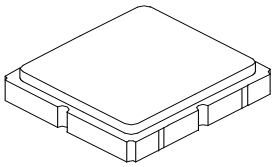
SF2316E-3

1583 MHz SAW Filter

- ***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)**
- **AEC-Q200 Qualified**

RoHS Compliant



SM3030-6

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

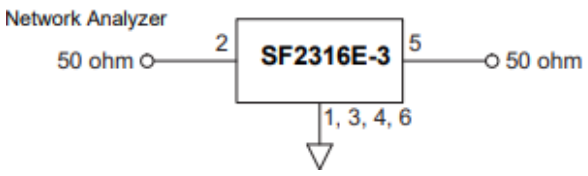
Electrical Characteristics

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)	IL			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 (-40 to +85°C)				0.9	2.0	dB
(-40 to +105°C)				0.9	2.5	
Attenuation,						dB
1 to 960 MHz			32	37		
1427 to1501 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, YWWS					

Electrical Connections

Connection	Terminals
Input	2
Output	5
Ground	All Others

Measurement Circuit



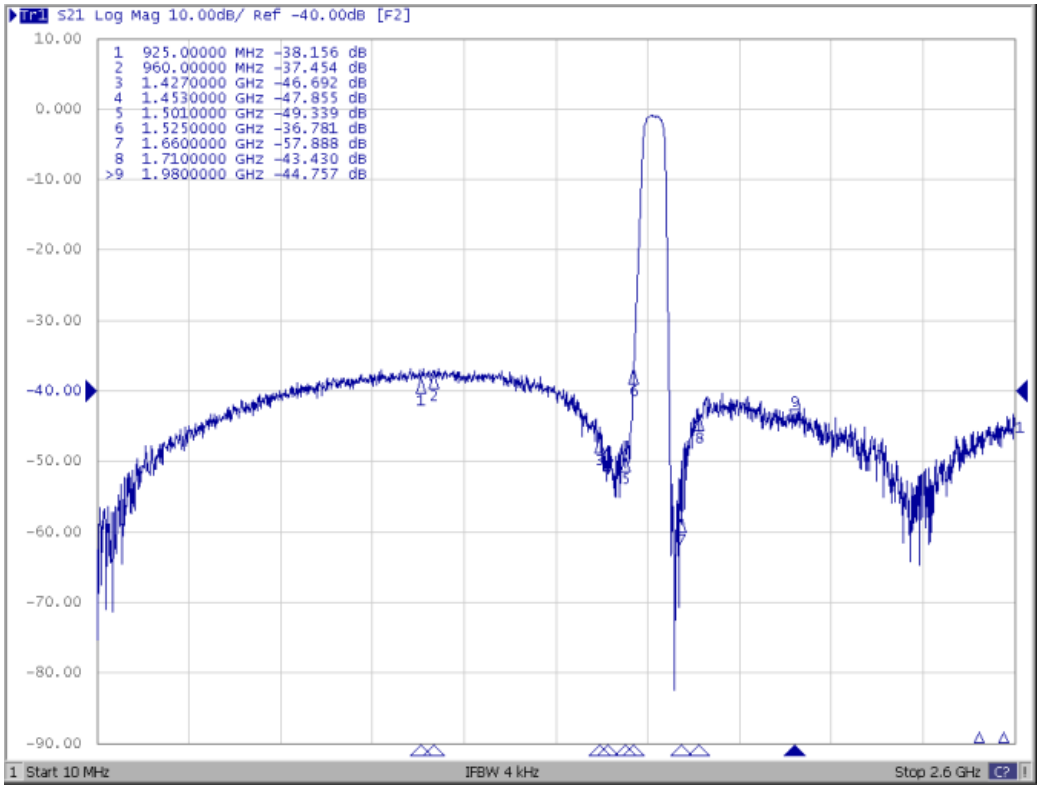
CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

NOTES:

