BFX3006G

5250 MHz BAW Filter

2520

MAXIMUM RATING:

- Input Power Level: + 28dBm
- Operating Temperature: -40°C to +85°C
- Storage Temperature: -40°C to +125°C
- Moisture Sensitivity Level: 3
- ESD Class 500V (HBM) Class 1000V (CDM)
- Small Form Factor 2.5mm x 2.0mm x 1.0mm

Applications

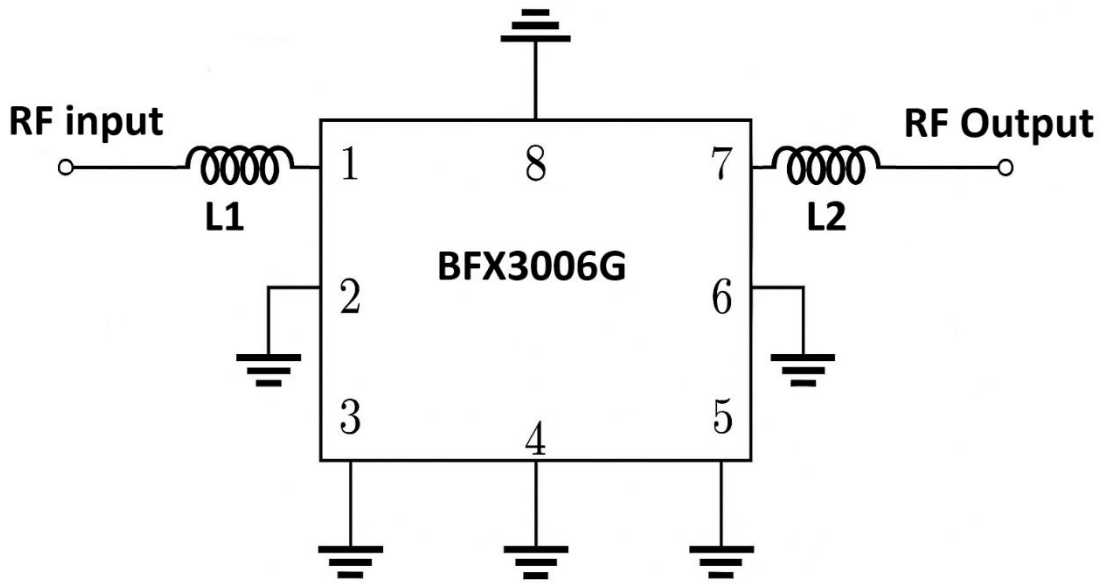
- Wi-Fi tri band routers, integrated cable modem
- Wi-Fi tri band access points
- LTE/LAA small cells

ELECTRICAL CHARACTERISTICS:

Item	Unit	Min.	Typ.	Max.
Center Frequency and Bandwidth	MHz	5170	5250	5330
Insertion Loss (5170 - 5330)	dB		1.3(1)	2.0
Amplitude Ripple	dB		0.6	0.7
Attenuation				
30 ~ 2700 MHz	dB	35	36	
3300 ~ 3700 MHz	dB	37	38	
5490 ~ 5835 MHz	dB	54	57	
5945 ~ 6425 MHz	dB	46	50	
6525 ~ 7125 MHz	dB	43	46	
7500 ~ 11000 MHz	dB	30	32	
Return Loss	dB	12	20(1)	
Load Impedance	Ω		50	
Power Handling (11ax, MCS10, 80MHz, PAR 11dB)	dBm			28
2nd Harmonic (Po=28dBm @25c)	dBm/MHz		-43	
3rd Harmonic (Po=28dBm @25c)	dBm/MHz		-91	

