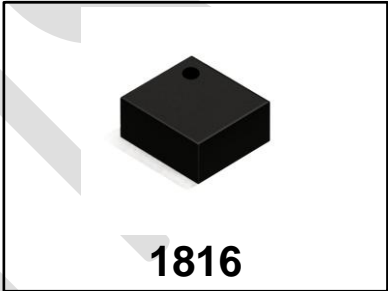


**BFX3005T**

**6535 MHz  
BAW Filter**



**Maximum Rating**

- Input Power Level: + 30dBm
- Operating Temperature: -40°C to +95°C
- Storage Temperature: -40°C to +125°C
- Moisture Sensitivity Level: 3
- ESD Class TBD (HBM) Class TBD (CDM)
- Small Form Factor 1.6mm x 1.8mm x 0.63mm

**Applications**

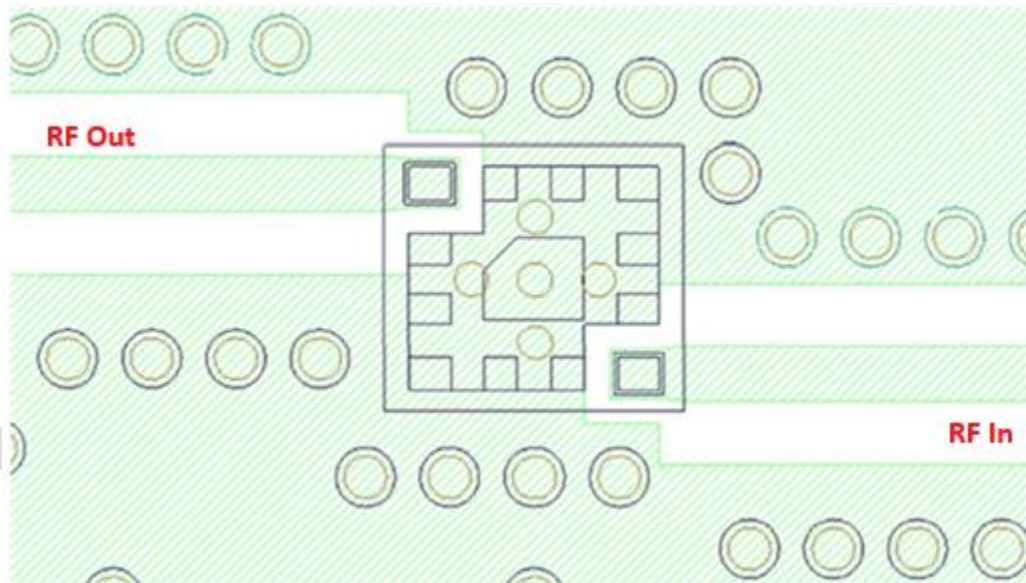
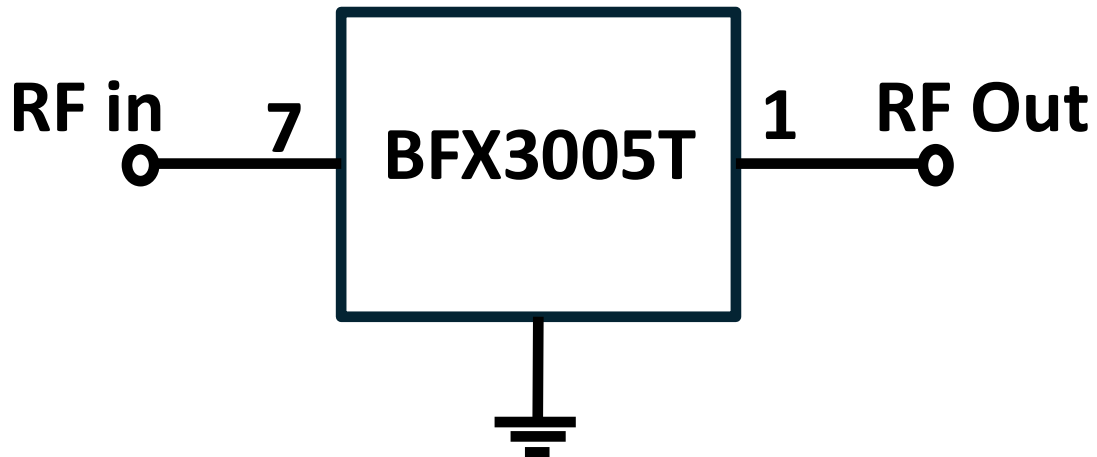
- Wi-Fi 6E & 7 tri band routers, integrated cable modem
- Wi-Fi 6E & 7 tri band access points
- LTE/LAA small cells

