

Thin Film Chip L,C filter

Now under development



Excellent loss characteristic
Small size and low tap



FEATURES

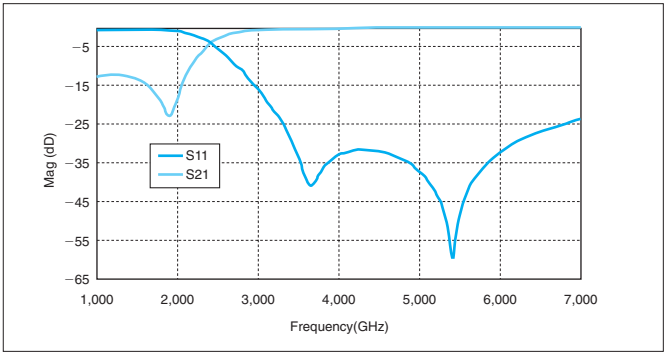
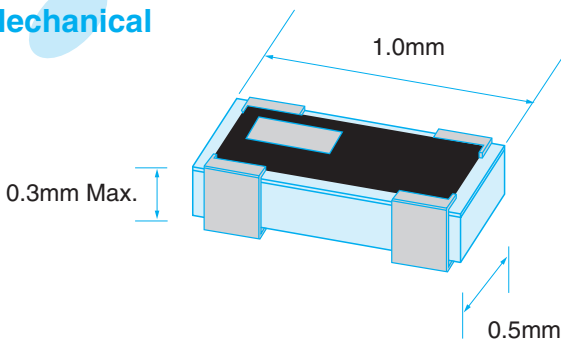
Realized high performance LPF for GSM/DCS in chip size 1.0×0.5×0.3mm



Example of application and its Characteristic

Low-Pass Filter (LPF) for GSM

Mechanical

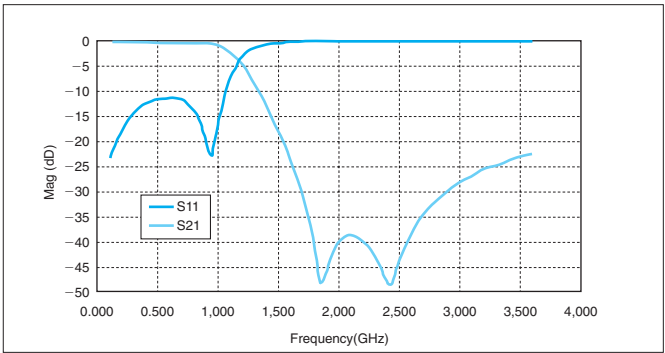
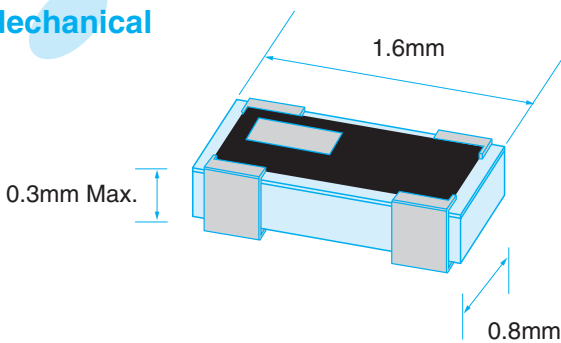


Electrical

	fo [MHz]	Loss [dB]fo	ATT [dB]2fo	ATT [dB]3fo
specification	1710-1910	<0.8	>30	>25
Simulation		<0.76	>29.5	>38.0

Low-Pass Filter (LPF) for DCS

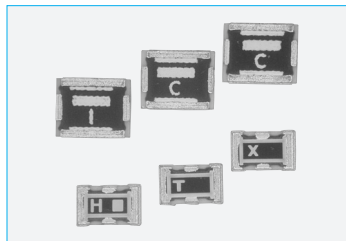
Mechanical



Electrical

	fo [MHz]	Loss [dB]fo	ATT [dB]2fo	ATT [dB]3fo	ATT1805-1830
specification	824-915	<0.80	>25	>25	>40
Simulation		<0.71	>27.3	>33.3	>42.9

· Please contact us for 0201 chip in high frequency.



