

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

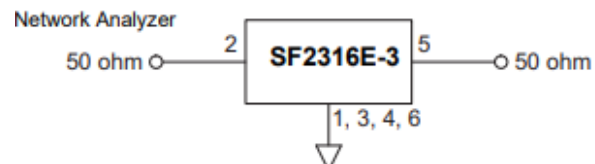
RoHS
Compliant

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 to1501 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						dB
			32	37		
			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, YWWS					

Measurement Circuit

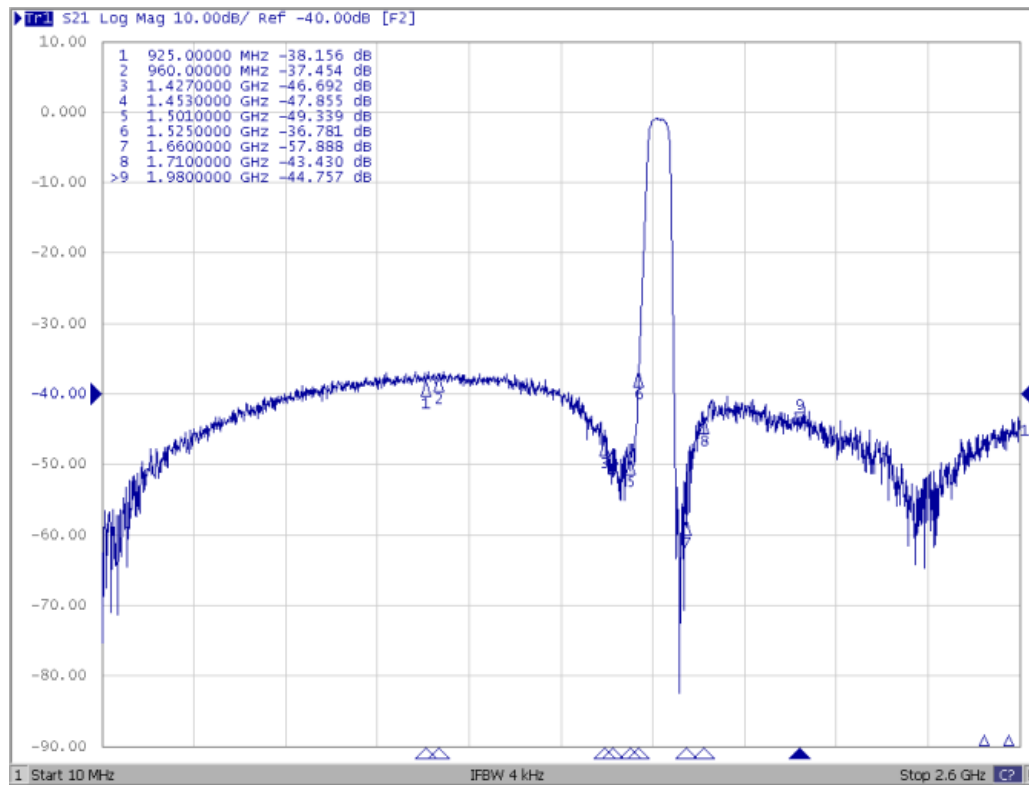


CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

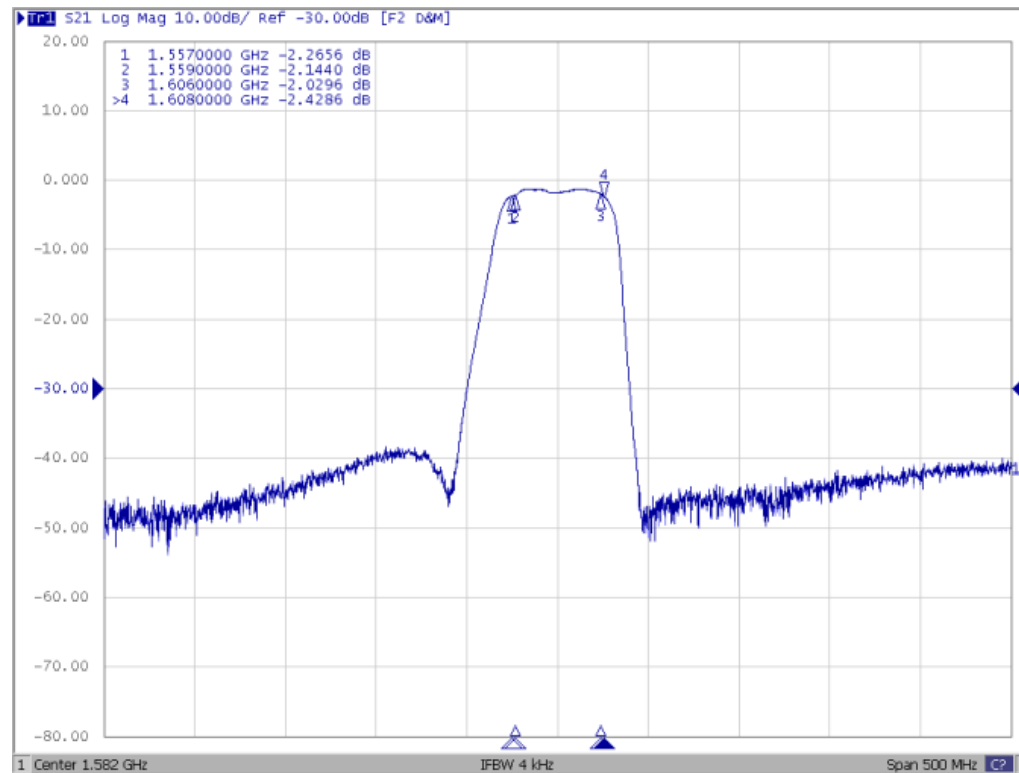
NOTES:

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.

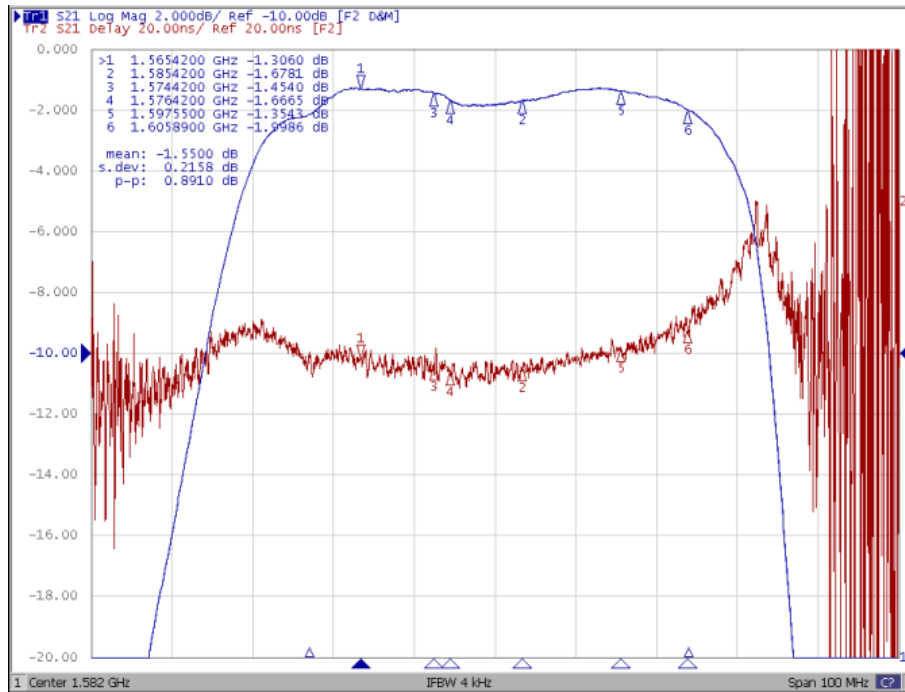
Frequency Characteristics: S21 response: (span 2.6 GHz)



