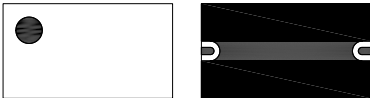


Description

The YCPB300 is a low temperature co-fired ceramic (LTCC) Band Pass Filter designed for high performance in various applications. The small part size allow for high density PCB layout, provide excellent solderability.



Applications

- ◆ 5G mmWave applications
- ◆ Narrow & Wideband amplifiers
- ◆ Factory and Process automation
- ◆ Test Instrumentation
- ◆ Satellite communication

Features

- ◆ 29.1 – 31.0GHz
- ◆ Low Insertion Loss
- ◆ High rejection out-of-band
- ◆ Surface Mount Type

Electrical Specification

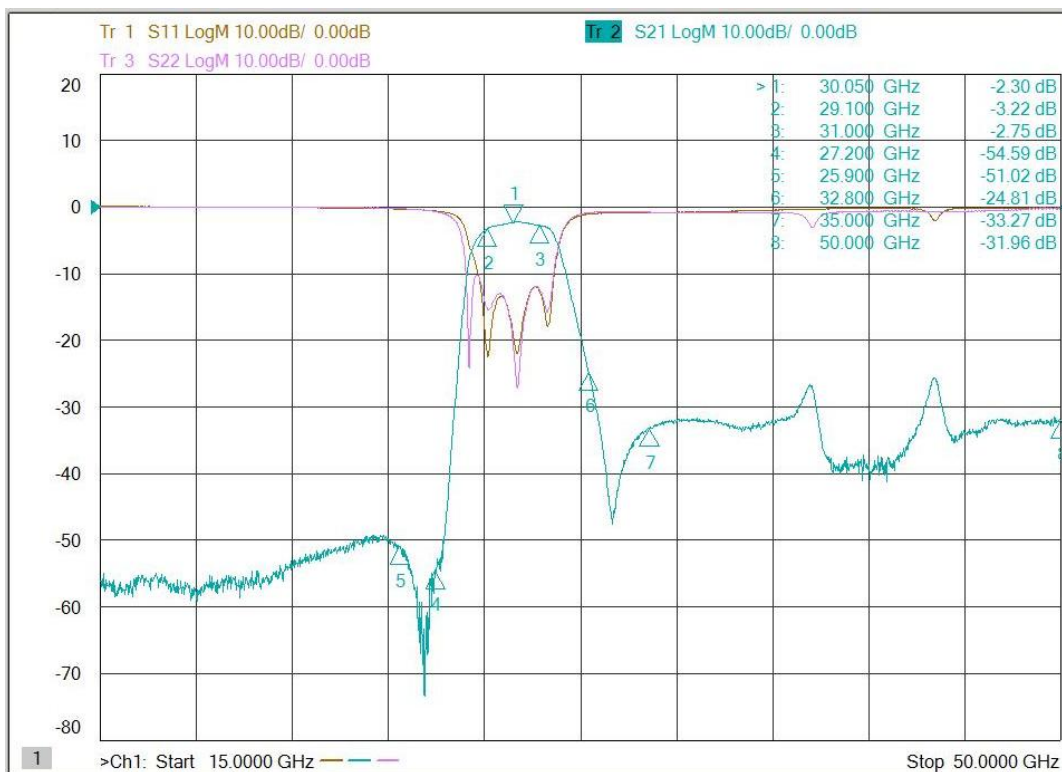
Parameter ¹⁾	Specification			Conditions	Unit
	Min.	Typ.	Max.		
Frequency	29.1	-	31.0	-	GHz
Insertion Loss	-	2.8	3.8	-	dB
VSWR	-	1.3	1.7	-	
Attenuation	45	50	-	@ 27.2GHz	dB
	48	54	-	@ 10.0 – 21.0GHz	
	43	46	-	@ 21.0 – 25.9GHz	
	20	33	-	@ 32.8 – 35.0GHz	
	20	30	-	@ 35.0 – 50.0GHz	
Group Delay	-	0.5	1		nS
Power Capacity	-	5	-	@ 85°C	W
Operation Temperature Range	-55	-	105	-	°C

Notes:

1) Ta = 25°C, 50Ω system, unless otherwise noted.

