SPECIFICATION

Part No.	:	**LBP.2450.X.B.30**
Description	:	LTCC Band Pass Filter for 2450MHz
		Bandwidth 100MHz (Cellular Frequency Rejection)
Features	:	Center Frequency 2450.0 MHz
		Low Insertion Loss
		High Attenuation
		Ultra-Compact, Low Profile SMT Package
		Dims: 2.0 x 1.25 x 0.95mm

1. Introduction

Taoglas are utilizing their deep understanding of the RF component design and manufacturing process to provide high-quality, small-form-factor, cost-effective and easy to implement RF filters. The Taoglas Filters Division will feature a range of off-the-shelf filters for a variety of applications, including filters for emerging license free bands used for IoT and for GPS L1/L2 and L1/L5 applications. We can also work with customers to develop bespoke filter solutions.

Taoglas LTCC filters are designed to be used in wireless transmitters or receivers. They feature low insertion loss and provide good rejection of unwanted signals at harmonic frequencies for improved system performance. The product is manufactured as a multi-layer monolithic ceramic structure which provides high reliability in a lightweight, low-profile, industrial standard SMT package.

These small part sizes allow for high density PCB layout, provide excellent solderability, and allow for easy visual inspection capability.

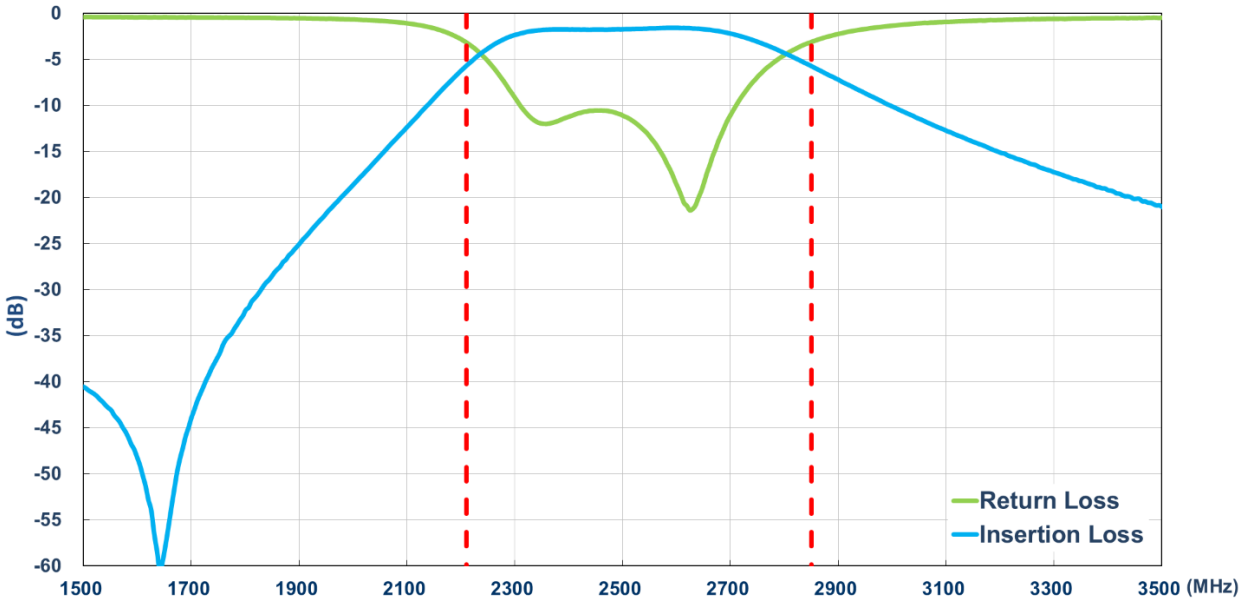
The LBP.2450.X.B.30 is a standard Taoglas product but can be customized for specific customer needs. For more information please contact your regional sales office.