**Electrical Characteristics**

Item	Unit	Min.	Typ.	Max.
<b>Center Frequency and Bandwidth</b>	MHz	5945	6535	7125
<b>Insertion Loss (5945 - 7065)</b>	dB		1.9 <sup>(1)</sup>	3.0 <sup>(3)</sup>
<b>Insertion Loss (7065 - 7125)</b>	dB		1.9 <sup>(1)</sup>	3.0 <sup>(2)</sup>
<b>Amplitude Ripple</b>	dB		2.0	2.5
<b>Attenuation</b>				
30 ~ 1000 MHz	dB	60	75	
1000 ~ 2400 MHz	dB	30	38	
2400 ~ 2500 MHz	dB	30	34	
3300 ~ 3800 MHz	dB	26	32	
3800 ~ 4200 MHz	dB	12	15	
4200 ~ 5000 MHz	dB	3	6	
5170 ~ 5330 MHz	dB	47 <sup>(3)</sup>	55	
5490 ~ 5650 MHz	dB	42 <sup>(3)</sup>	50	
5650 ~ 5815 MHz	dB	50 <sup>(3)</sup>	55	
5815 ~ 5835 MHz <sup>(2)</sup>	dB	48 <sup>(5)</sup>	52	
7737 ~ 8236 MHz	dB	5	9	
8500 ~ 11890 MHz	dB	12	17	
11890 ~ 14250MHz	dB	20	25	
<b>Return Loss</b>	dB	10 <sup>(2)</sup>	16 <sup>(1)</sup>	
<b>Load Impedance</b>	Ω		50	
<b>Power Handling (OFDM MCS0 20M, PAR 10dB)</b>	dBm			30

(1) Averaged over specified frequency at 25C. (2) Averaged over 20MHz channel. (3) Averaged over 160MHz channel. (4) Averaged over 60MHz. (5) For temperature >25C. (6) Averaged over passband. (7) Performance based on AKOUSTIS EVB.

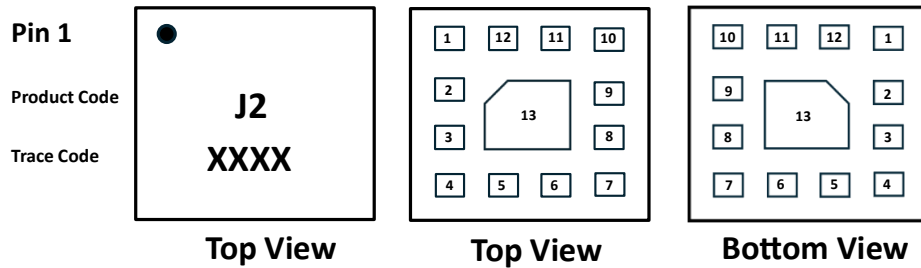
## EVB Schematic & Layout



### Notes:

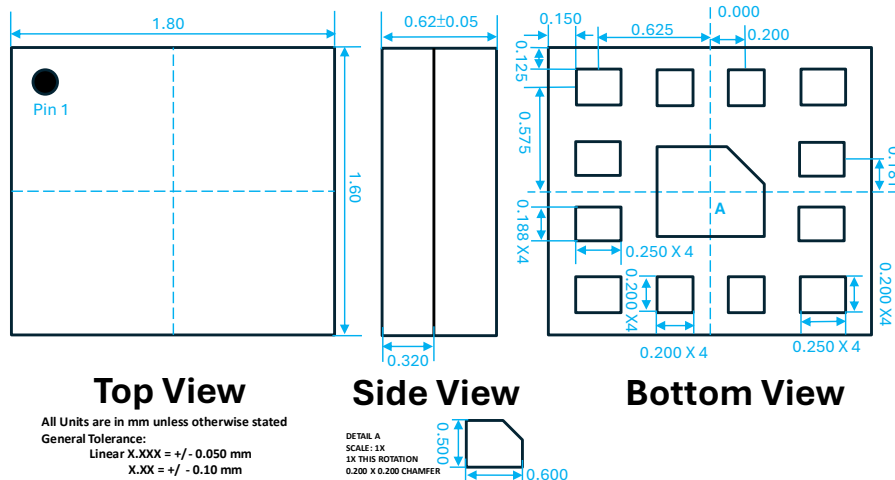
- 1) Center ground pad via: 8mil; outer via: 10mil diameter
- 2) "RF in" trace located on bottom layer
- 3) Place tuning components as close as possible to filter
- 4) Emulate AKOUSTIS EVB as close as possible  
Particularly the via ground pattern