Thin Film Band-Path Filter

TBF series NEW



- Band-pass filter with low tap of 0.5mm and small size of 2.0*1.25mm(0805)
- Excellent loss characteristics

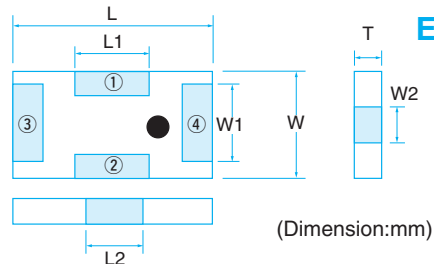
Applications

Bluetooth,
Wireless LAN,
PHS

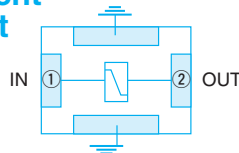


SPECIFICATIONS

Mechanical



Equivalent circuit



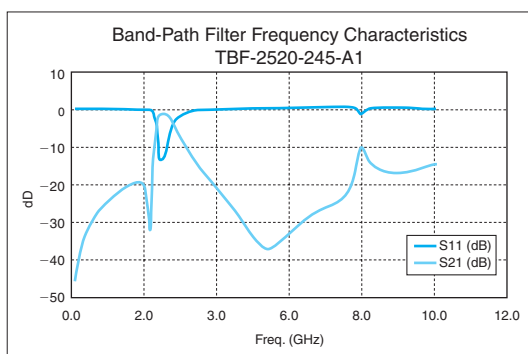
Dimension (mm)	TBF-2012	TBF-2520
L	2.0±0.1	2.5±0.2
L1	0.4±0.1	2.0±0.2
L2	0.4±0.1	1.2±0.1
W	1.25±0.1	2.0±0.2
W1	1.25±0.1	0.8±0.1
W2	0.75±0.1	0.4±0.1
T	0.5 max.	0.5±0.1

Electrical

Type	TBF-2012-245-R1	TBF-2520-245-A1	TBF-2520-245-B1	TBF-2520-245-A2
Application	For Bluetooth, W-LAN	For Bluetooth	For W-LAN	For PHS
Fo(MHz)	2450	2450	2450	2450
Band(MHz)	2400~2500	2400~2500	2400~2500	2400~2500
Insertion Loss	1.5dB at 25°C 1.6dB at -40~85°C	1.7dB at 25°C 1.9dB at -40~85°C	1.3dB at 25°C 1.5dB at -40~85°C	3.0dB at 25°C 3.3dB at -40~85°C
Attenuation	30.0dB at 880~960MHz 30.0dB at 1710~1910MHz 30.0dB at 4800~5000MHz 30.0dB at 7200~7500MHz	25.0dB at 1750MHz 25.0dB at 2000~2100MHz 22.0dB at 4800~5000MHz	35.0dB at 880~915MHz 35.0dB at 1710~1785MHz 25.0dB at 1850~1910MHz 30.0dB at 4800~5000MHz	20.0dB at 2000MHz 25.0dB at 2690MHz 25.0dB at 4800~5000MHz 20.0dB at 7200~7500MHz
VSWR in BW	2.0 Max.			
Impedance	50Ω			
Power	500mW Max.			

Type	TBF-2012-190-T1	TBF-2520-190-A1	TBF-2520-190-B1	TBF-2520-190-B3
Application	For PHS	For PHS	For PHS	For PHS
Fo(MHz)	1906.5	1906	1906	1906
Band(MHz)	1893~1920	1893~1920	1893~1920	1893~1920
Insertion Loss	2.7dB at 25°C 3.0dB at -40~85°C	2.5dB at 25°C 2.8dB at -40~85°C	0.95dB at 25°C 1.25dB at -40~85°C	1.5dB at 25°C 1.8dB at -40~85°C
Attenuation	30.0dB at 1420MHz 30.0dB at 1660MHz 12.0dB at 2128MHz 30.0dB at 3814MHz	40.0dB at 1660MHz 15.0dB at 2139MHz	40.0dB at 1400MHz 10.0dB at 1649~1680MHz 24.0dB at 3786~3840MHz 24.0dB at 5679~5760MHz	42.0dB at 1396~1454MHz 14.0dB at 1687MHz 6.0dB at 2126MHz 24.0dB at 3786~3840MHz
VSWR in BW	2.0 Max.			
Impedance	50Ω			
Power	500mW Max.			