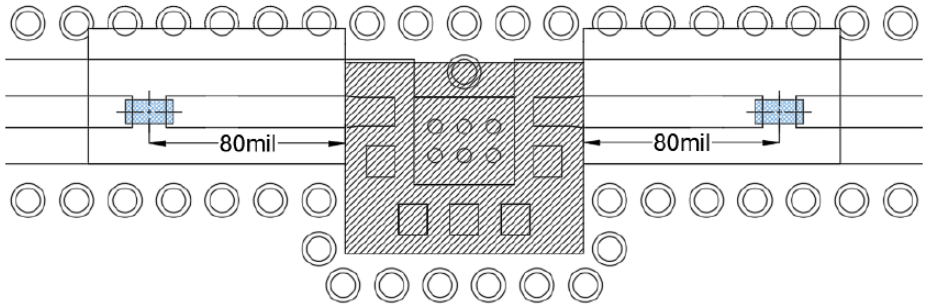
(1) Averaged over specified frequency at 25C.

EVB Schematic



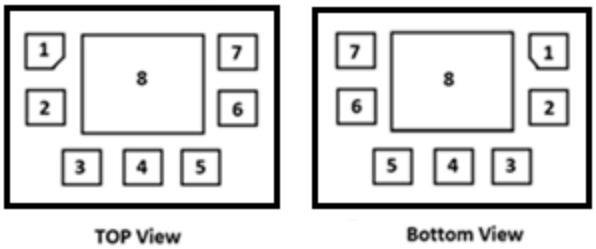
Reference Des.	Value	Description Manufacturer	Manufacturer	Part Number
L1	1.4nH	Chip inductor, 0201, ±0.05nH	Murata	LQP03HQ1N4W02
L2	1.4nH	Chip inductor, 0201, ±0.05nH	Murata	LQP03HQ1N4W02

EVB Layout



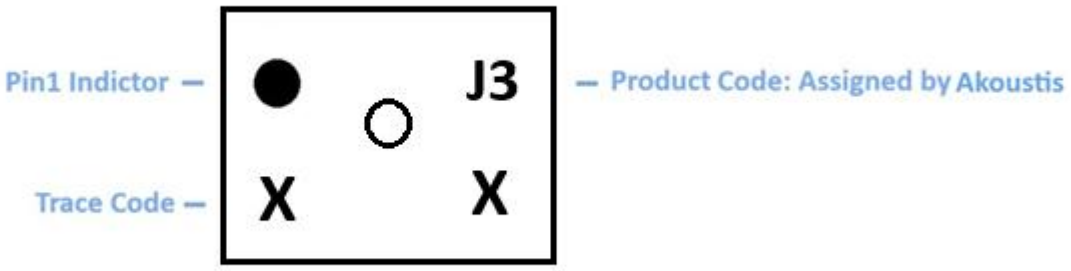
Notes: Center ground pad via: 6mil; outer via: 10mil

Pin definition

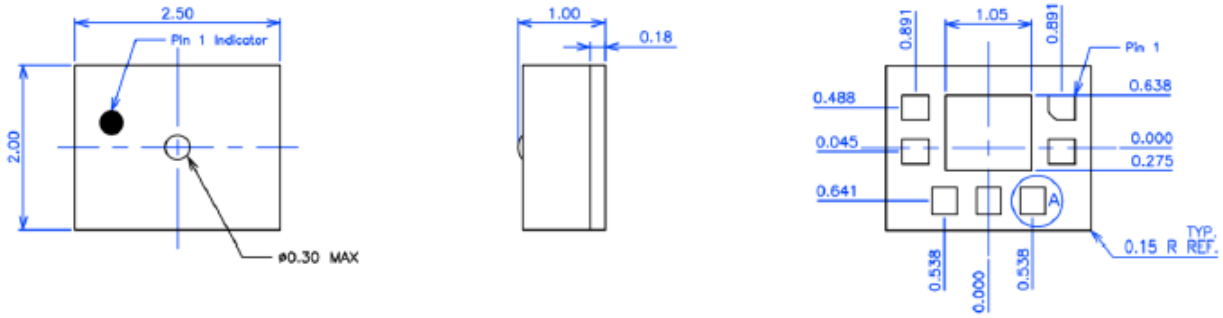


Pin	Name	Description
1	RF In	(High power input)
7	RF Out	Antenna TX
2, 3, 4, 5, 6, 8,	GND	Ground