## Pin definition

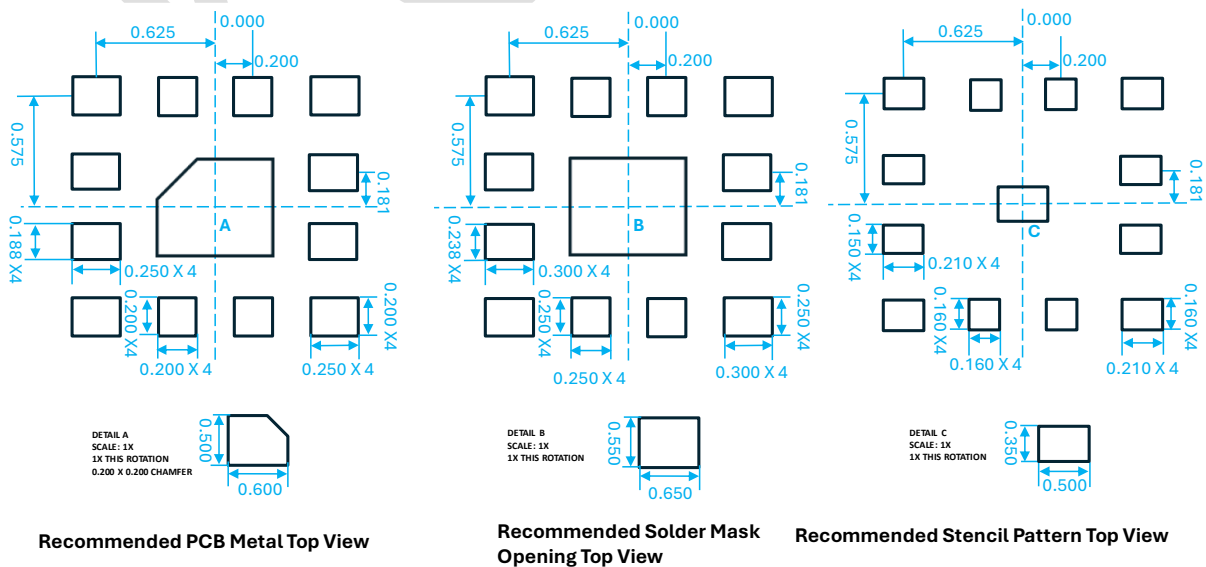


Pin	Name	Description
1	RF Out	Antenna
7	RF In	TX (High power input)
2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13	GND	Ground

