THE DATASHEET OF

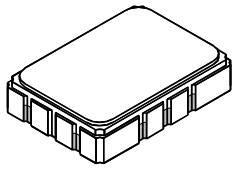
SF2026B

RFMi
A BRAND OF AKOUSTIS

SF2026B

114.815 MHz SAW Filter

- ***Low Insertion Loss***
- ***5.0 X 7.0 mm Surface-Mount Case***
- ***Complies with Directive 2002/95/EC (RoHS)***
- ***Moisture Sensitivity Level: 1***
- ***AEC-Q200 Qualified***



SMP-03

Absolute Maximum Ratings

Rating	Value	Units
Maximum Incident Power in Passband	+10	dBm
Max. DC voltage between any 2 terminals	0	VDC
Storage Temperature Range	-60 to +95	°C
Suitable for lead-free soldering - Max Soldering Temperature	260°C for 30 s	

Electrical Characteristics

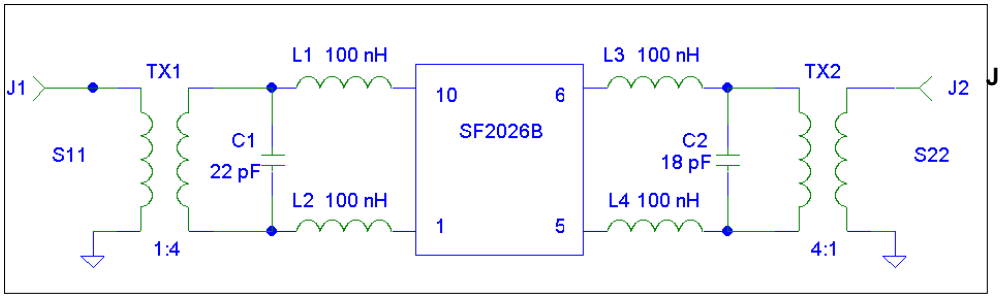
Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency of IF SAW Filter (RF LO ±50ppm correction to 1st IF)	f_C			114.815		MHz
Insertion Loss	IL			12.5	15	dB
Amplitude Ripple (p-p) between 111.7594.....113.4107 MHz (BW=1.64 MHz ±50ppm)					1.3	dB
Amplitude Ripple (p-p) between 113.5993.....115.2508 MHz (BW=1.64 MHz ±50ppm)					1.3	
Amplitude Ripple (p-p) between 115.3492.....117.8709 MHz (BW=1.64 MHz ±50ppm)					1.3	
Pass Bandwidth of -1.5 dB				6.30		MHz
Pass Bandwidth of -3 dB				7.24		
Low side attenuation 80 MHz...102.815 MHz (Fc -12 MHz)			38	40		dB
Low side attenuation 102.815 MHz...107.690 MHz (Fc -7.125 MHz)			36	38		
Low side attenuation 107.690 MHz...109.690 MHz (Fc -5.125 MHz)			28	30		
High side attenuation 121.260 (Fc +6.445 MHz)...123.860 MHz (Fc +9.045 MHz)			25	27		
High side attenuation 123.860 MHz...126.815 MHz (Fc +12.00 MHz)			36	38		
High side attenuation 126.815 MHz...150.815 MHz (Fc +36.00 MHz)			38	40		
Group Delay Ripple (p-p) between 111.7594.....113.4107 MHz (BW=1.64 MHz ±50 ppm)					80	ns
Group Delay Ripple (p-p) between 113.5993.....115.2508 MHz (BW=1.64 MHz ±50 ppm)					80	ns
Group Delay Ripple (p-p) between 115.3492.....117.8709 MHz (BW=2.510 MHz ±50 ppm)					100	ns
Operating Temperature Range	T_A		-40		+85	°C
Case Style			SMP-03 7 x 5 mm Nominal Footprint			
Lid Symbolization (YY=year, WW=week, S=shift, ## = Sequence Code)			SF2026B, YYWWS##			

CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

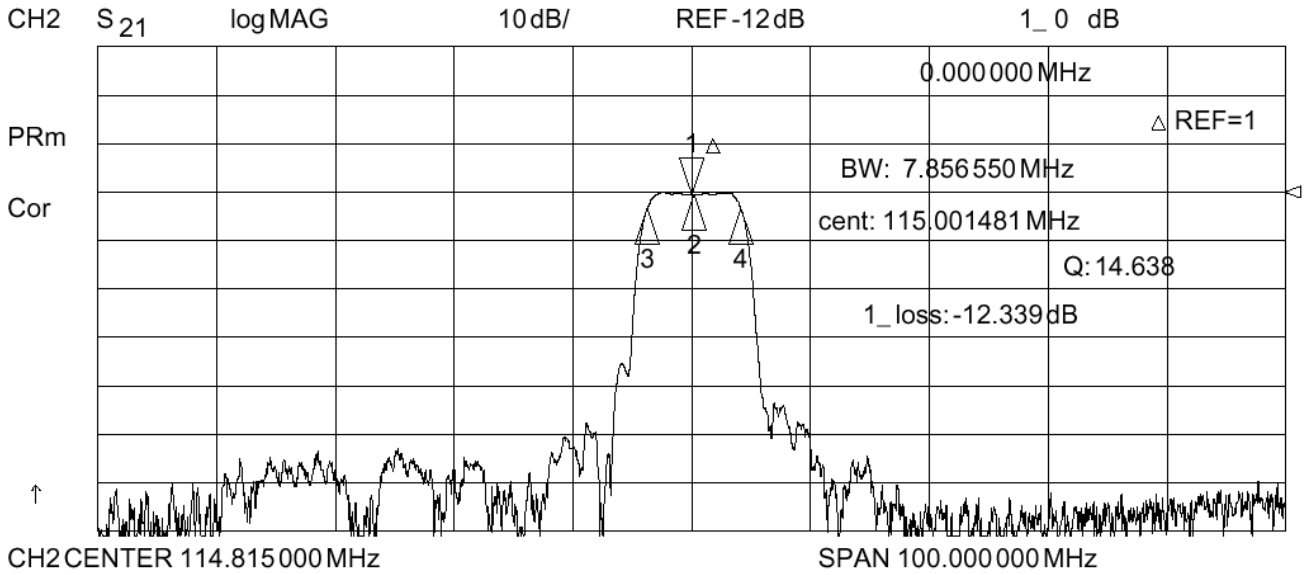
NOTES:

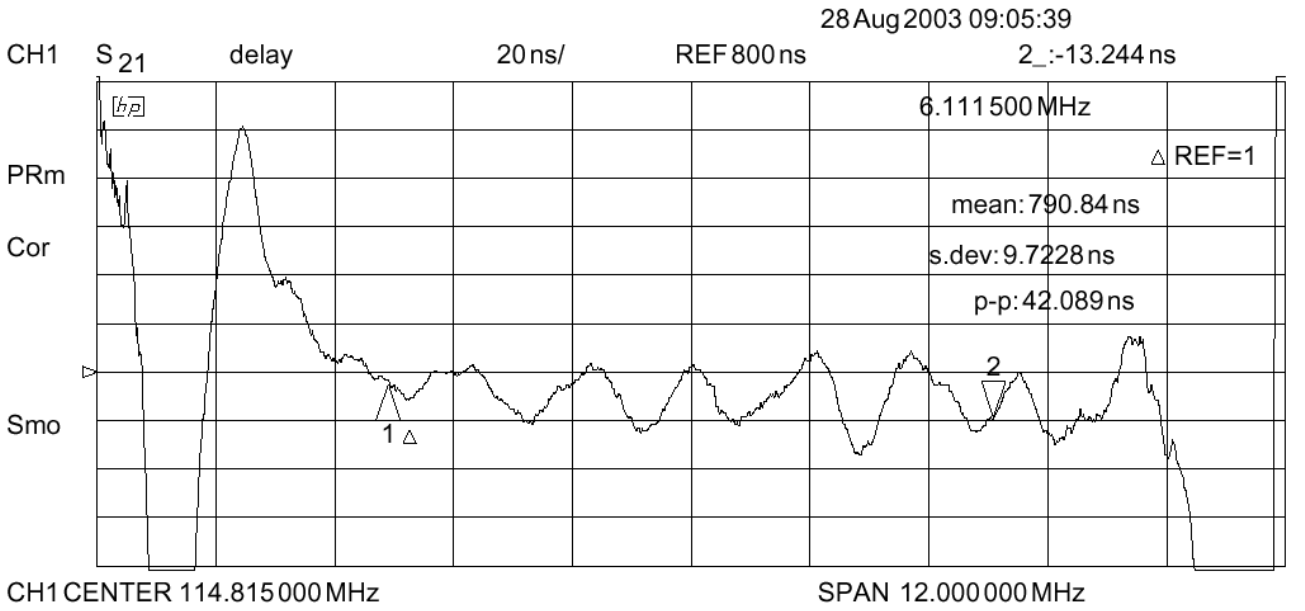
1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

