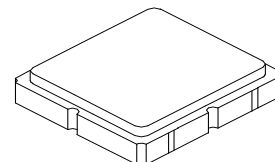


SF1184B-1
**947.5 MHz
SAW Filter**

SM3030-6

- **RF Filter for GSM900**
- **No Matching Circuit Required**
- **3.0 x 3.0 x 1.3 mm Package**
- **Complies with Directive 2002/95/EC (RoHS)**



Absolute Maximum Ratings

Rating	Value	Units
Maximum Input Power	+15	dBm
DC voltage between Terminals	-5 to +5	VDC
Operable Temperature Range	-45 to +125	°C
Specification Temperature Range	-30 to +85	°C

Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Nominal Operating Frequency	f_c			947.5		MHz
Passband	Insertion Loss (935~960 MHz)	IL		2.7	3.5	dB
	Amplitude Ripple (935~960 MHz)			0.6	1.4	dB
Attenuation	D.C.~871 MHz		50	62.1		dB
	890~915 MHz		30	43.9		dB
	980~1025 MHz		25	28.6		dB
	1025~2000 MHz		45	54.1		dB
	2000~3000 MHz		20	26.8		dB
VSWR (935~960 MHz)				1.6	2.3	dB
Temperature Coefficient				-36		ppm/°C
Impedance at f_c ; Input Z_{IN}				50		Ω
Output Z_{OUT}				50		Ω

Case Style	SM3030-6 3 x 3 mm Nominal Footprint
Lid Symbolization (Y=year, WW=week, S=Shift)	459, YWWS

Electrical Connections

Connection	Terminals
Input	2
Output	5
Ground	All others

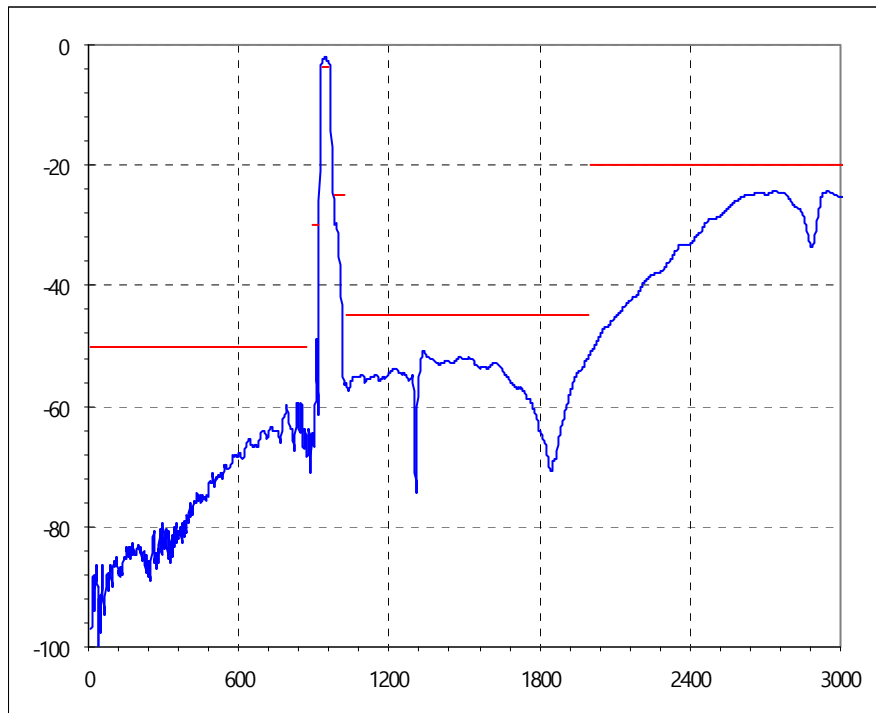
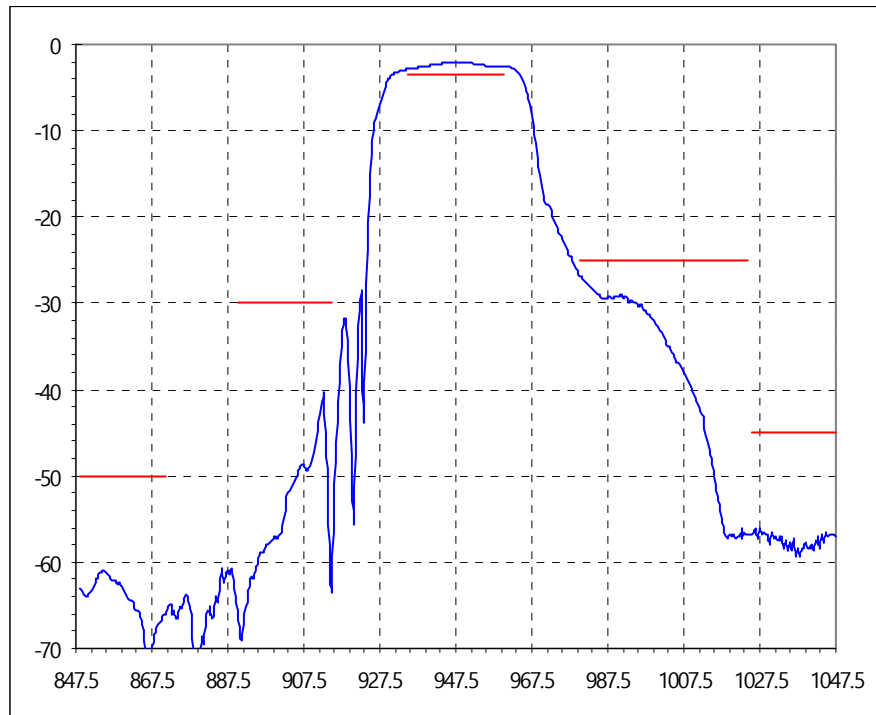

CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

NOTES:

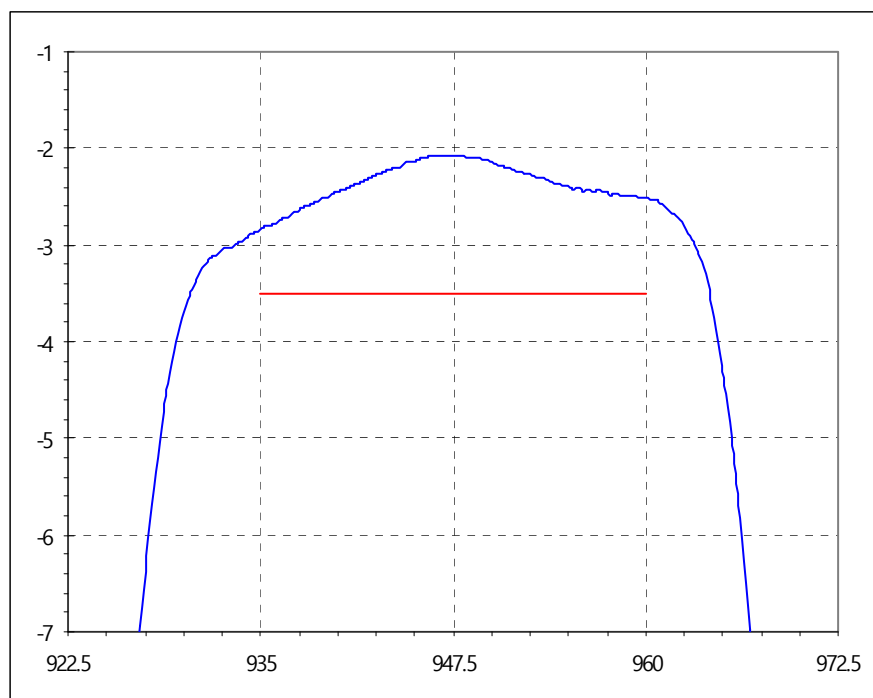
1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.