## Outline Drawing

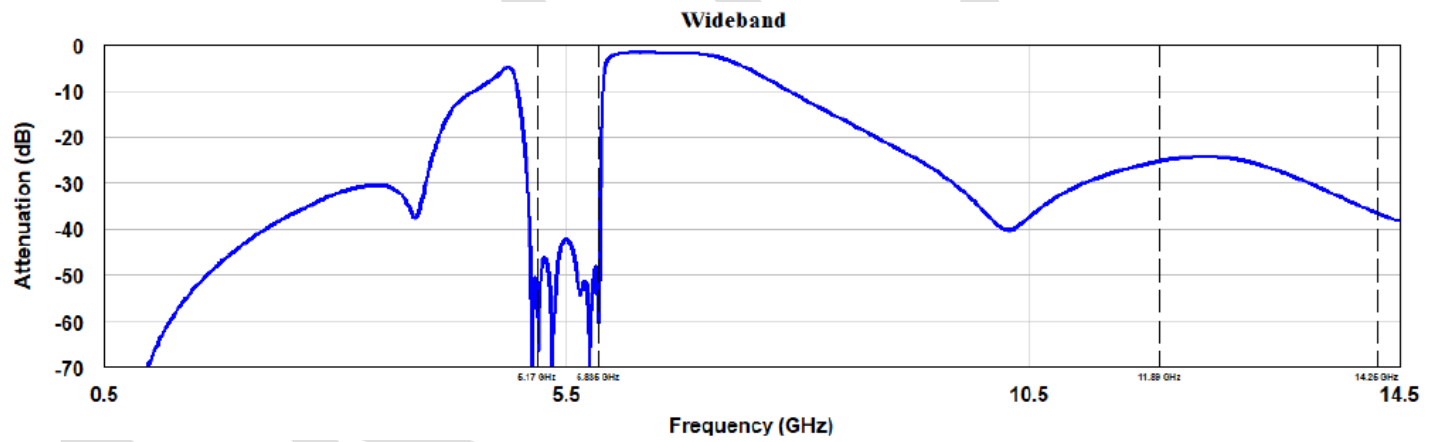
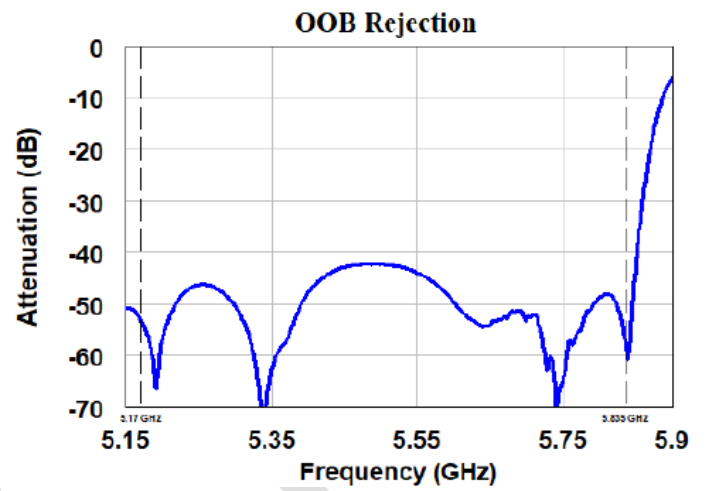
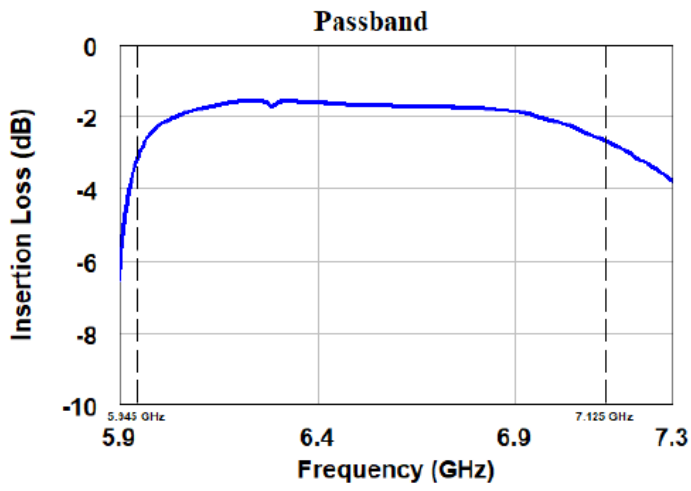