J = 50 Ohms



J = 50 Ohms





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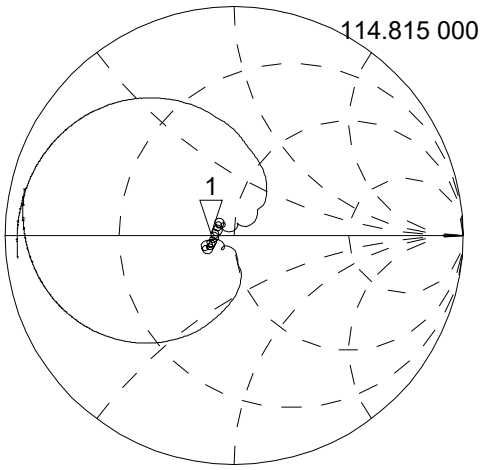
CH1 S 11 1 U FS 1_: 40.76 Ω 0.5801 Ω 804.09 pH

114.815 000 MHz

PRm

Cor



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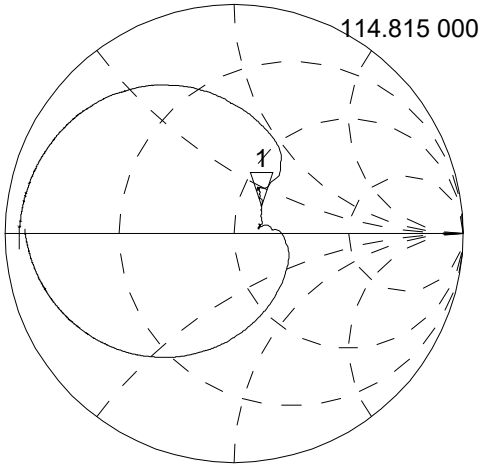
CH2 S 22 1 U FS 1_ 61.52 Ω 15.119 Ω 20.958 nH

114.815 000 MHz

PRm

Cor



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CENTER 114.815 000 MHz SPAN 100.000 000 MHz

SF2026B Recommended Matching

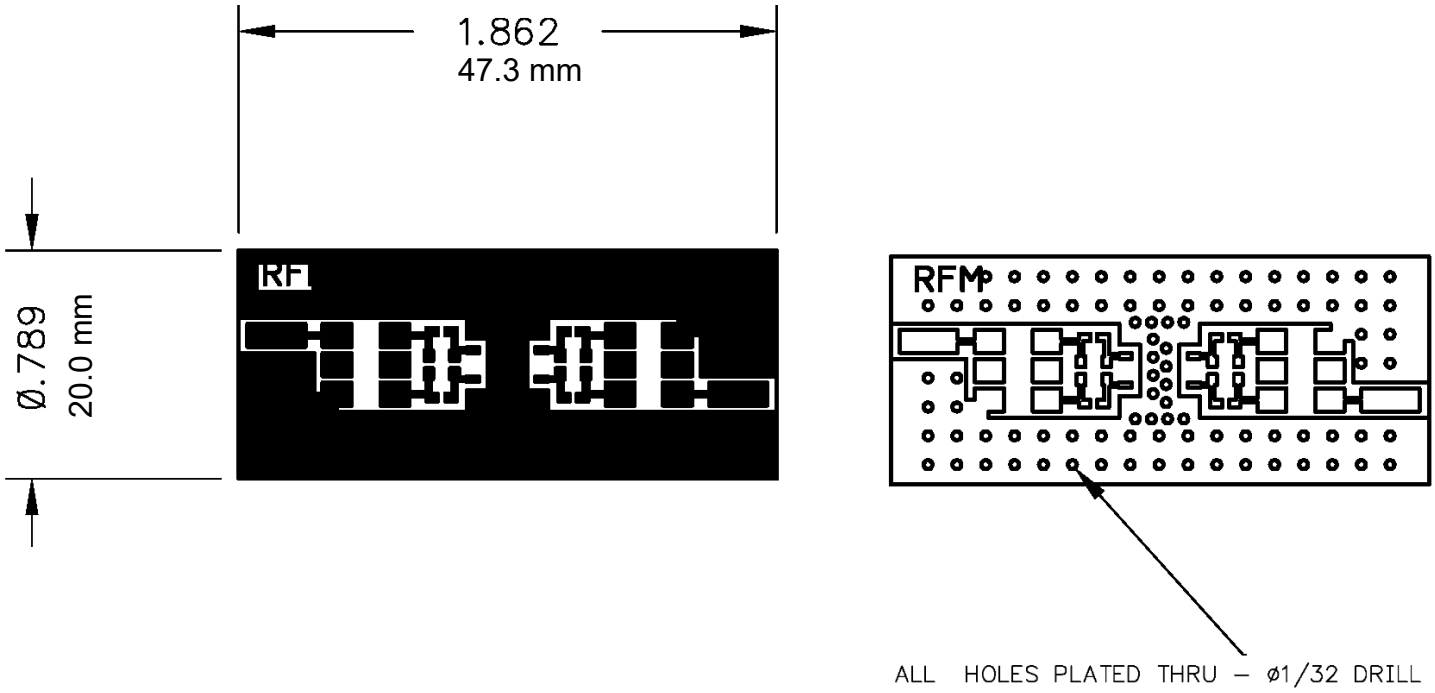
Component for 200 ohm load on Input and Ouput upon Differential SAW