2. Specification

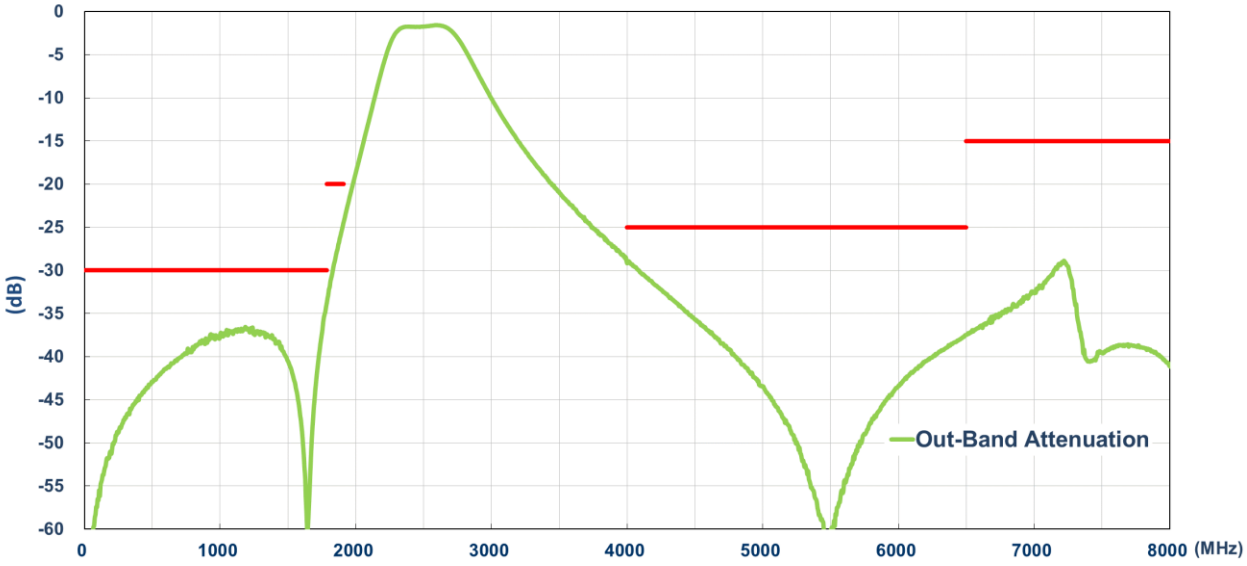
Electrical	
Centre Frequency (Fo)	2450 MHz
3dB Bandwidth	100 MHz
Insertion Loss	1.5 dB max
Return Loss	< -10 dB
Attenuation	> 30dB @ 0 ~ 1785 MHz > 25dB @ 1785 MHz ~ 1910 MHz > 25dB @ 4000 MHz ~ 6500 MHz > 15dB @ 6500 MHz ~ 8000 MHz
In/Out Impedance	50 Ω
Power Dissipation	1.0 W min.
Mechanical	
Dimension	2.0 x 1.25 x 0.95 mm (L x W x H)
Material	Ceramic
Finish	Ag plated
Environmental	
Operating Temperature	-40°C to 85°C
Storage Temperature	-40°C to 85°C

