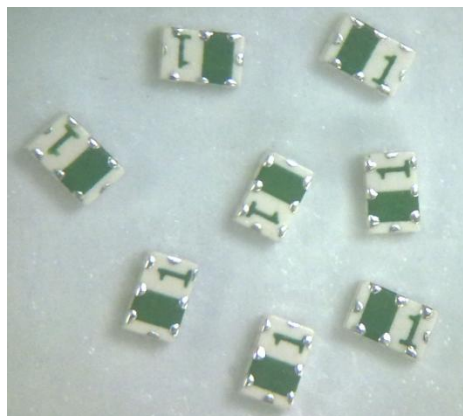


Multilayer Chip Balance Filter

FEATURES

- Good performance as small size Band-pass Filter
- Low Insertion Loss at the passband and High suppression at the rejection area
- Phase difference 180 degree and amplitude difference 1dB max.
- Compact structure and low material loss



APPLICATIONS

- WLAN IEEE 802.11b~g and Bluetooth module.
- RF and Wireless Communication system.

Product Identification

MBF 22 M2450 H132 - M12
① ② ③ ④ ⑤

① Series name

② Dimension L×W: 【22: 2.5mm×2.0mm; 21: 2.0mm×1.25mm; 18: 1.6mm×0.8mm;】

③ Center Frequency: 2450MHz

④ Via Design Series

⑤ Normal Type

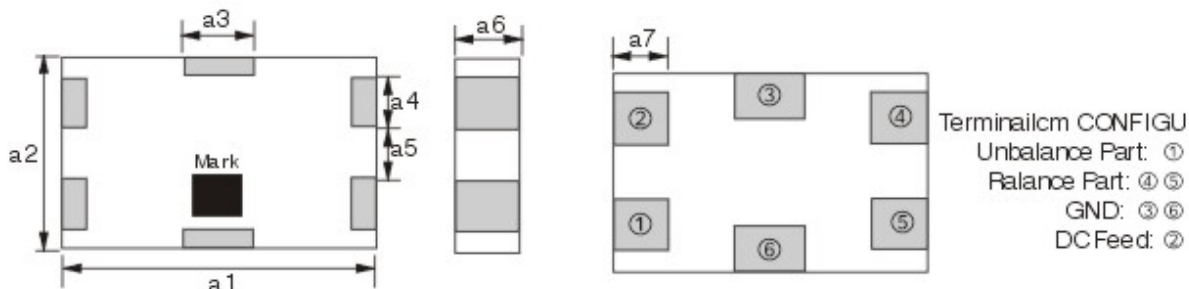
Product Specification

Part No	Dimensions L×W(mm)	Unbalance Port Impedance (Ω)	Balance Port Impedance (Ω)	Center Frequency fo (MHz)	Insertion Loss (dB)
MBF21M2450H155-M12	2.0×1.25	50	55+j50	2450 MHz	2.3max.(@25 ° C)
MBF21M2450H133-M13	2.0×1.25	50	Conjugate to MT6612	2450 MHz	3.5max.(@25 ° C)
MBF21M2450P69-M16	2.0×1.25	50	Conjugate to BC3,BC4,BC6	2450 MHz	3.5max.(@25 ° C)
MBF18M2450H133-M18	1.6×0.8	50	Conjugate to MT6616	2450 MHz	3.5max.(@25 ° C)
MBP21M2450P69-M20	2.0×1.25	50	100 (50+50)	2450 MHz	3.0max.(@25 ° C)
MBF21M2450P69-M21	2.0×1.25	50	50 (25+25)	2450 MHz	3.0max.(@25 ° C)
MBP21M2450P69-M28	2.0×1.25	50	50 (25+25)	2450 MHz	3.0max.(@25 ° C)