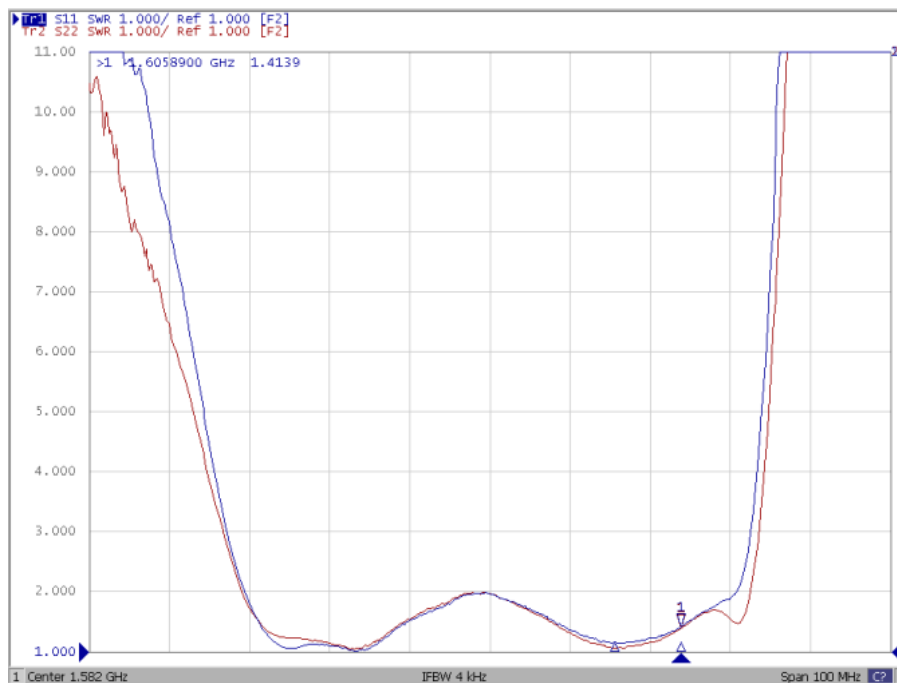
S21 response: (span 500 MHz)