3. Characteristics Curve

3.1. Pass Band Return & Insertion Loss

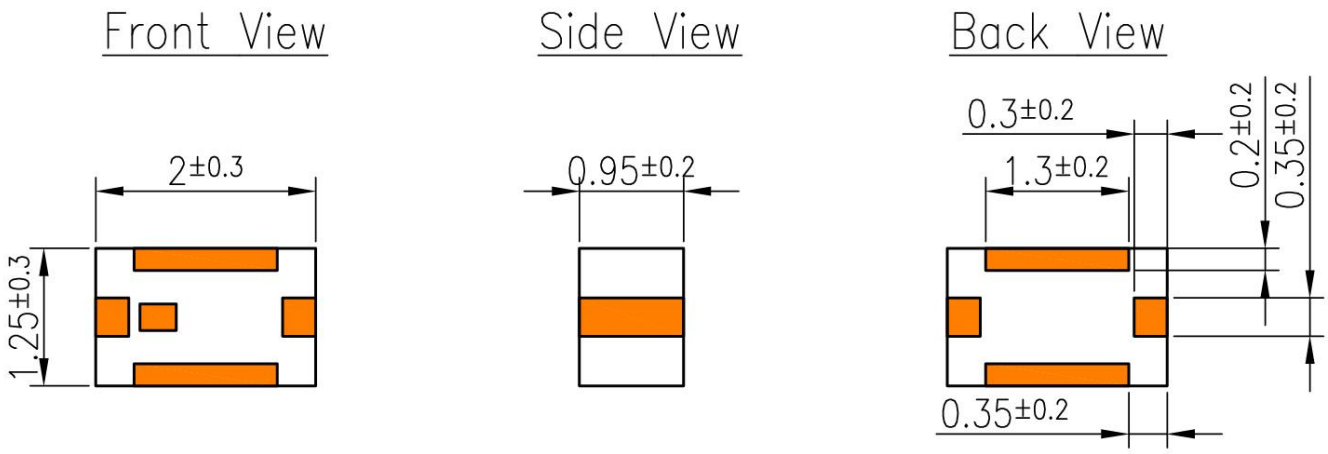


3.2. Out-Of-Band Attenuation



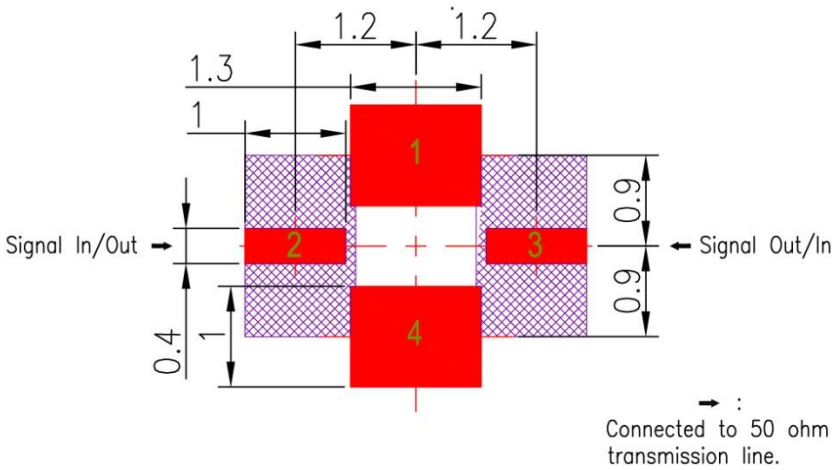
4. Drawing

4.1. Antenna Drawing

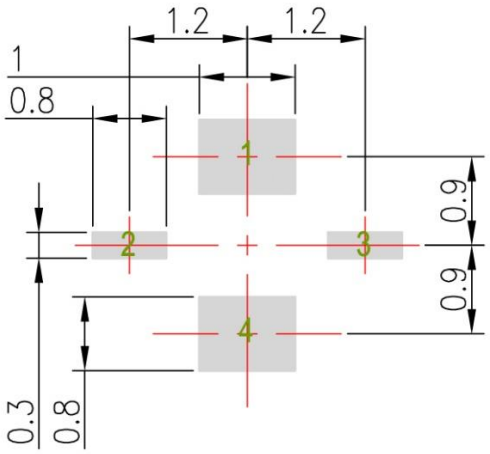


4.2. Recommended PCB Layout

4.2.1. Top Copper

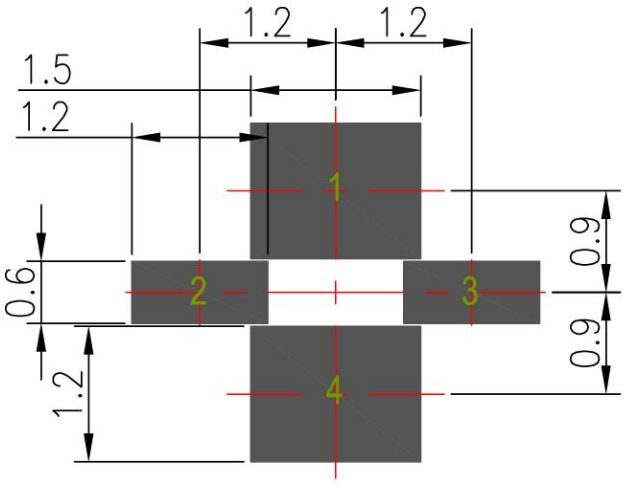


4.2.2. Top Solder Paste

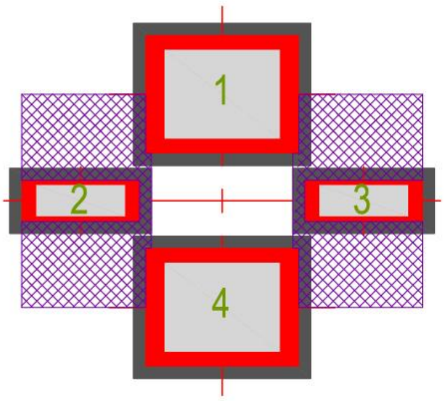


NOTE:
1. Ag Plated area
2. Solder Mask area
3. Copper area
4. Paste area
5. Copper Keepout Area
6. Any vias in pads should be either filled or tented to prevent solder from wicking away from the pad during reflow.
7. The dimension tolerances should follow standard PCB manufacturing guidelines