Multilayer Chip Balance Filter

Part No: MBF22M2450H155-M12

1. Dimensions (Unit: mm)

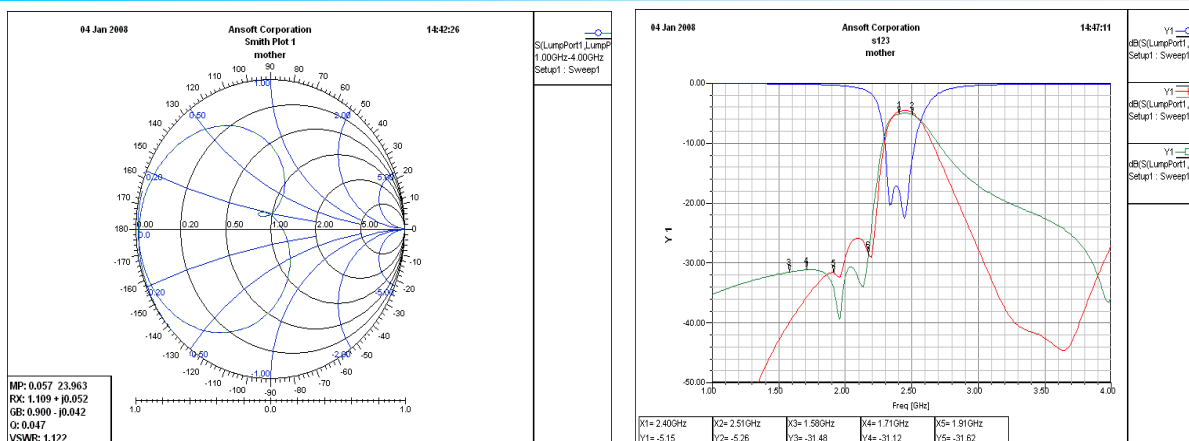


Type 型号	a1	a2	a3	a4	a5	a6	a7
M12	2.0±0.15	1.5±0.15	0.45±0.15	0.4±0.15	0.4±0.15	1.0±0.15	0.35±0.15

2. Electrical Characteristics

No.	Item	Specifications
1	Unbalance Port Impedance	50Ω
2	Balance Port Impedance	55+j50
3	Center Frequency fo	2450.0 MHz
4	Insertion Loss	≤2.3dB (@25℃±5℃)
		≤2.8dB (@-40℃~85℃)
5	Band Width	2400~2500 MHz
6	V.S.W.R at Unbalance Port (in BW)	≤2.0 (2400~2500 MHz)
7	Attenuation	≥35 (DC~960 MHz)
		≥31 (1570~1990 MHz)
		≥26 (2110~2170 MHz)
		≥20 (4800~5000 MHz)
8	Phase difference	180±5 Deg.

3. Characteristic curve

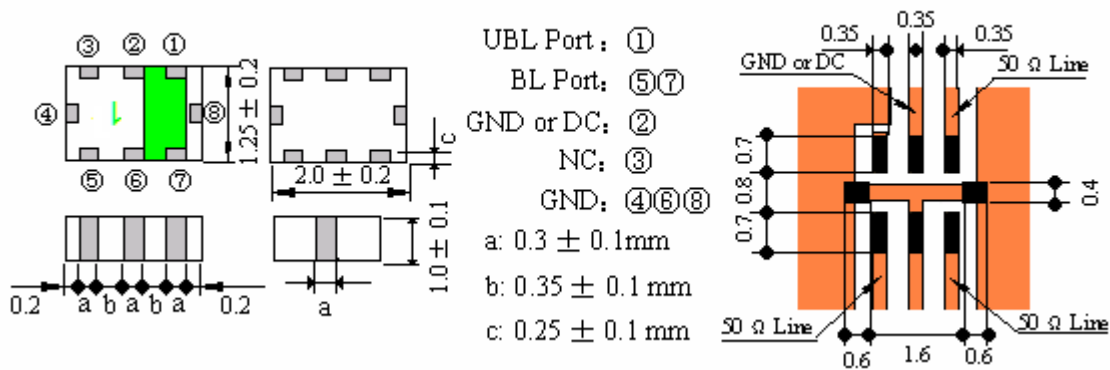


Phase-difference curve

Multilayer Chip Balance Filter

Part No: MBF21M2450P69-M16

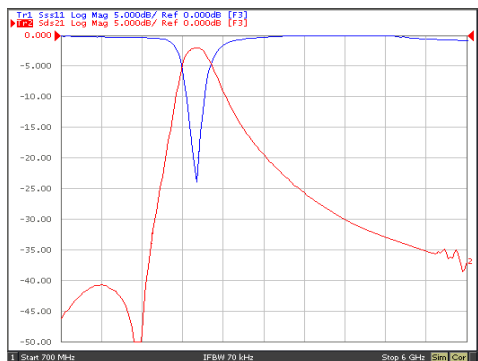
1. Dimensions (Unit: mm)