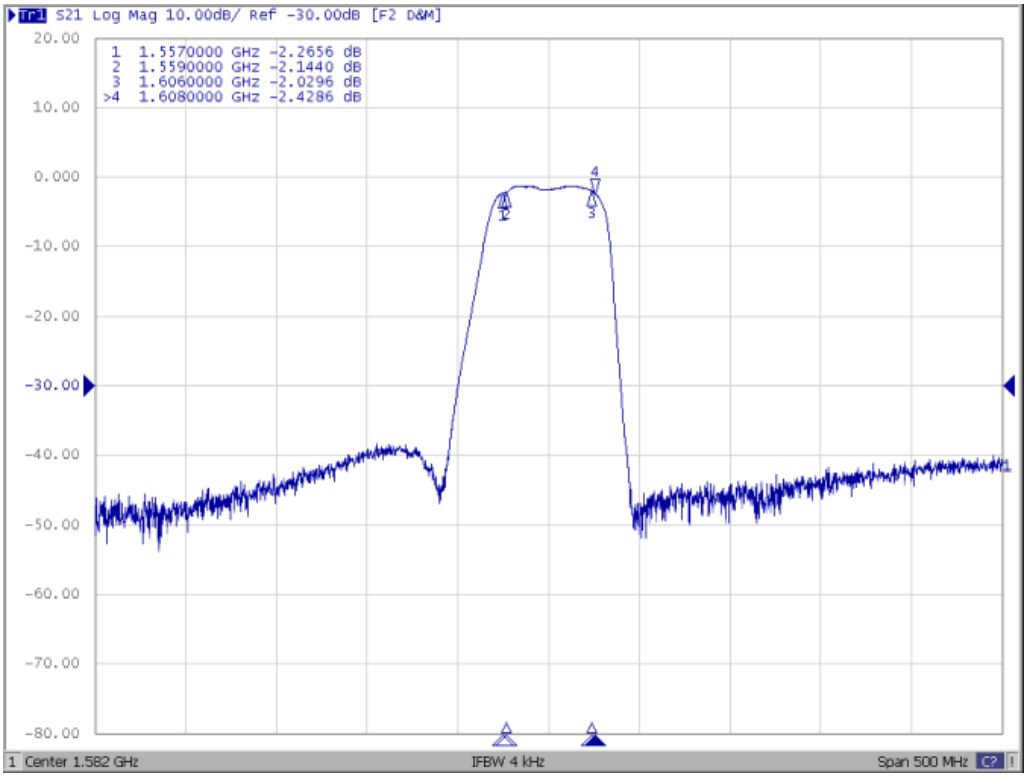
1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

Frequency Characteristics:

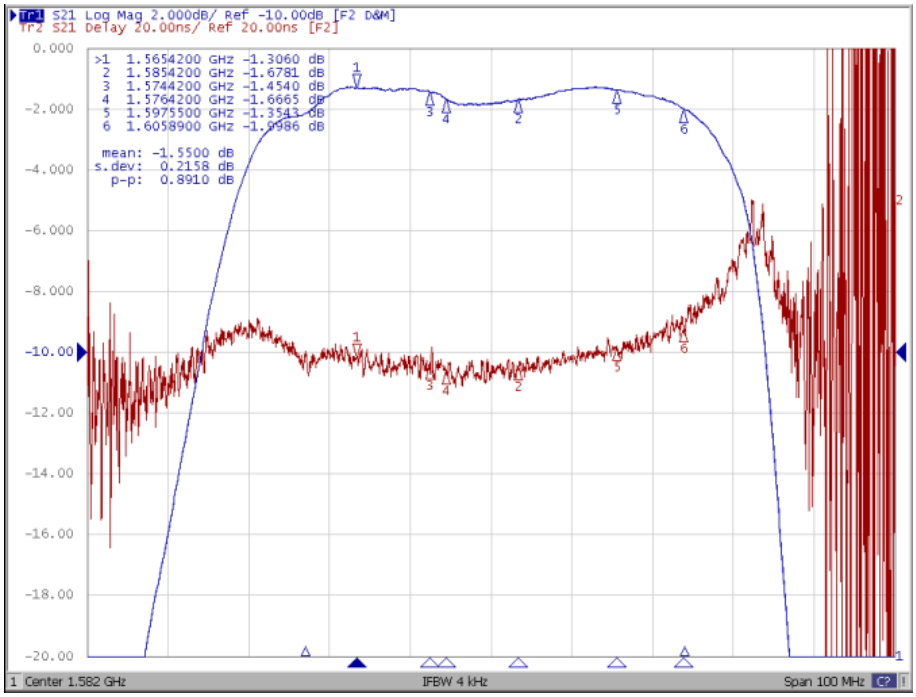
S21 response: (span 2.6 GHz)