4.2.3. Top Solder Mask



4.2.4. Composite Diagram



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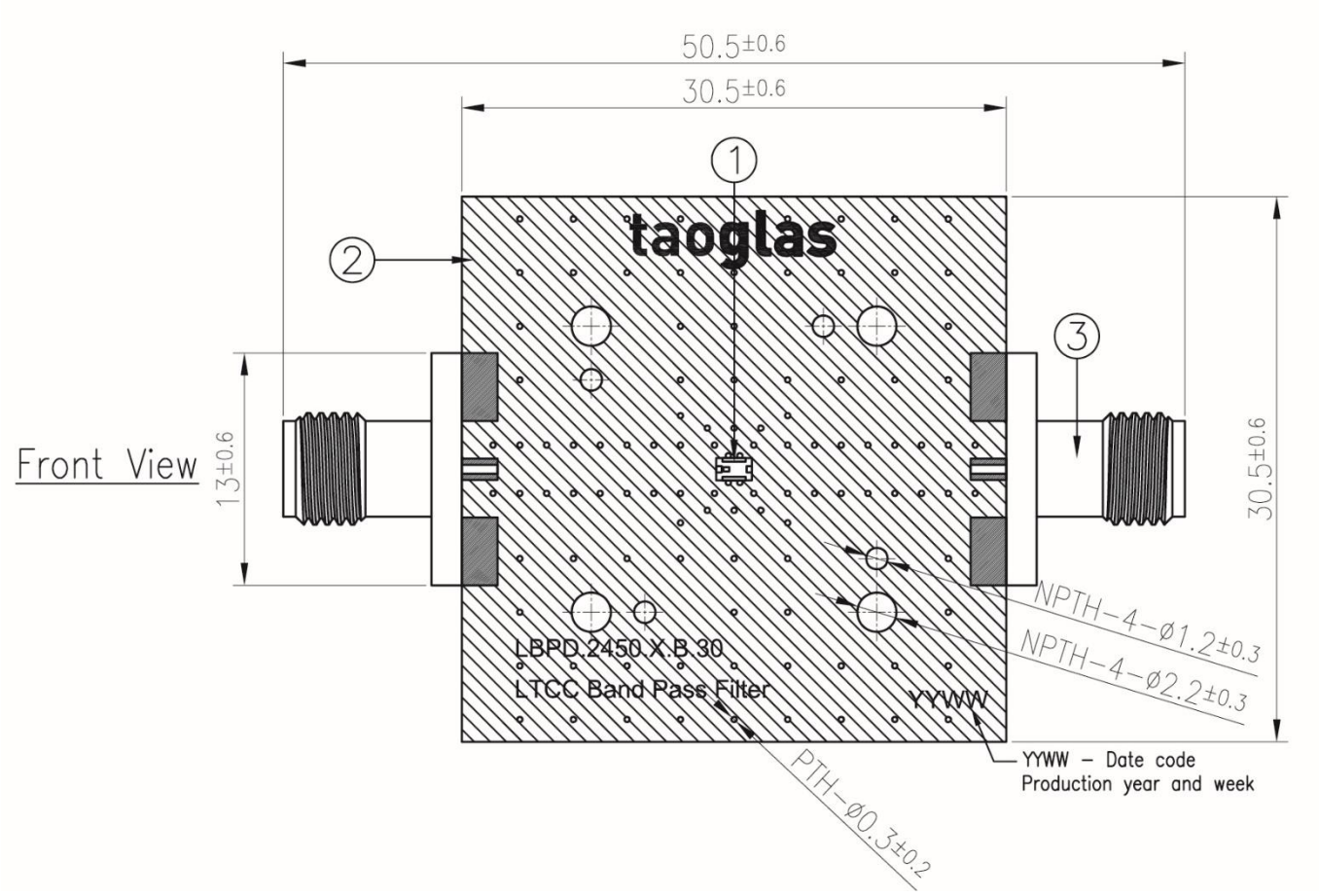
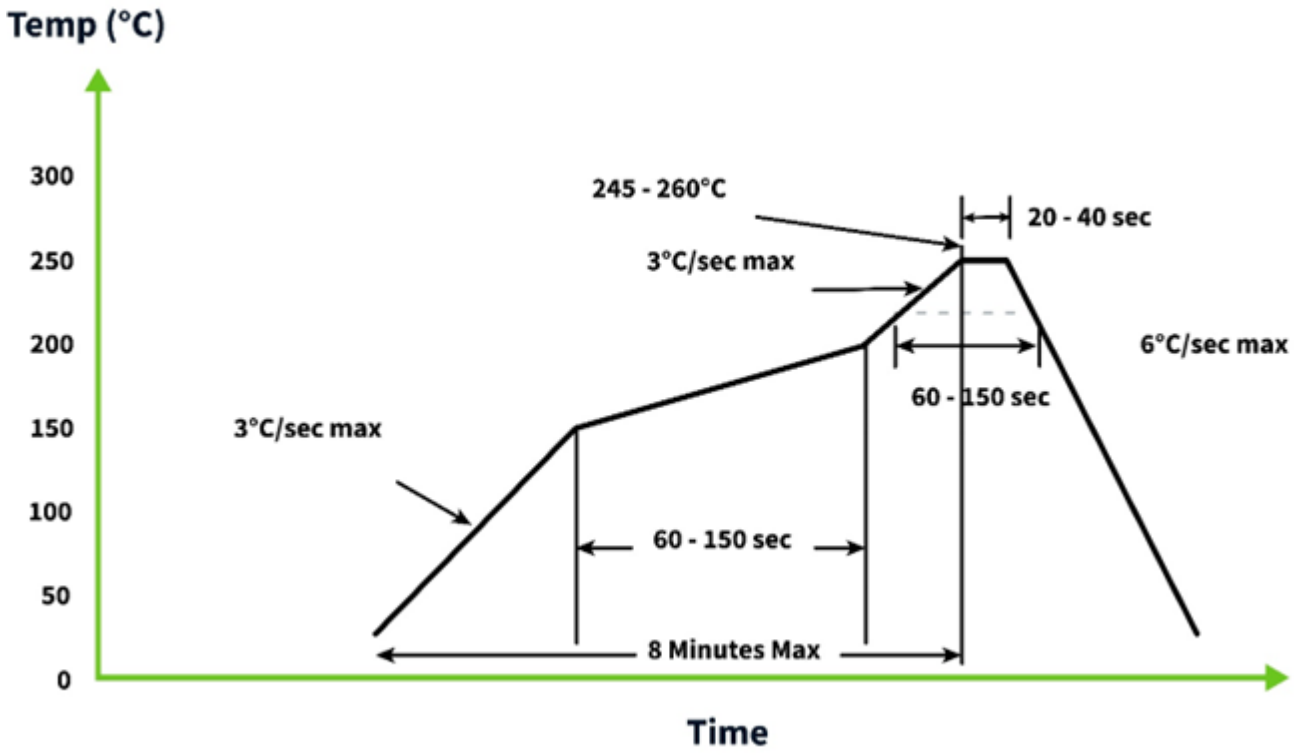
4.3. Evaluation Board Drawing