## PCB Footprint

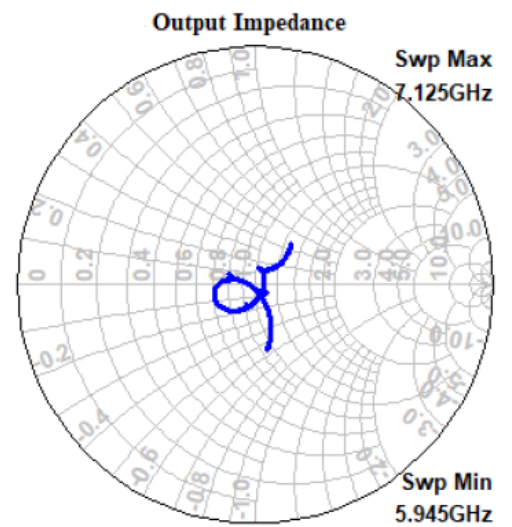
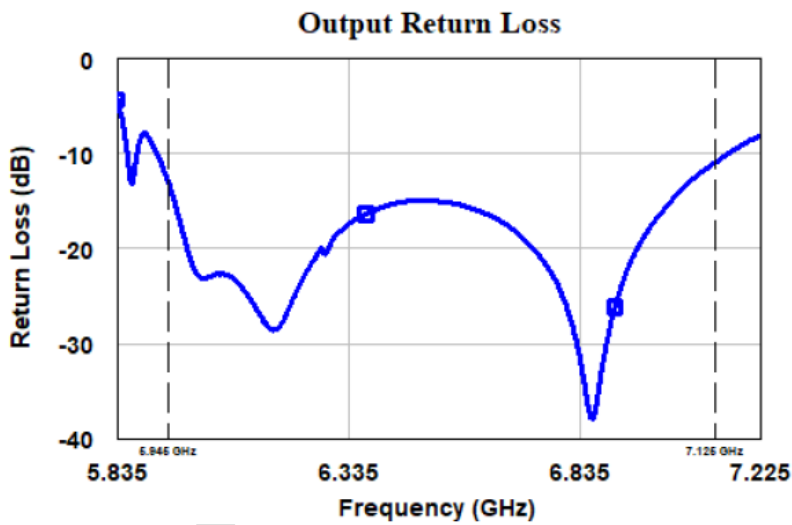
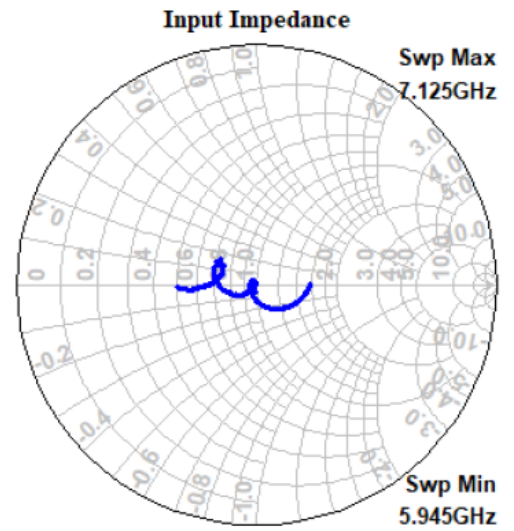
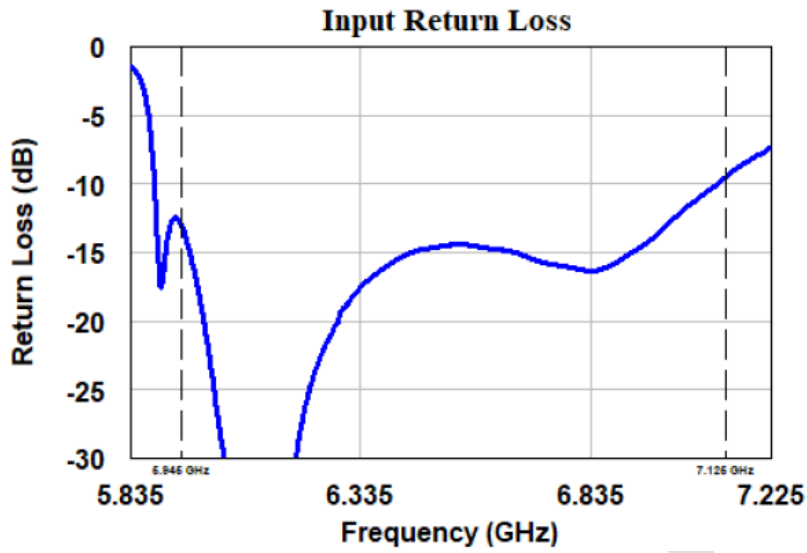