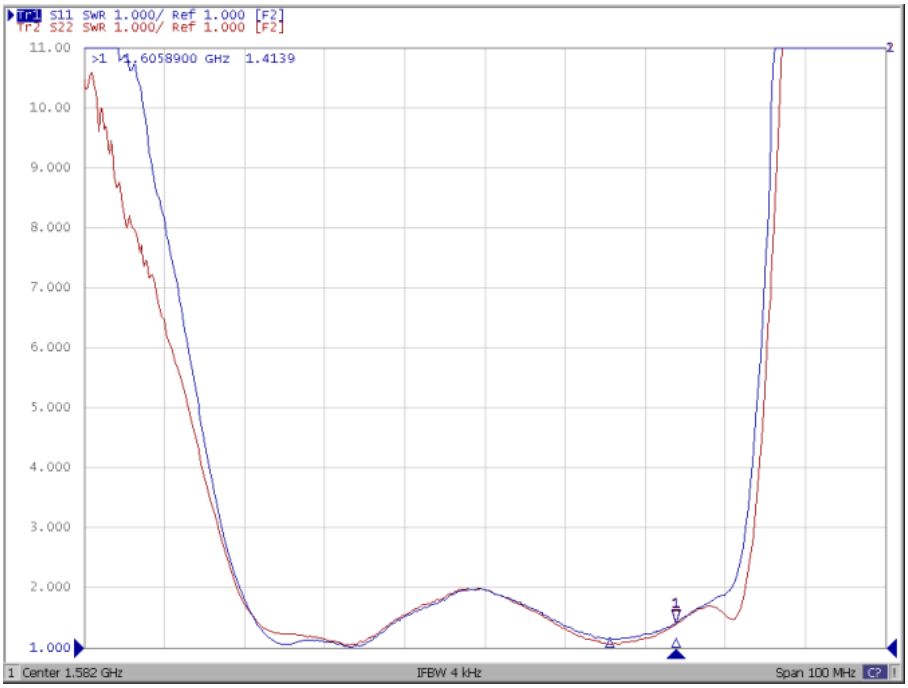
S21 response: (span 500 MHz)