FREQUENCY CHARACTERISTICS:

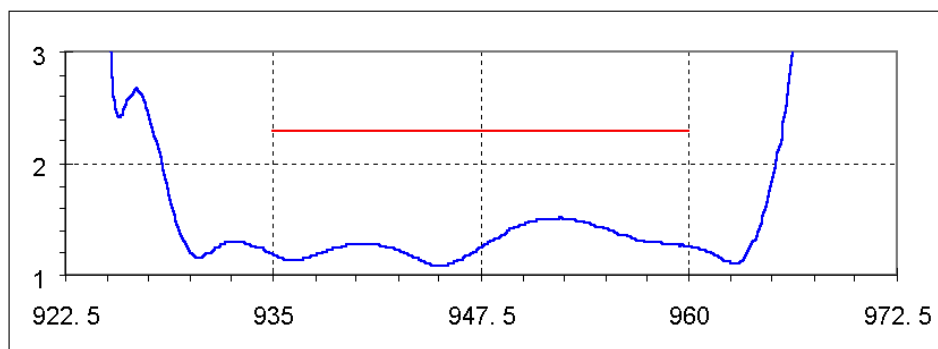
1. wideband response:



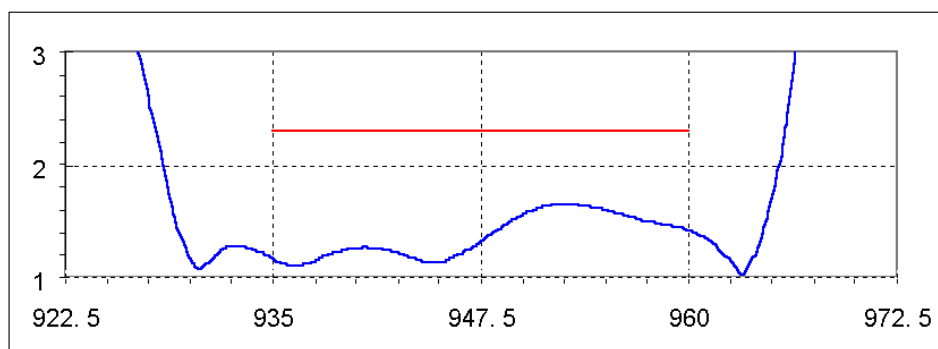
1. passband response:



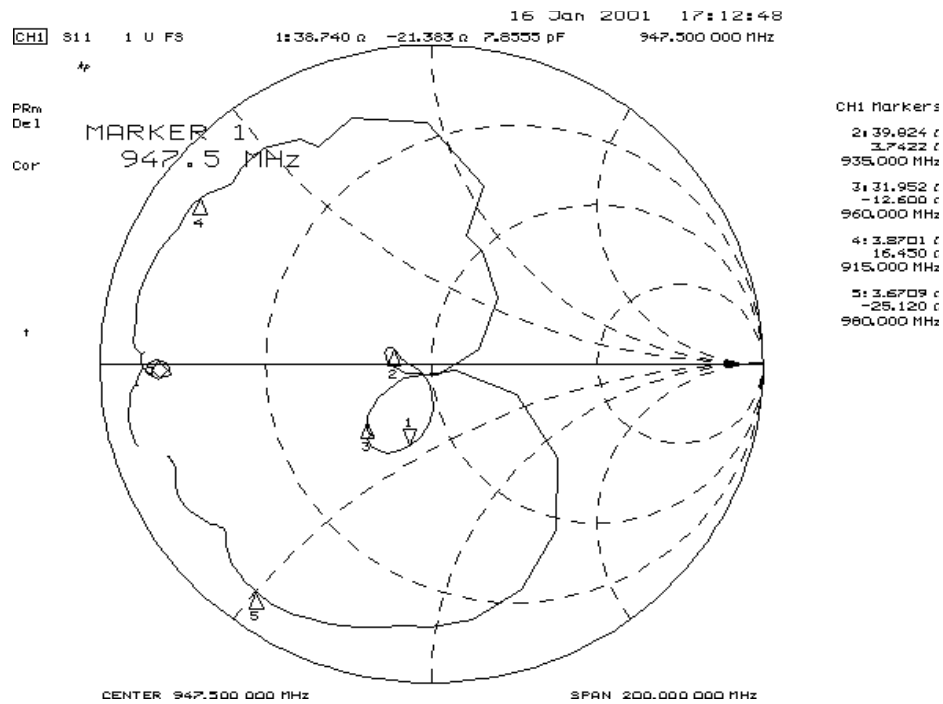
2. VSRW:



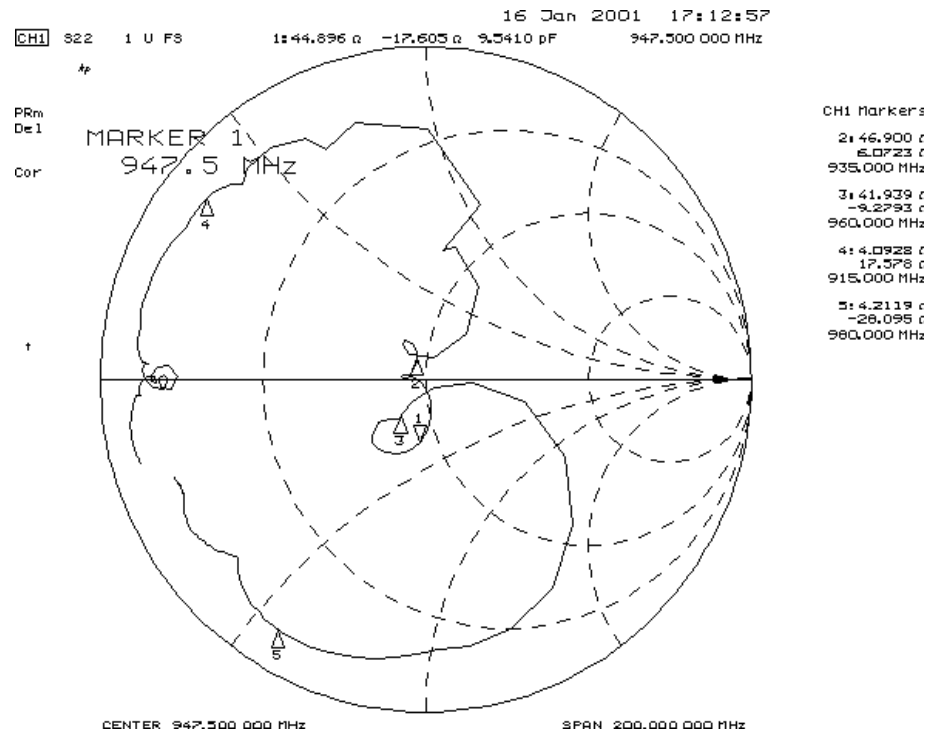
S22



3. Smith chart of S11:

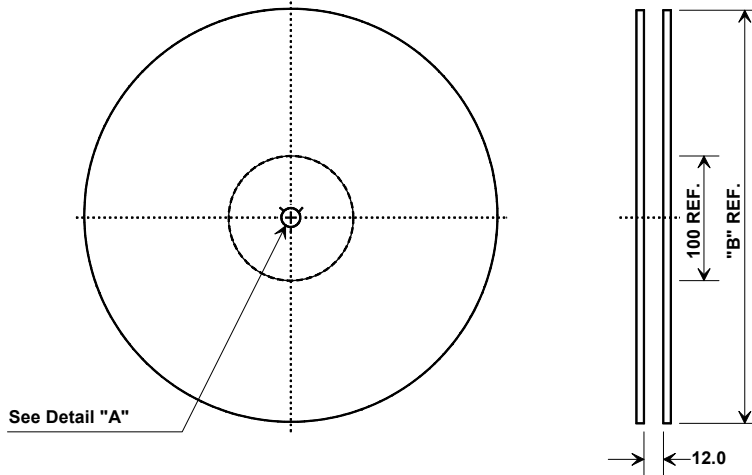


4. Smith chart of S22:

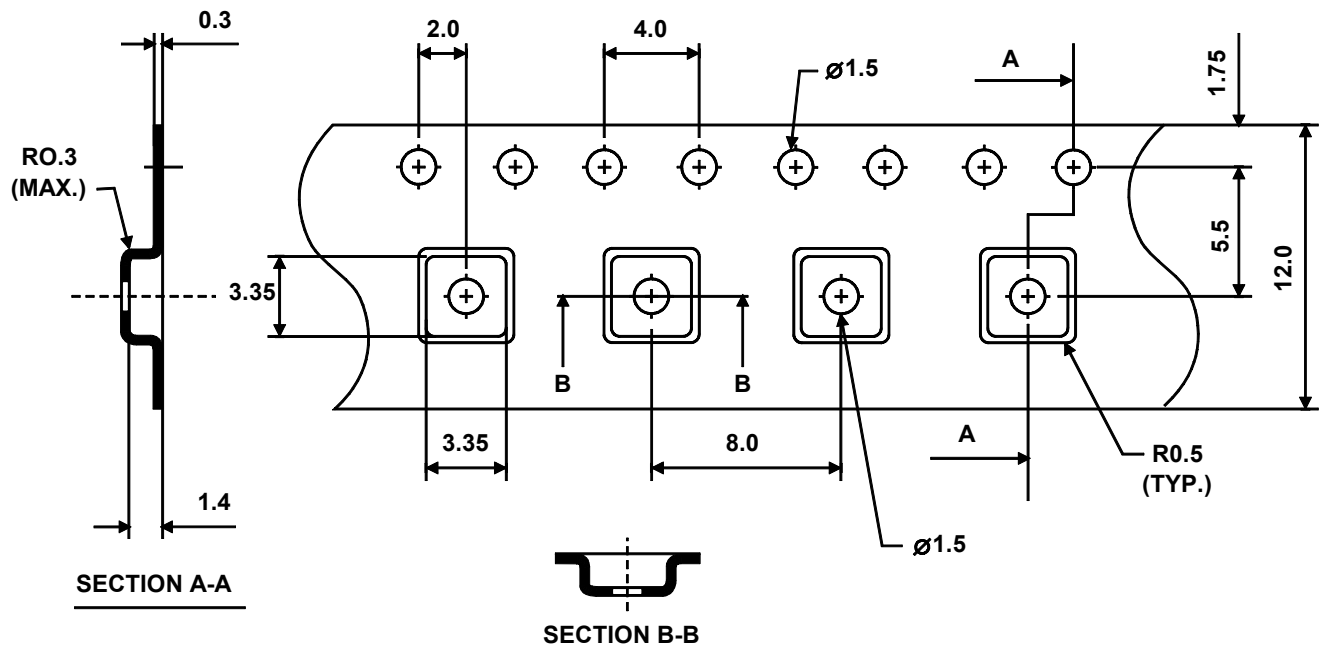
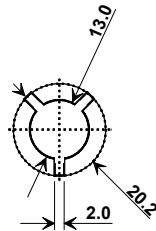


Tape and Reel Specifications

Tape and Reel Standard per ANSI/EIA-481