Performance Plots : measured data¹⁾

Insertion Loss, Attenuation & Return Loss



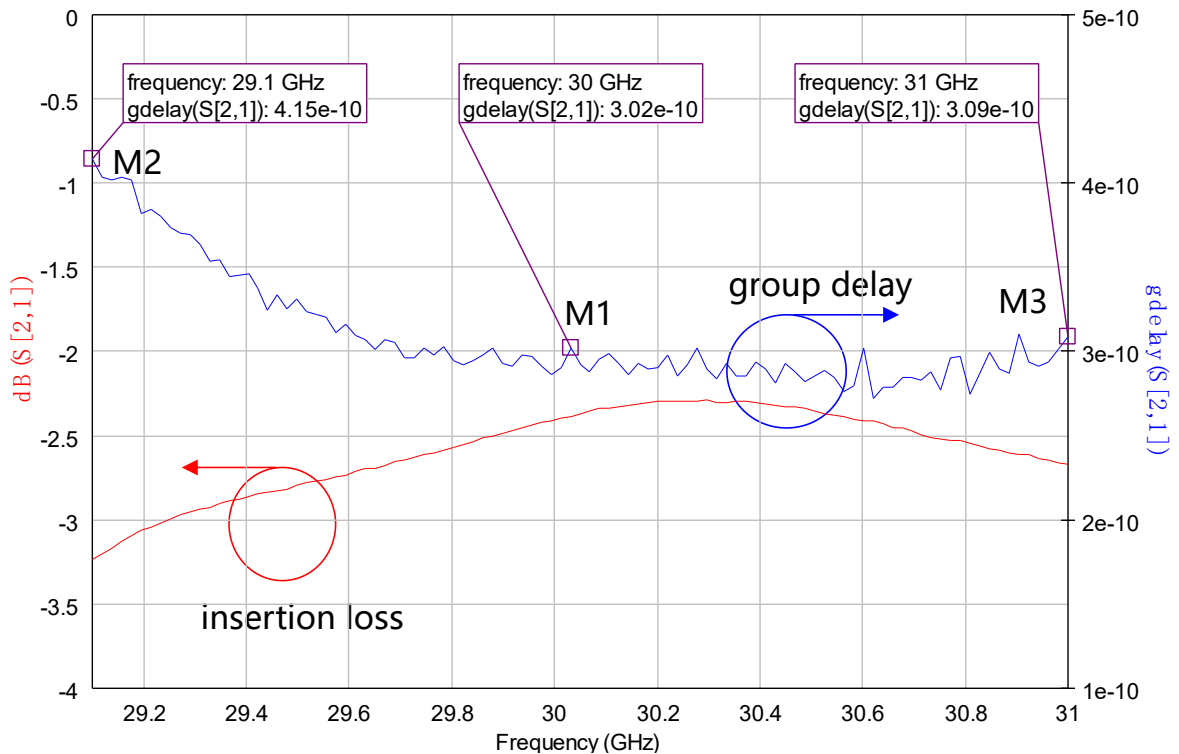
Marker	Frequency [GHz]	Value [dB]	Marker	Frequency [GHz]	Value [dB]
M1	30.05	-2.30	M6	32.8	-24.8
M2	29.1	-3.22	M7	35.0	-33.2
M3	31.0	-2.75	M8	50.0	-31.9
M4	27.2	-54.5			
M5	25.9	-51.0			

Notes:

1) Measure by placing an RF probe directly on the product itself.

Performance Plots : measured data¹⁾

Group Delay & Insertion Loss



Marker	Frequency [GHz]	Value [nS]	Marker	Frequency [GHz]	Value [dB]
M1	30	0.30			
M2	29.1	0.41			
M3	31	0.30			

Notes:

1) Measure by placing an RF probe directly on the product itself.

Recommended Operating Condition

Parameter	Min	Typ	Max	Units
Operating Temperature	-55	25	105	°C
Storage Temperature	-20		35	°C

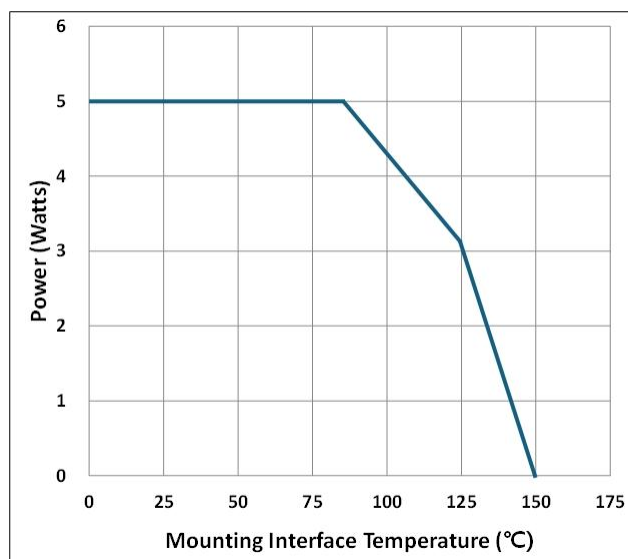
Notes:

1) Storage Temperature Range before soldering in taping package.

Absolute Maximum Ratings

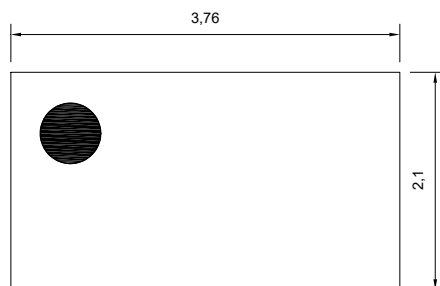
Parameter	Rating	Units
Input Power (AVG/CW)	5	W

Power Derating Curve

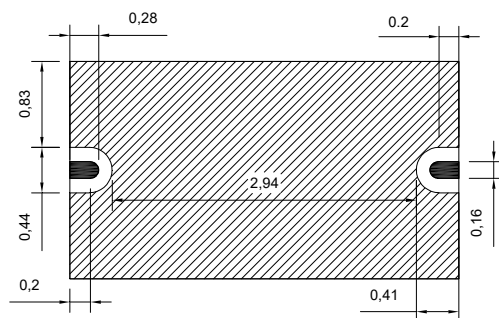


Package Outline Drawing

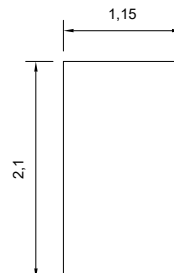
[Top View]



[Bottom View]



[Side View]



[Side View]



Unit : mm
Tolerance : +/- 0.15