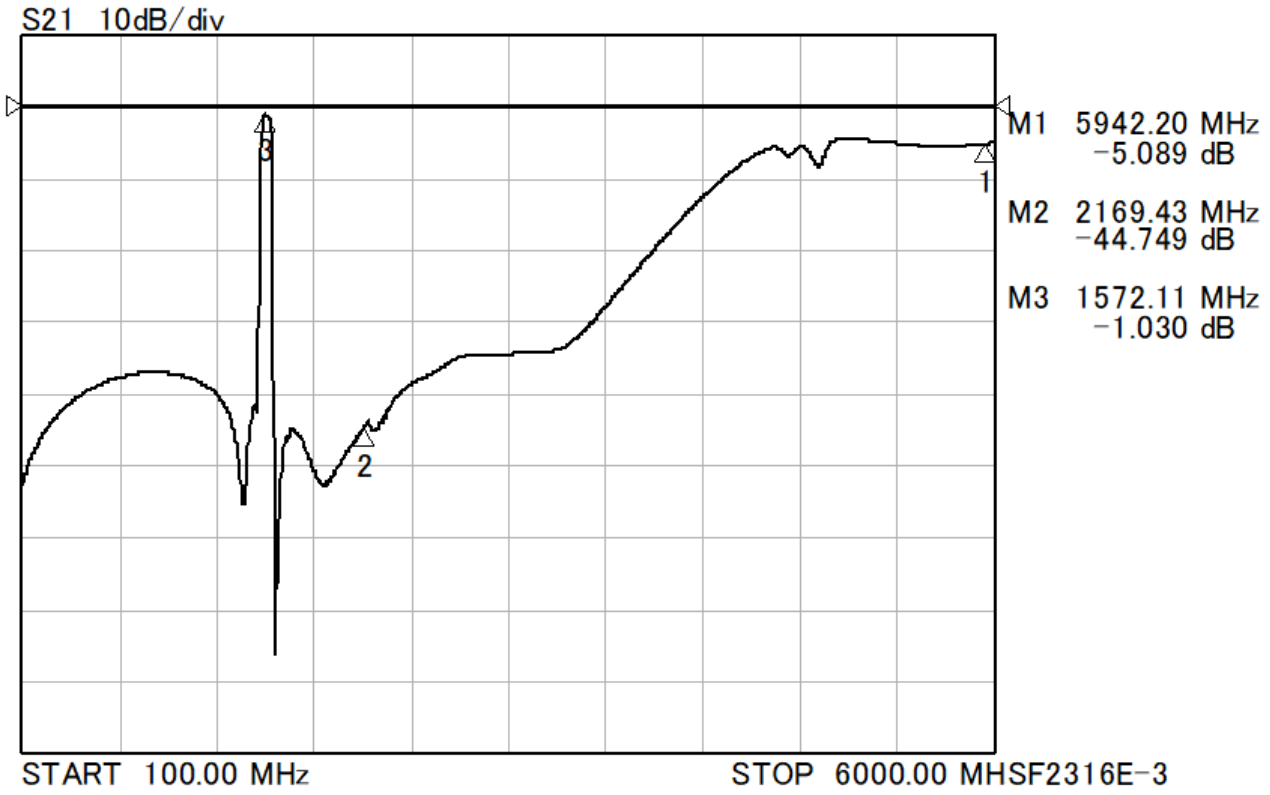


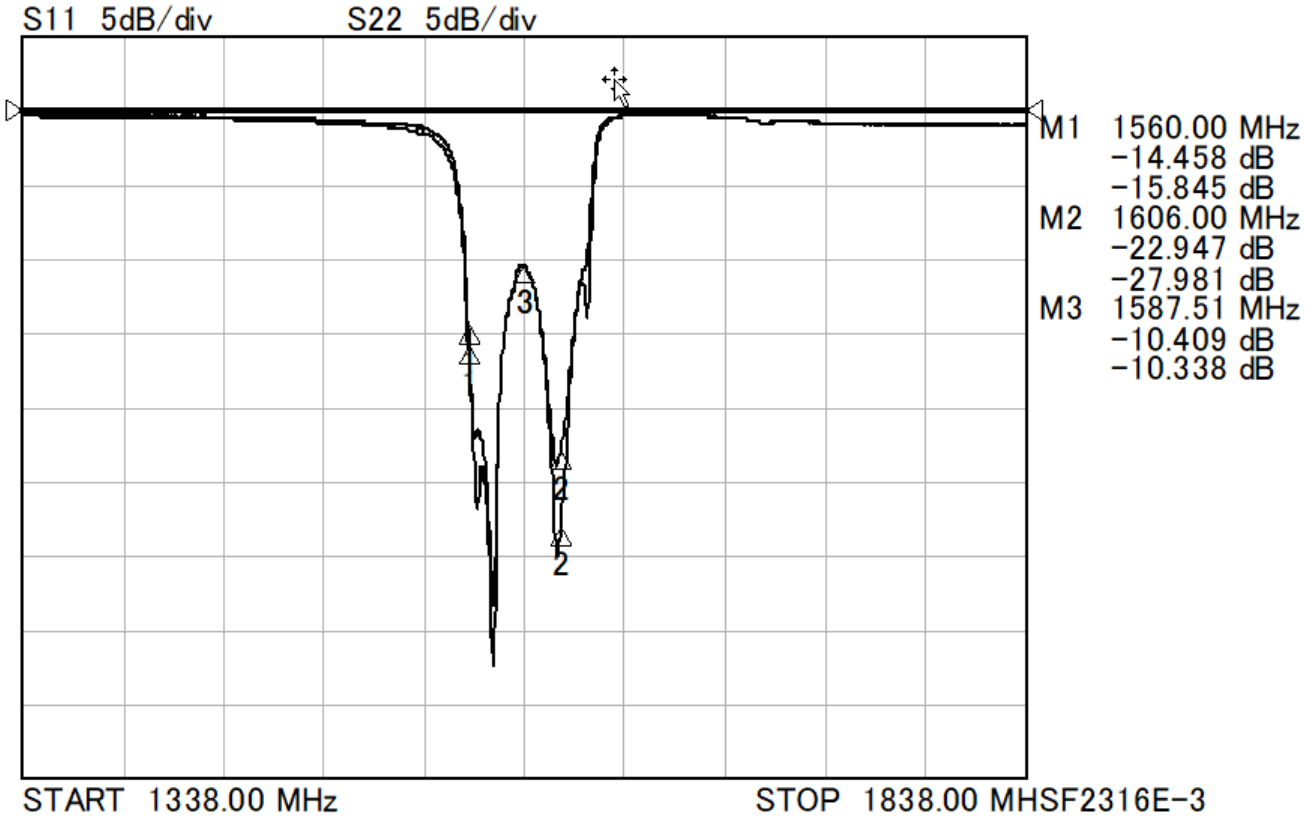
S21 response: (span 100 MHz)