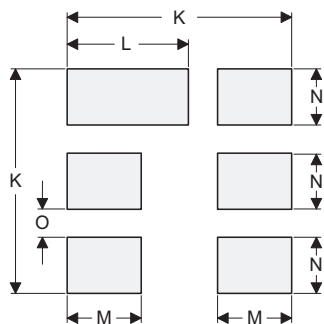
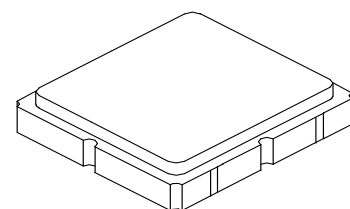


"B" Nominal Size		Quantity Per Reel
Inches	millimeters	
7	178	500
13	330	3000



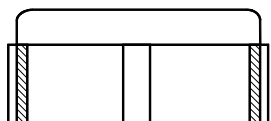
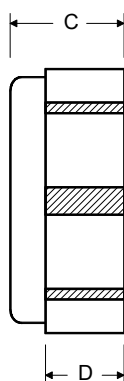
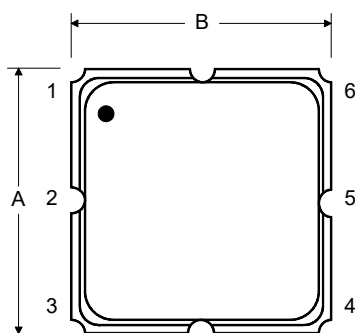
SM3030-6 Case