Unit: mm

## Performance Plots



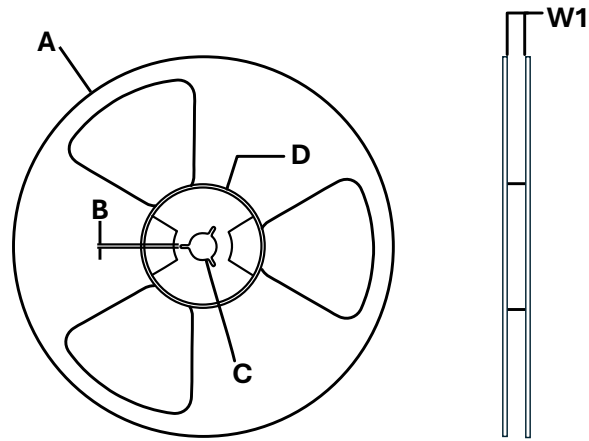
# Performance Plots...continued



# Reel Dimension

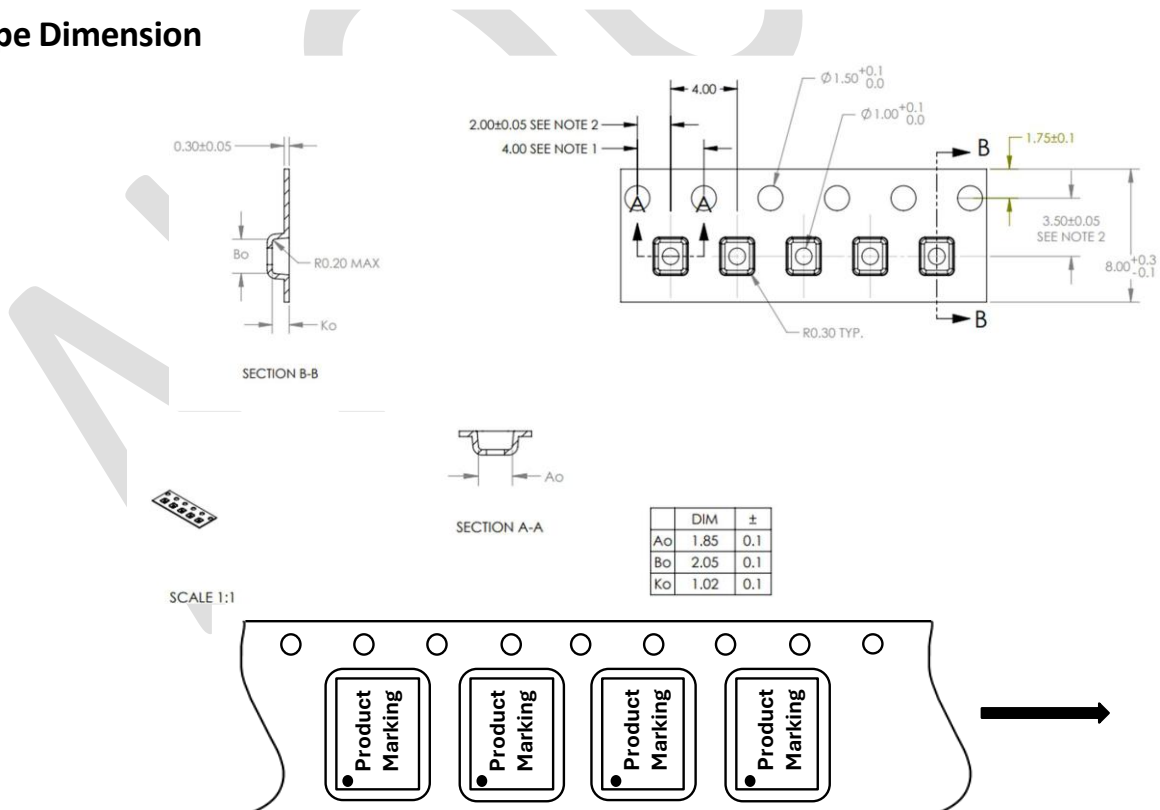
Reel Count

7" = 2500



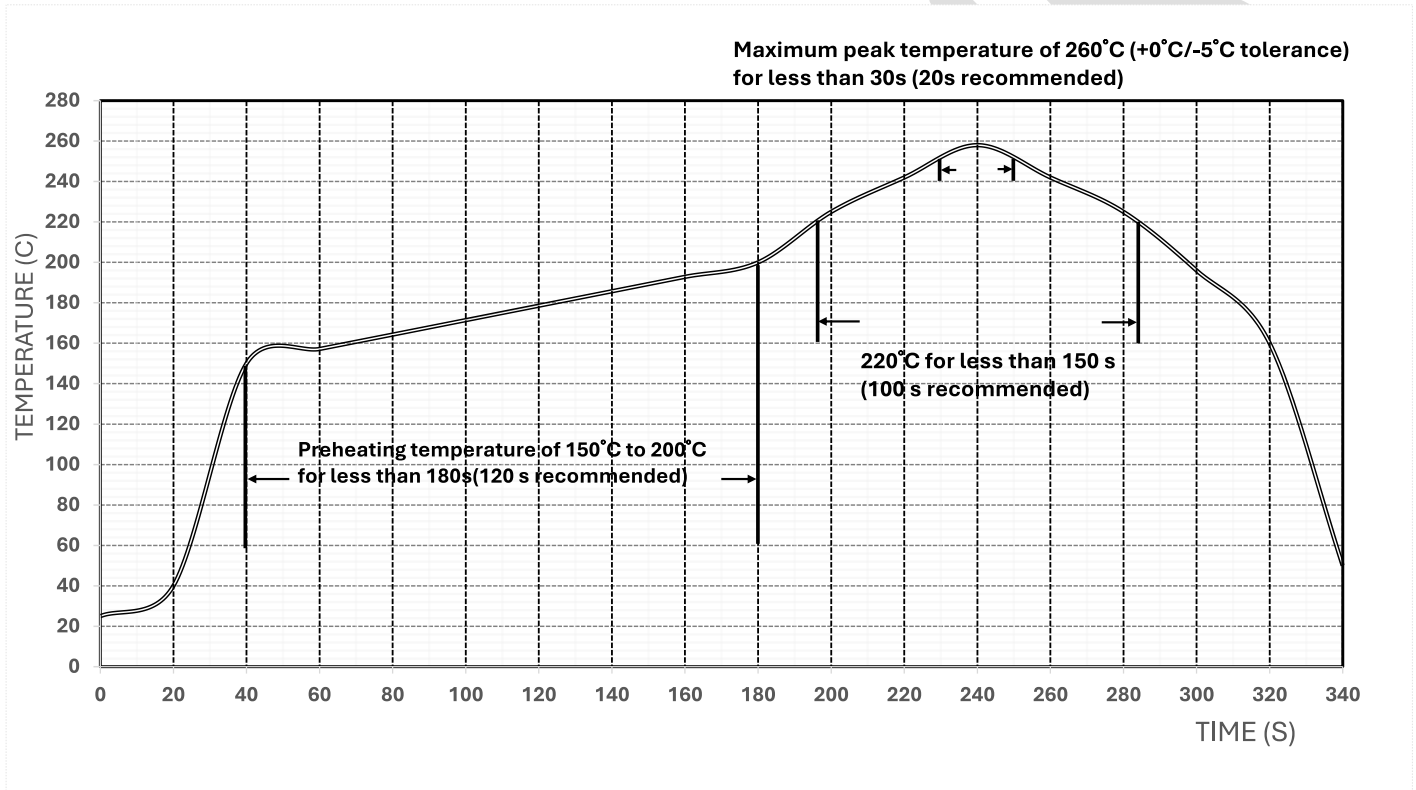
Reel Dimensions						
Reel Size	Tape Width	A	B	C	D	W1 *measured at hub
7 Inch	8 mm	180 +0/-2.0mm	2.0 +/-0.5mm	13.0 +0.5/-0mm	60.0 +/-2.0mm	8.40 +1.5/-0mm
	12 mm	180 +0/-2.0mm	2.0 +/-0.5mm	13.0 +0.5/-0mm	60.0 +/-2.0mm	12.40 +2.0/-0mm
	16 mm	180 +0/-2.0mm	2.0 +/-0.5mm	13.0 +0.5/-0mm	60.0 +/-2.0mm	16.40 +2.0/-0mm

# Tape Dimension



## Recommended Reflow Profile

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



## Ordering Information

Part Number	Description
BFX3005TDEMO	Evaluation board
BFX3005T	7" reels at 2.5Kpcs
Note: Samples can be requested	

## Contact Information

All contents specified in the datasheet are subject to change.

Please contact Akoustis for the latest on our products and company information.

Email: [sales@akoustis.com](mailto:sales@akoustis.com)

Website: [www.akoustis.com](http://www.akoustis.com)

Telephone: +1 704.997.5735

Fax: +1 704.997.5734