Typical Part Marking

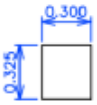


Outline Drawing



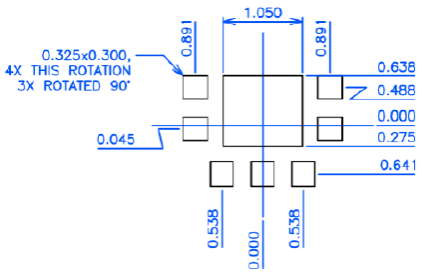
NOTES:
1. Terminal Finish:
Electroless Ni/Electroless Pd/Immersion Au

Notes:
– All Units are in mm unless otherwise stated
– General Tolerance:
Linear X.XXX = ±0.050mm
X.XX = ±0.10mm

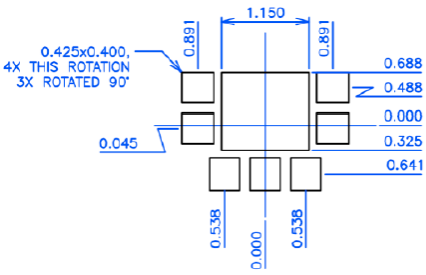


DETAIL A
PAD
SCALE: 2x
3X THIS ROTATION
4X ROTATED 90°
PIN 1 CHAMFER 0.150 X 45°

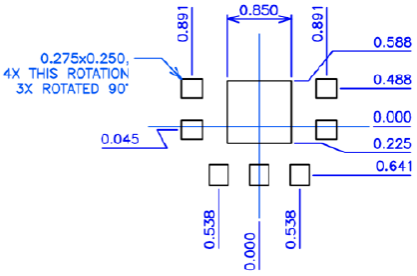
PCB Footprint



Recommended PCB
Metal Top View



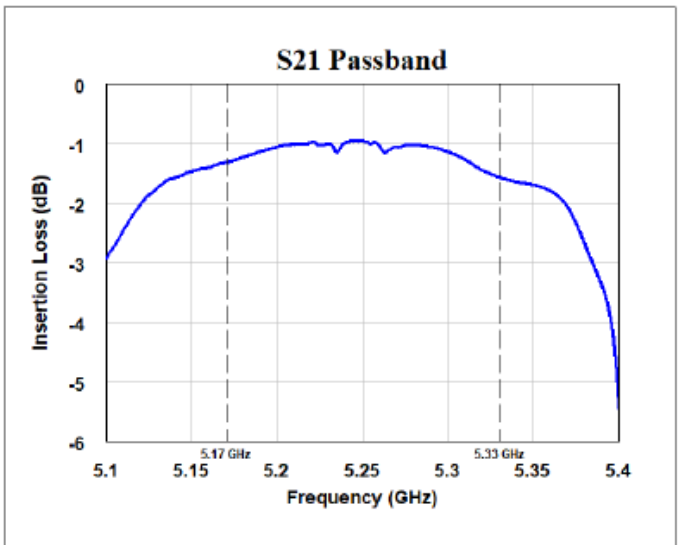
Recommended
Solder Mask Opening
Top View