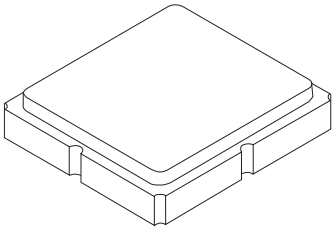
S11 and S22VSWR: (span 100 MHz)

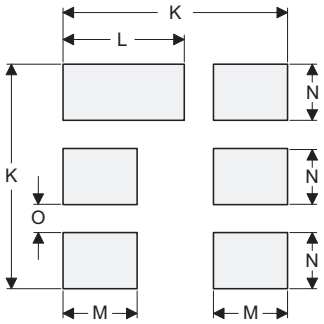






SM3030-6 Ceramic 6-Terminal Surface-Mount Case
3.0 X 3.0 mm Nominal Footprint





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

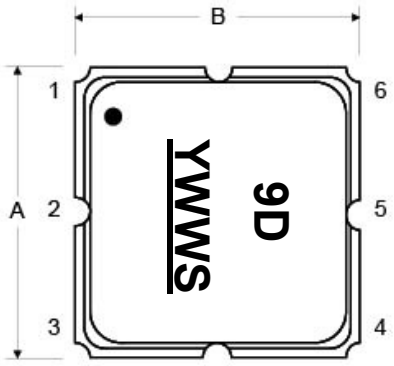
Case Materials

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
Pb Free	

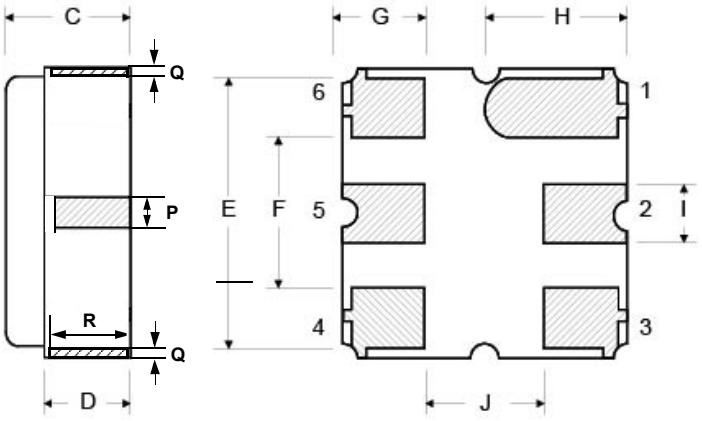
Electrical Connections

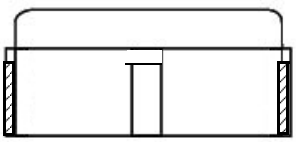
Connection	Terminals
Input	2
Output	5
Case Ground	All others