Inductor

Part Number	0603CSR10XJBW
Value	100nH
Size	0603
Tolerance	5%
Recommended Manufacturer	Coilcraft 0603CS-series

Capacitor

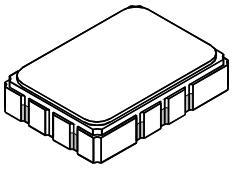
Part Number	0603CG220J9B20	0603CG180J9B20
Value	22 pF	18 pF
Size	0603	0603
Tolerance	±5%	±5%
Recommended Manufacturer	Philips	Philips



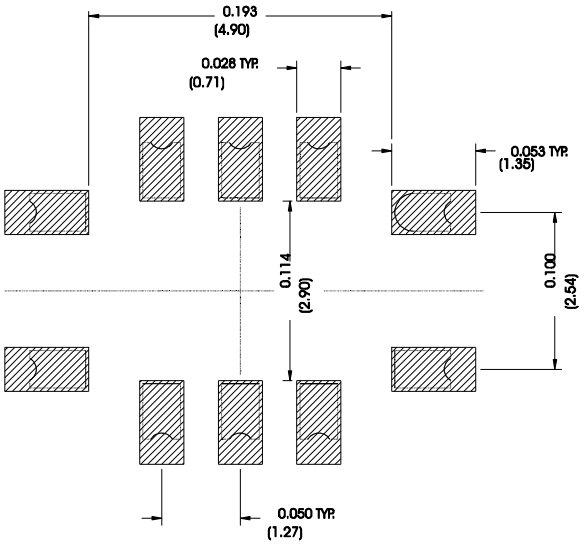
SMP-03 Case

10-Terminal Ceramic Surface-Mount Case

7 x 5 mm Nominal Footprint



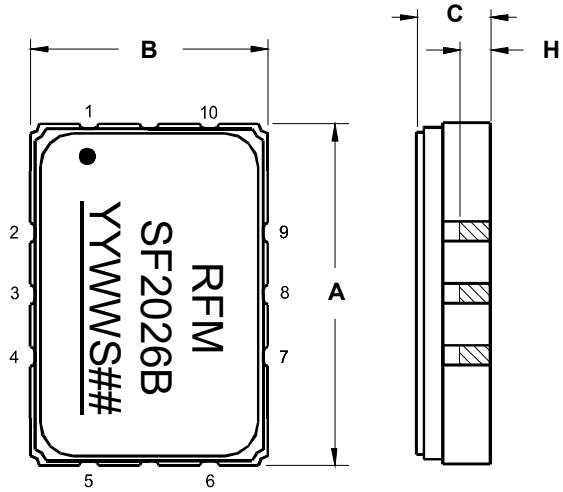
Recommended PCB Footprint



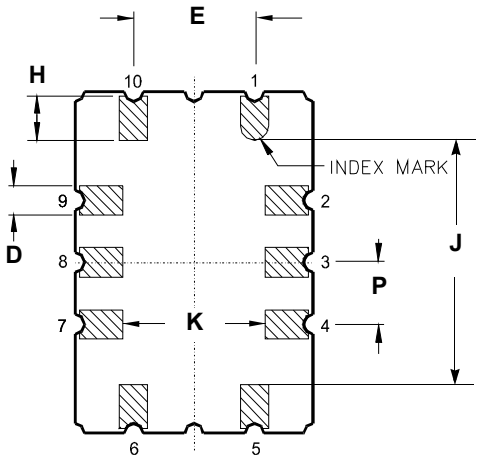
Case Dimensions						
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	6.80	7.00	7.20	0.268	0.276	0.283
B	4.80	5.00	5.20	0.189	0.197	0.205
C		1.65	2.00		0.065	0.079
D	.47	0.60	.73	0.019	0.024	0.029
E	2.41	2.54	2.67	0.095	0.100	0.105
H	0.87	1.0	1.13	0.034	0.039	0.044
J	4.87	5.00	5.13	0.192	0.197	0.202
K	2.87	3.00	3.13	0.113	0.118	0.123
P	1.14	1.27	1.40	0.045	0.050	0.055

Materials	
Solder Pad Termination	Au plating 30 - 60 uInches (76.2-152 uM) over 80-200 uInches (203-508 uM) Ni.
Lid	Fe-Ni-Co Alloy Electroless Nickel Plate (8-11% Phosphorus) 100-200 uInches Thick
Body	Al_2O_3 Ceramic

Electrical Connections		
Connection		Terminals
Port 1	Input or Return	10
	Return or Input	1
Port 2	Output or Return	5
	Return or Output	6
Ground		All others
Single Ended Operation		**Return is ground**
Differential Operation		**Return is hot**