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



PCB FOOTPRINT

TOP VIEW



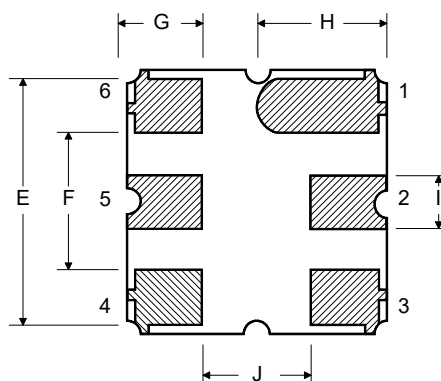
Case and PCB Footprint Dimensions

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	

Case Materials

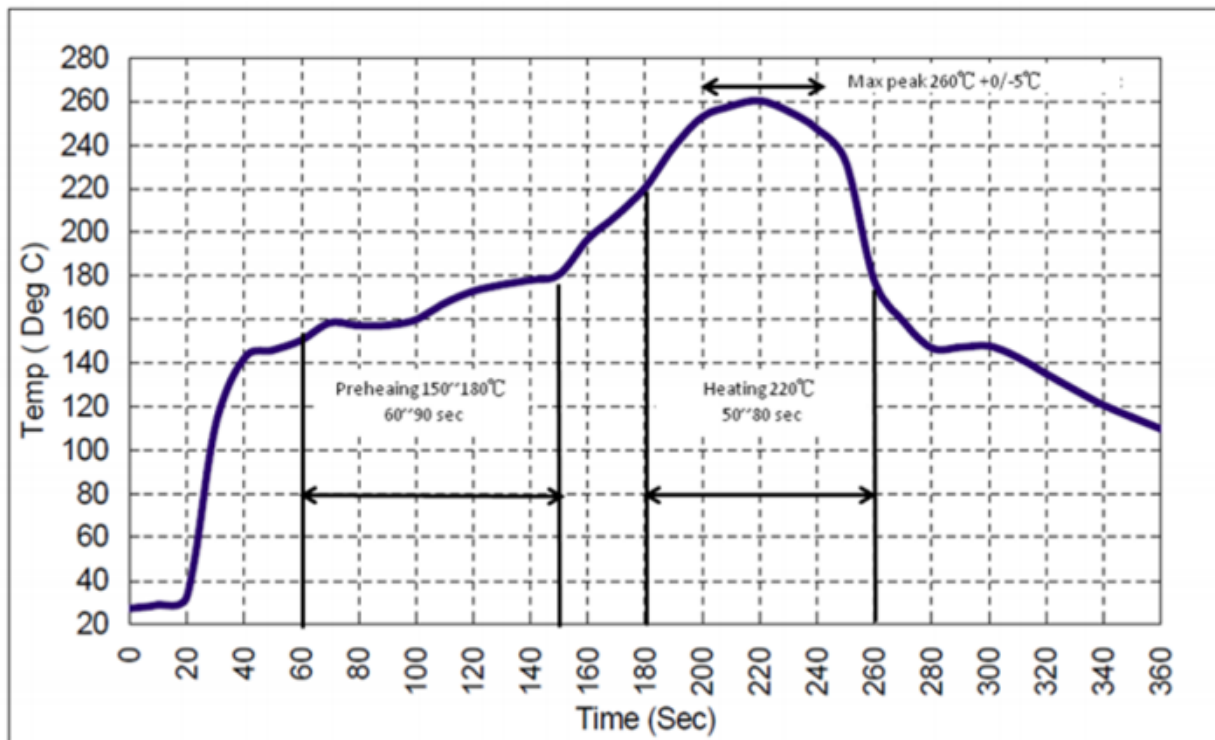
Solder Pad Plating	0.3 to 1.0 μ m Gold over 1.27 to 8.89 μ m Nickel
Lid Plating	2.0 to 3.0 μ m Nickel
Body	Al ₂ O ₃ Ceramic
Pb Free	

BOTTOM VIEW



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.



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