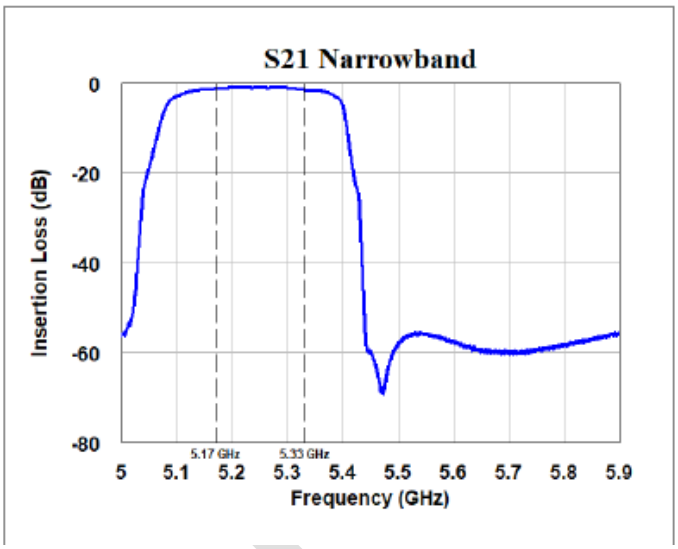


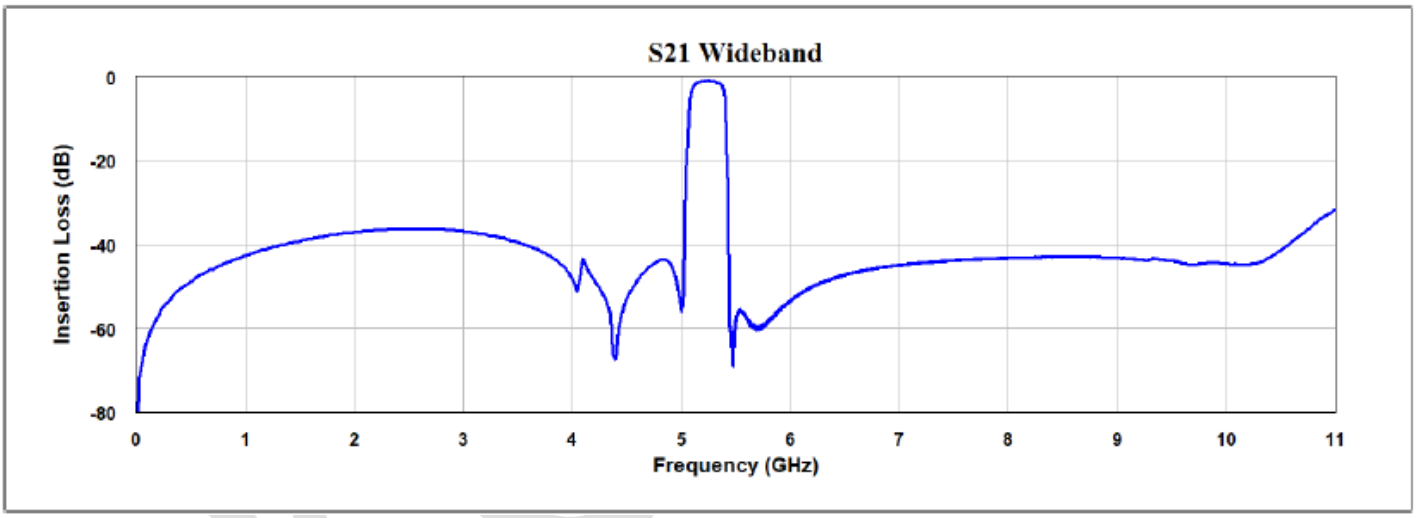
Recommended Stencil
Pattern Top View

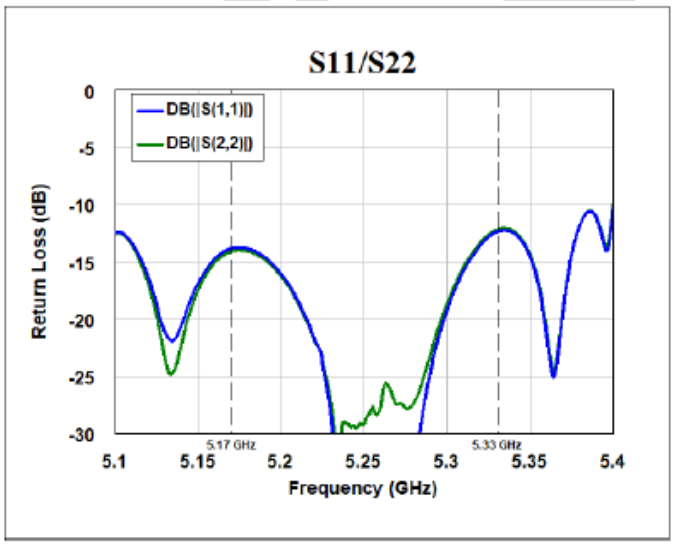
Unit: mm

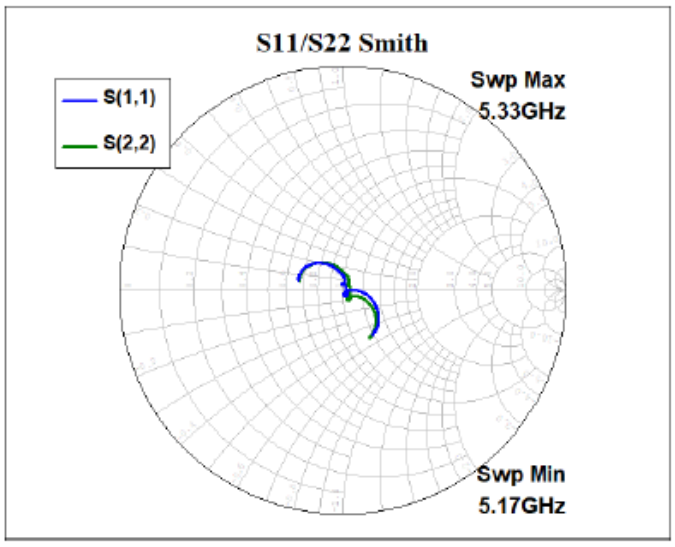
Performance Plots







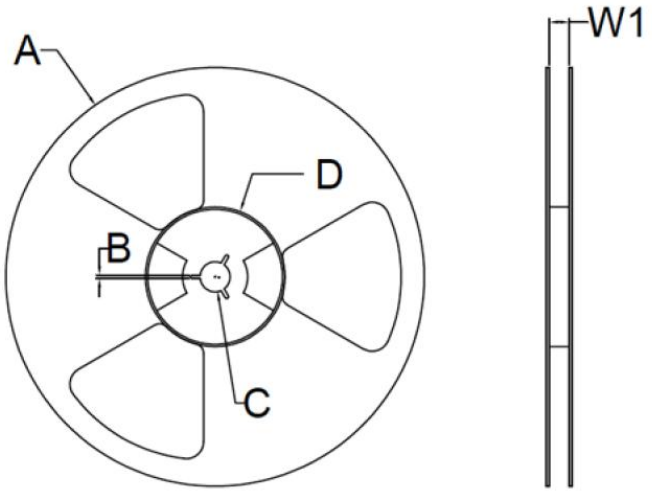




Reel Dimension

Reel Count