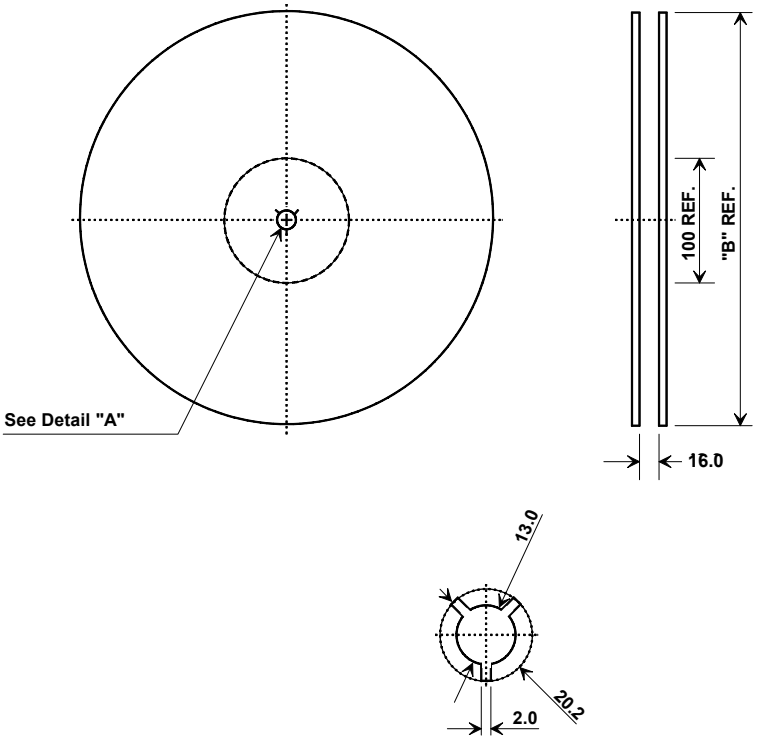
TOP VIEW



BOTTOM VIEW

Tape and Reel Specifications

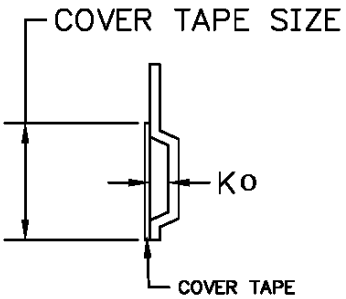
Tape and Reel Standard per ANSI/EIA-481

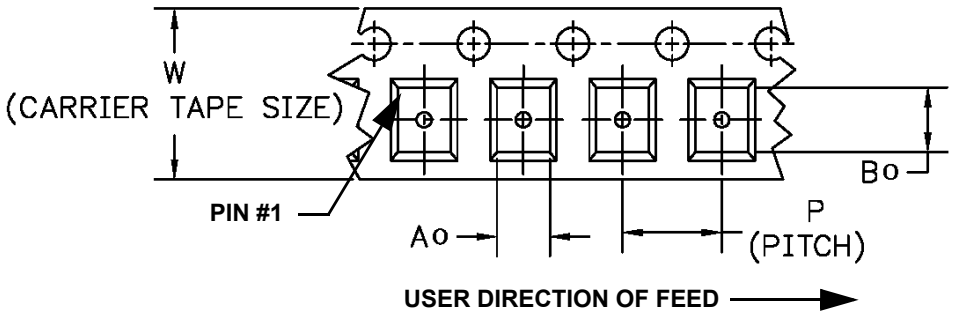


"B " Nominal Size		Quantity Per Reel
Inches	millimeters	
7	178	500