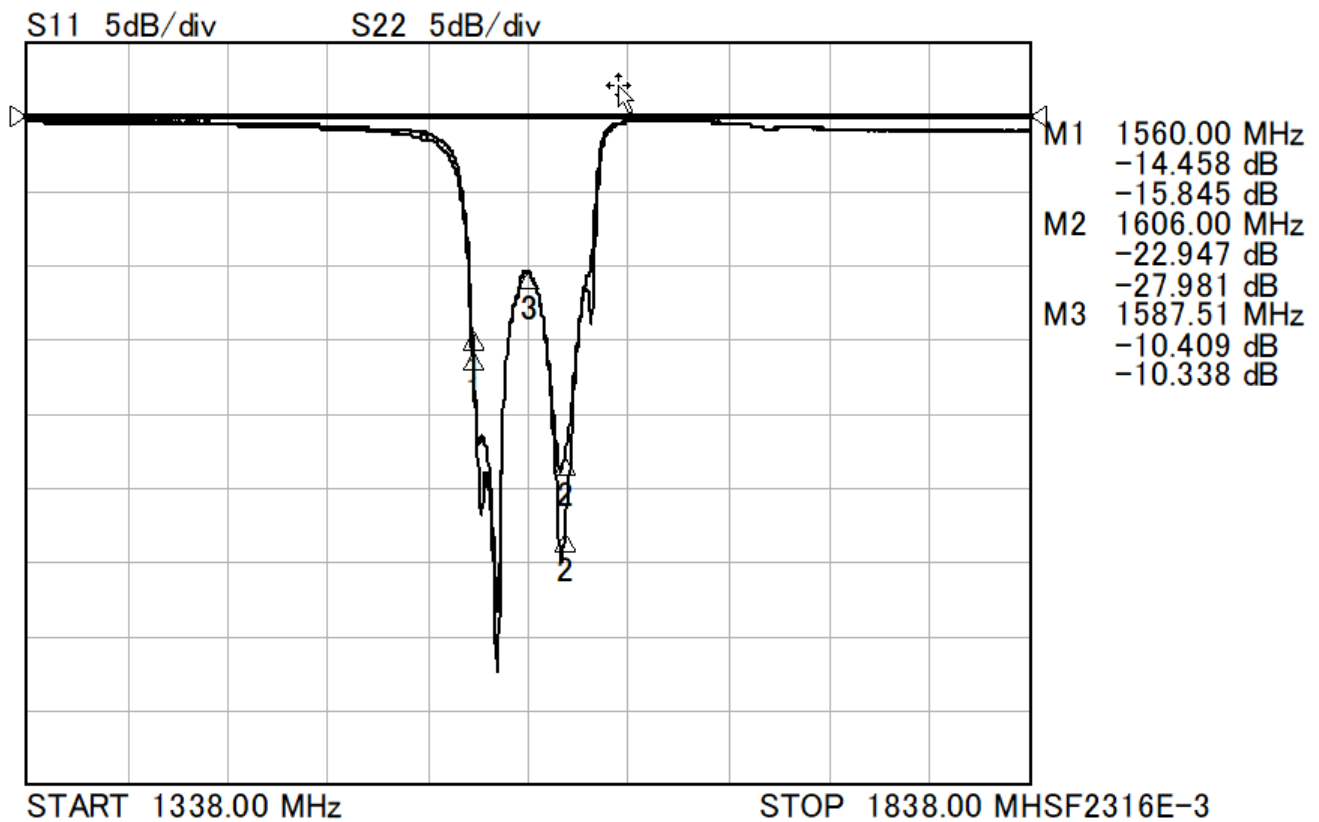
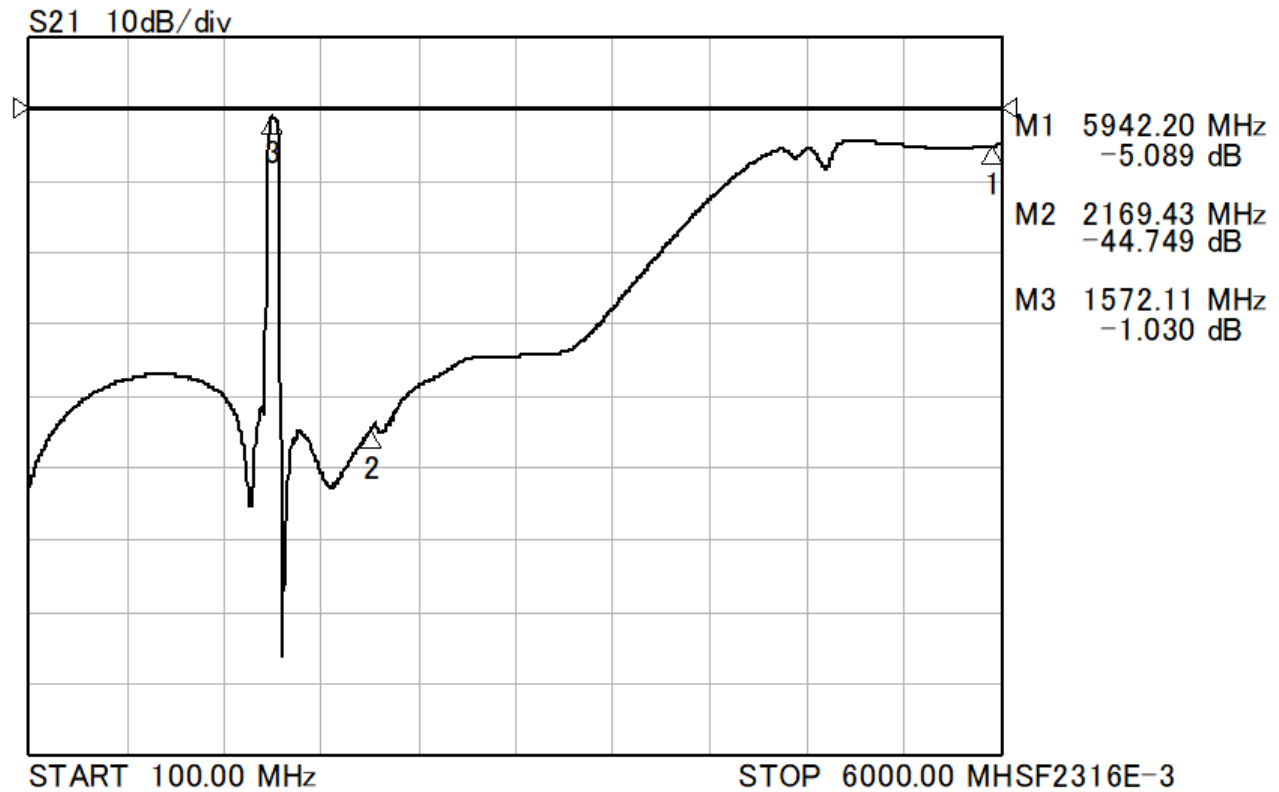


S21 response: (span 100 MHz)

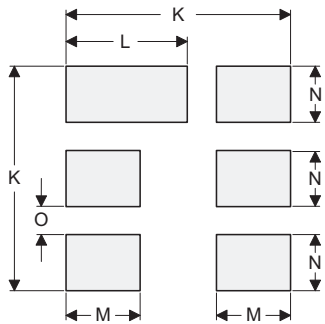
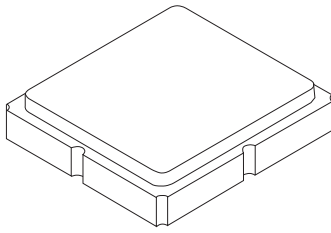