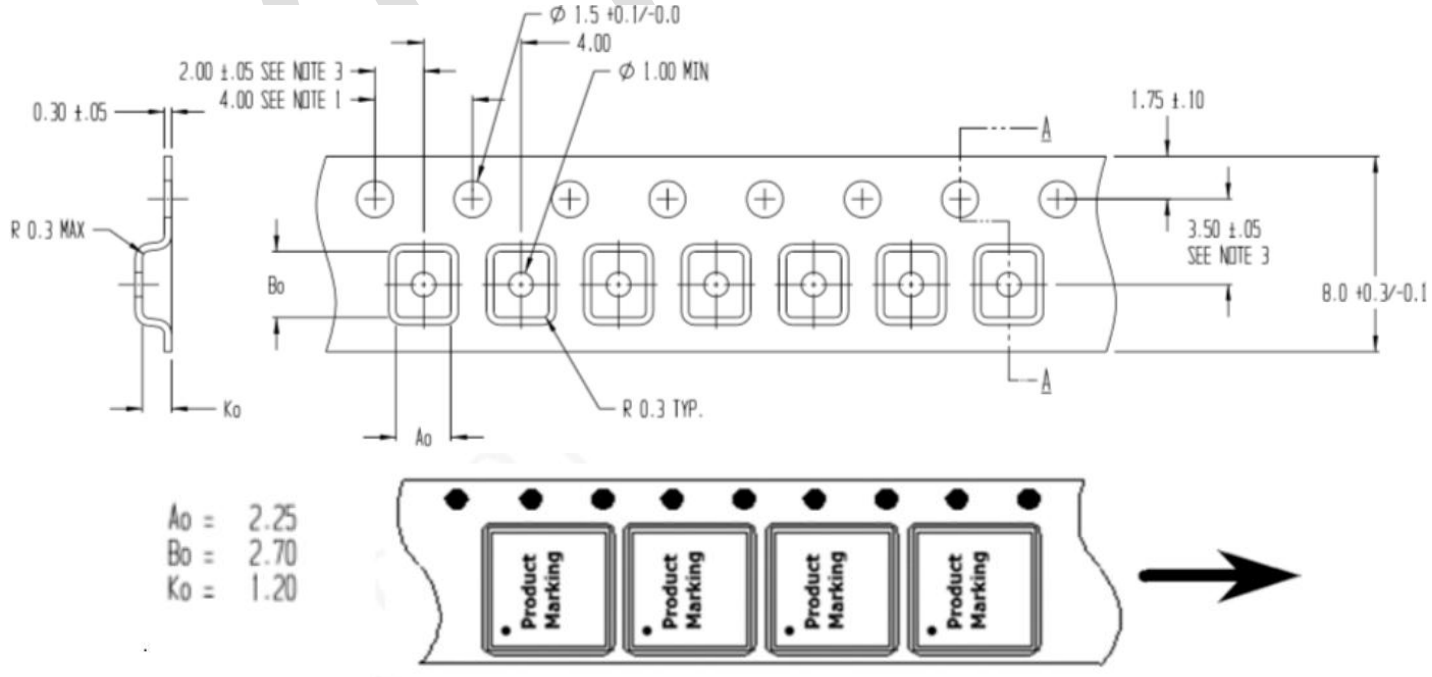
7” = 2500



Reel Dimensiones						
Reel Size	Tape Width	A	B	C	D	W1 *measured at hub
7 Inch	8 mm	180 +0/-2.0 mm	2.0mm +/-0.5	13.0 + 0.5 / -0 mm	60.0 +/- 2.0 mm	8.40 + 1.5 / -0 mm
	12 mm	180 +0/-2.0 mm	2.0mm +/-0.5	13.0 + 0.5 / -0 mm	60.0 +/- 2.0 mm	12.40 + 2.0 / -0 mm
	16 mm	180 +0/-2.0 mm	2.0mm +/-0.5	13.0 + 0.5 / -0 mm	60.0 +/- 2.0 mm	16.40 + 2.0 / -0 mm
13 Inch	8 mm	330 +/- 2.0 mm	2.0mm +/-0.5	13.0 + 0.5 / -0.2 mm	102 +/- 2.0 mm	8.8 + 2.0 / -0 mm
	12 mm	330 +/- 2.0 mm	2.0mm +/-0.5	13.0 + 0.5 / -0.2 mm	102 +/- 2.0 mm	12.8 + 2.0 / -0 mm
	16 mm	330 +/- 2.0 mm	2.0mm +/-0.5	13.0 + 0.5 / -0.2 mm	102 +/- 2.0 mm	16.8 + 2.0 / -0 mm