Example of characteristics



PART NUMBER

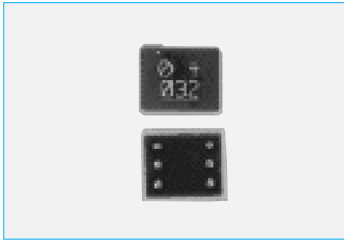
TBF 2012 - 245 - B1

Type(see electrical characteristics table)

Center Frequency Fo
(245=2450MHz, 190=1906MHz)

Dimensions
(2012=2.0*1.25mm, 2520=2.50*2.00mm)

Part Code



Ball-Grid-Array Thin Film Low-Pass Filter

FL*B5BC series NEW

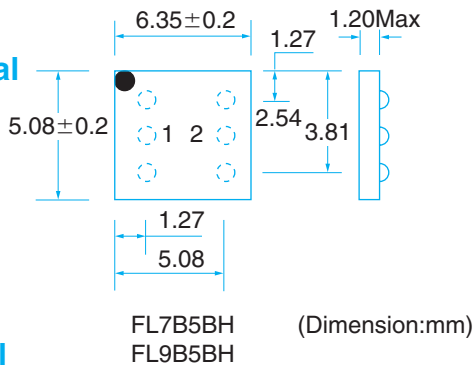


Low pass filter up to 10GHz with very low reflection.
Ball-grid-array termination for surface mount application.

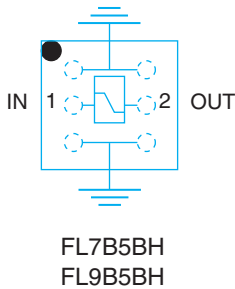


SPECIFICATIONS

Mechanical



Equivalent circuit



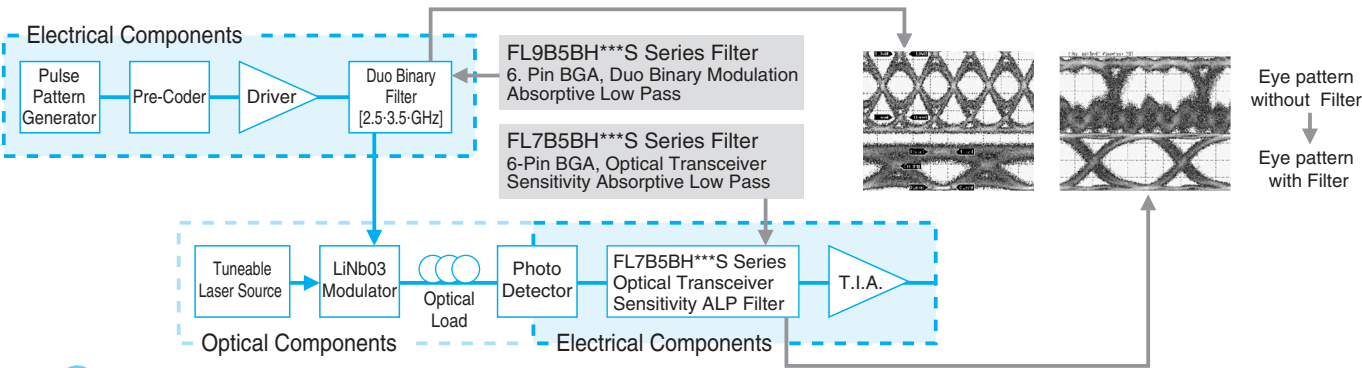
Electrical

Type	FL7B5BH	FL9B5BH
Cut Off Frequency f0(-3dB)	6.0GHz~10.0GHz(0.5GHz step)	2.5GHz~4.0GHz(0.25GHz step)
Attenuation(typical)	-10dB at 2f0	-10dB at 3f0
Reflection(typical)	S11 S22	S11 S22
	>12dB at F0, >10dB at 2f0 >10dB at F0	>15dB at F0, >10dB at 2f0 >13dB at F0
Rated current (A)	100m	
Operating Temp. Range	-40°C~+85°C	



Application/ Features

Transmission & reception on optical fiber communication



PART NUMBER