S11 and S22 VSWR: (span 100 MHz)





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

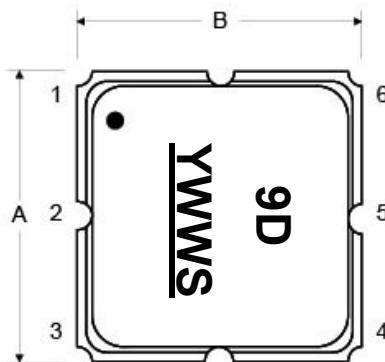
Case Materials

Materials	
Solder Pad Plating	0.3 to 1.0 μ m Gold over 1.27 to 8.89 μ m Nickel
Lid Plating	2.0 to 3.0 μ m Nickel
Body	Al ₂ O ₃ Ceramic

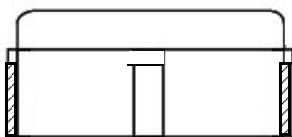
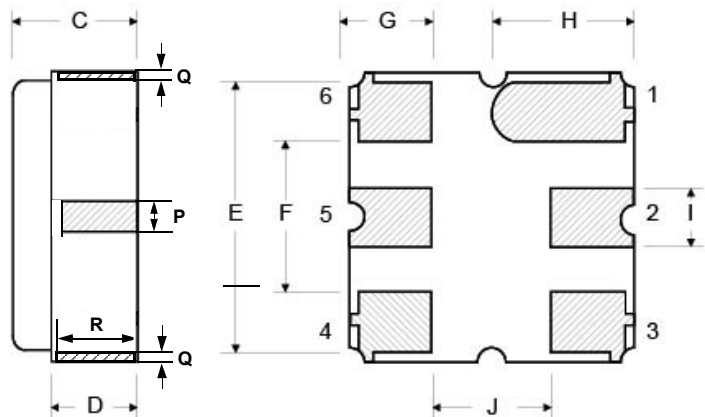
Electrical Connections

Connection	Terminals
Input	2
Output	5
Case Ground	All others

TOP VIEW



BOTTOM VIEW

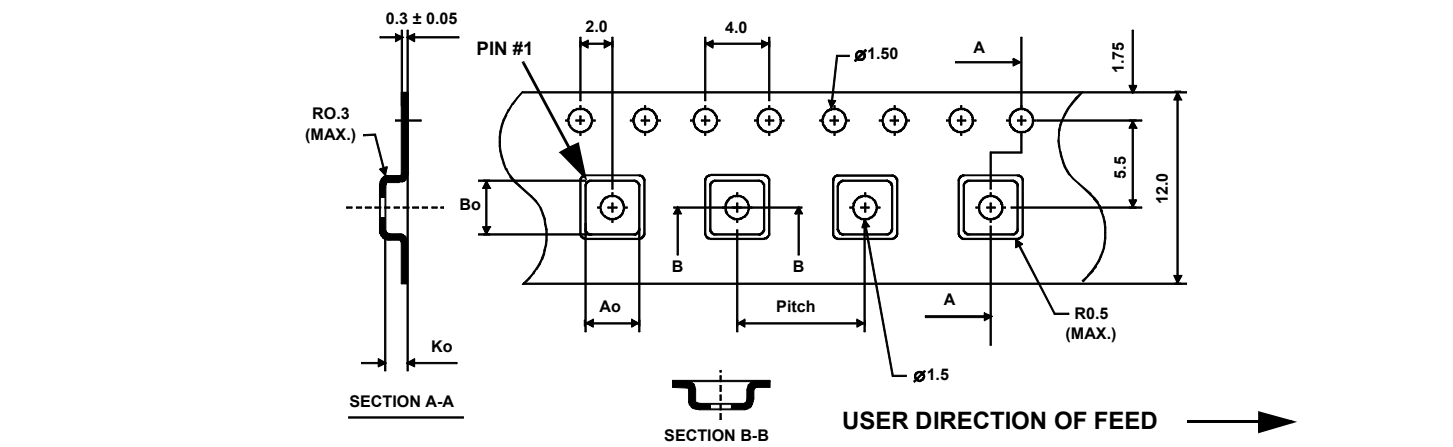


See Detail "A"

Technical drawing of a mechanical part showing a cross-section. The drawing includes dimensions: 13.0 (vertical), 20.2 (diagonal), and 2.0 (horizontal). The part has a circular cross-section with a central hole and a vertical slot.

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.