	Name	Material	Finish	QTY
1	Filter (2x1.25x0.95mm)	Ceramic	Clear	1
2	PCB	Composite 1.0t	Black	1
3	SMA(F) ST	Brass	Au Plated	2

5. Recommended Reflow Soldering Profile

The LBP.2450.X.B.30 can be assembled by following the recommended soldering temperatures are as follows:



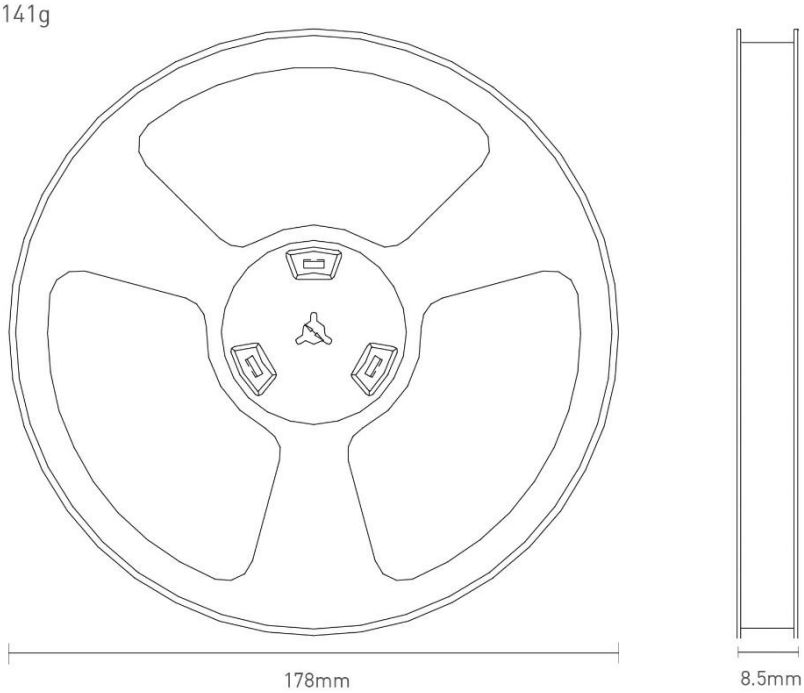
*Temperatures listed within a tolerance of +/- 10º C

Smaller components are typically mounted on the first pass, however, we do advise mounting the LBP.2450.X.B.30 when placing larger components on the board during subsequent reflows.

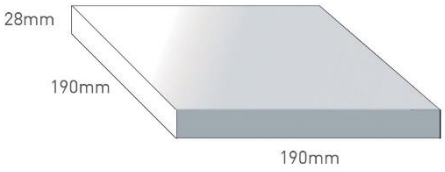
Note: Soldering flux classified ROL0 under IPC J-STD-004 is recommended.

6. Packaging

4000 pc LBP.2450.X.B.30
1 reel per small inner box
Dimensions - 178*8.5mm
Weight - 141g



8000 pc LBP.2450.X.B.30
2 reel in small inner box
Dimensions - 190*190*28
Weight - 331Kg



10 inner boxes / 80000 pcs in one carton
Carton Dimensions - 330*210*210mm
Weight - 3.7 Kg