13	330	2000

COMPONENT ORIENTATION and DIMENSIONS

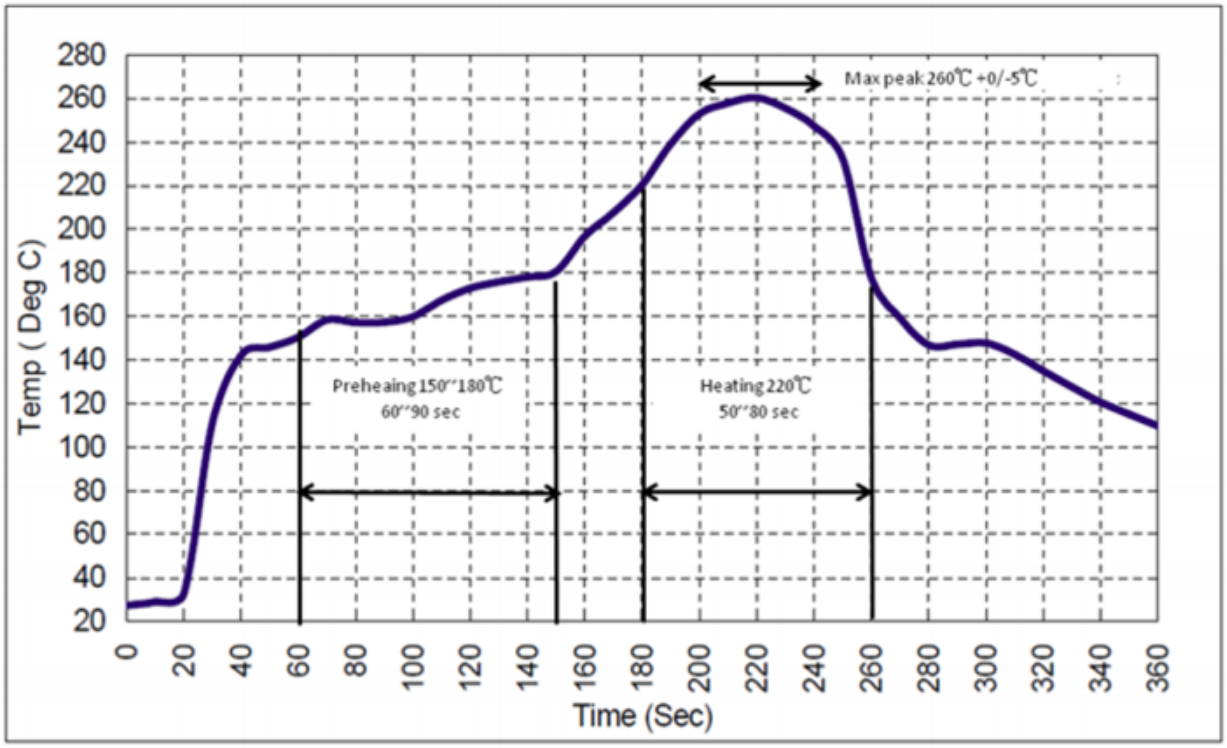
Carrier Tape Dimensions	
Ao	5.5 mm
Bo	7.5 mm
Ko	2.0 mm
Pitch	8.0 mm
W	16.0 mm





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.



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