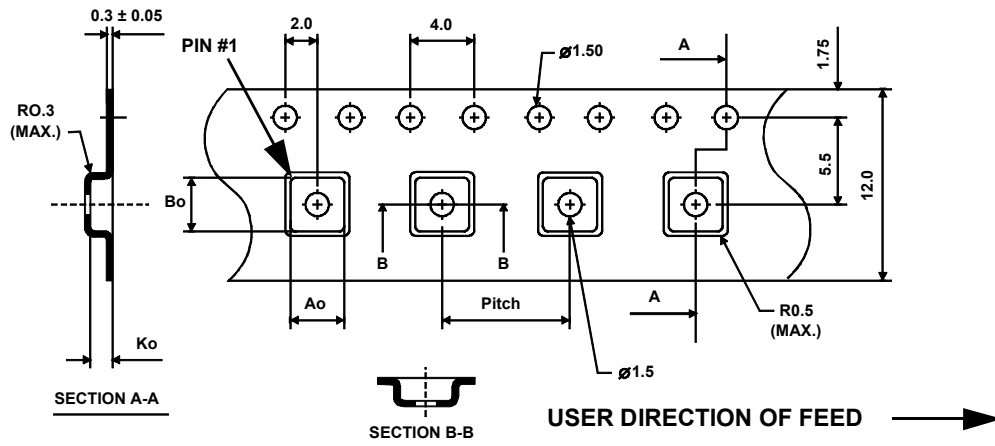


"B"		Quantity Per Reel
Inches	millimeters	
7	178	500
13	330	3000



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.