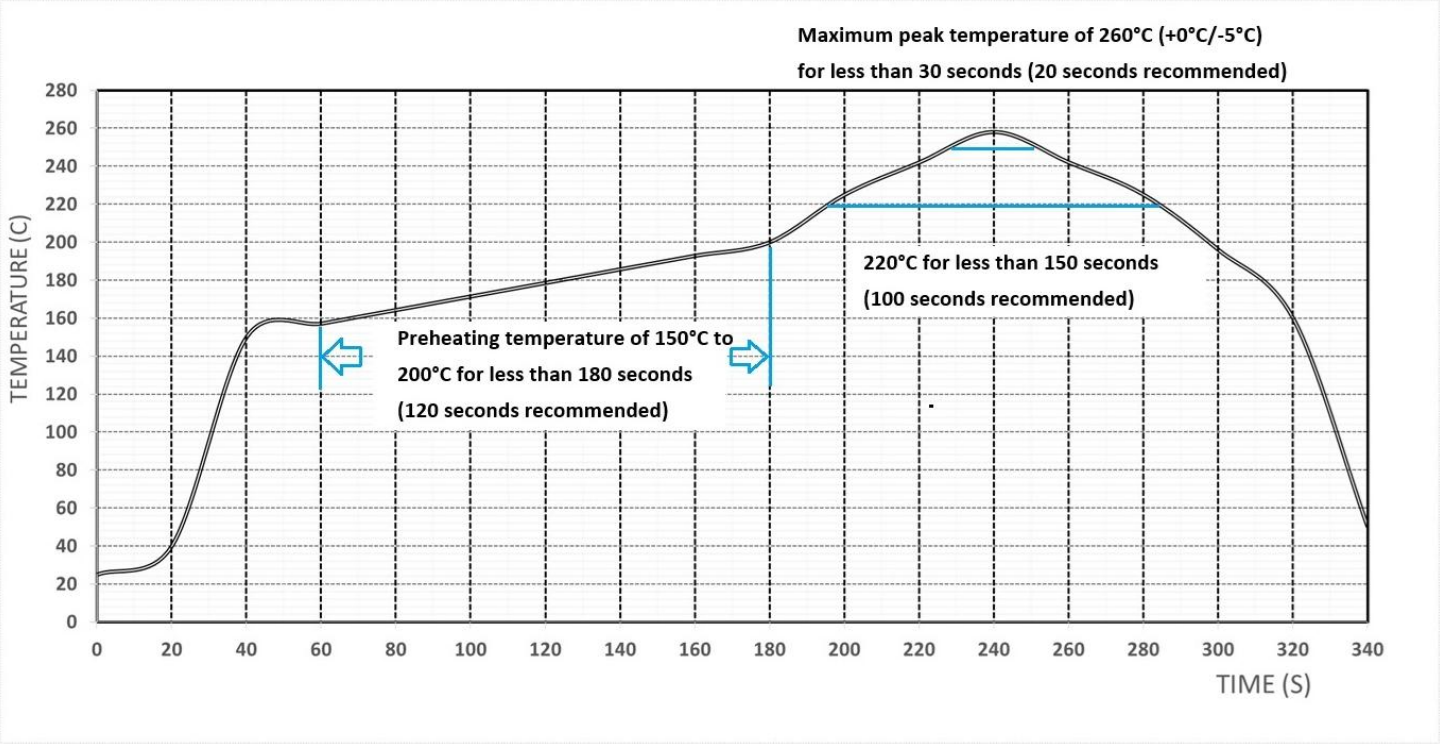
Note: 7 Inch Reel Only Has One Opening

TAPE DIMENSION



RECOMMENDED REFLOW PROFILE

1. Preheating shall be fixed at 150℃~200℃ for 90~180 seconds.
2. Ascending time to preheating temperature 150℃ shall be 30 seconds min.
3. Heating shall be fixed at 220℃ for 90~130 seconds
4. Heating 20 seconds for 245~260℃ peak (min. 10sec, max 30sec).
5. Time: 2 times.



RECOMMENDED SMT Pick Up Nozzle Size

AKTS BFX3006G a 2520 package size with a vent hole gel size at the center of the top surface package. As such, in order to have an optimum SMT pick up, we would recommend to using a nozzle size with the **inner** diameter of 1.20 mm to 1.30 mm.