TOP VIEW



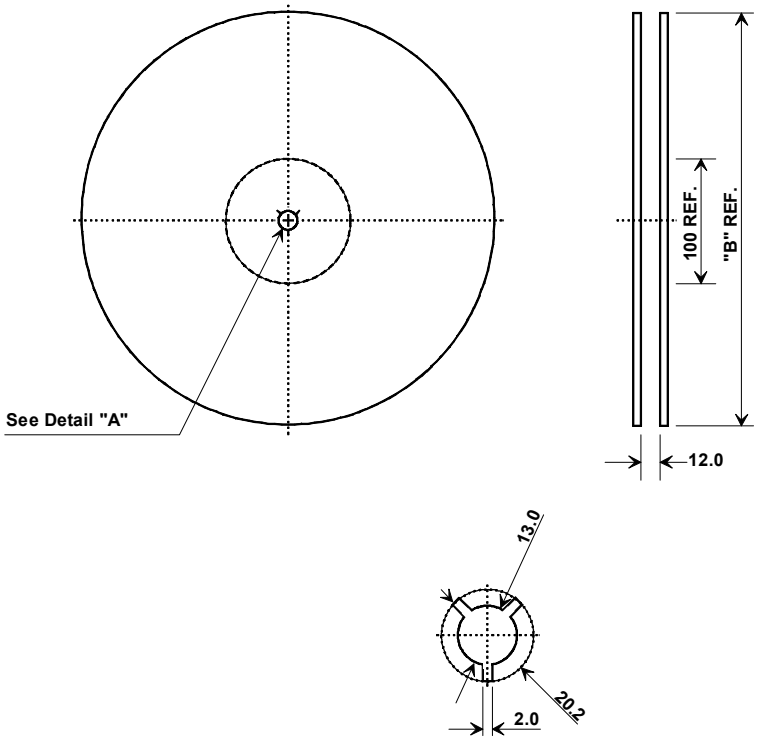
BOTTOM VIEW





Tape and Reel Specifications

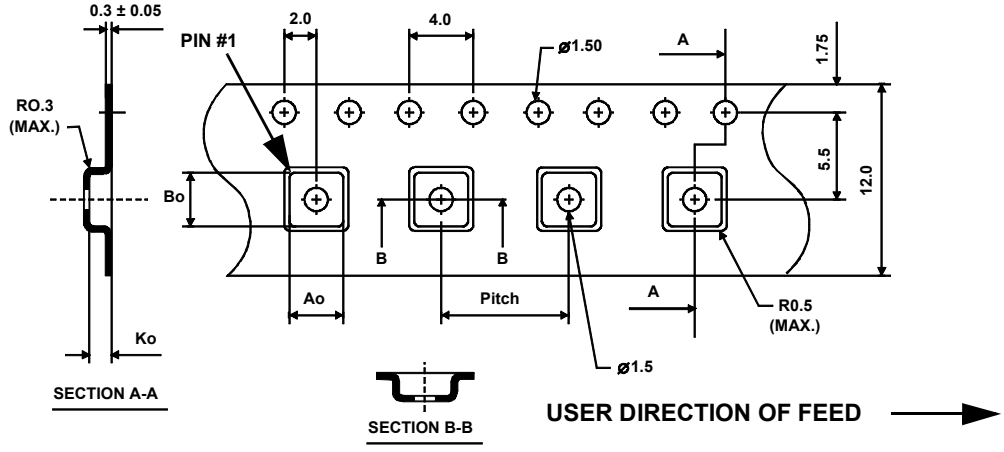
Tape and Reel Standard per ANSI/EIA-481



"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 150~180ºC for 60~90 seconds.
2. Ascending time to preheating temperature 150ºC shall be 30 seconds min.
3. Heating shall be fixed at 220ºC for 50~80 seconds and at 260ºC +0/-5ºC peak (10 seconds).
4. Time: 5 times maximum.