2. Electrical Characteristics

No.	Item	Specifications
1	Unbalance Port Impedance	50Ω
2	Balance Port Impedance	Conjugate to BC3,BC4,BC6
3	Center Frequency f_0	2450.0 MHz
4	Insertion Loss	≤ 3.5 dB (@25°C±5°C)
		≤ 3.8 dB (@-40°C~85°C)
5	Band Width	2400~2500 MHz
6	V.S.W.R	≤ 2.0 (2400~2500 MHz)
7	Attenuation	≥ 35 (880~960 MHz) ≥ 20 (1710~1990 MHz) ≥ 12 (1990~2170 MHz) ≥ 20 (4800~5000 MHz) ≥ 20 (7200~7500 MHz)
8	Phase difference	180±10 Deg.

3. Characteristic curve



S-Parameters curve

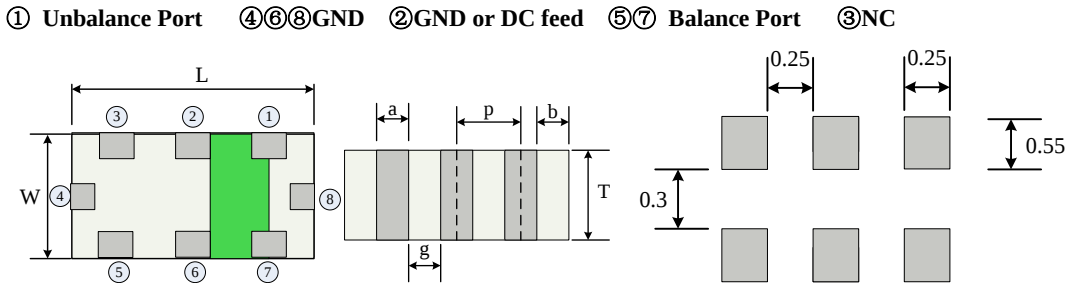


Phase-difference curve

Multilayer Chip Balance Filter

Part No: MBF21M2450H132-M18

1. Dimensions (Unit: mm)



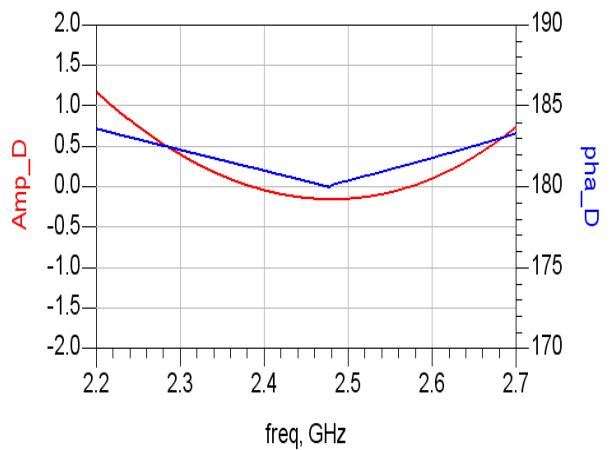
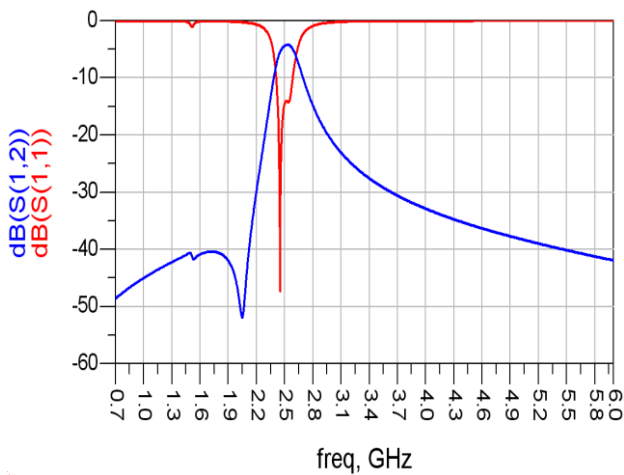
Dimensions and Land Pattern

Mark	W	L	T	a	b	g	p
Dimensions(mm)	0.8±0.1	1.6±0.1	0.6±0.1	0.2±0.1	0.2±0.1	0.3±0.1	0.5±0.1

2. Electrical Characteristics

No.	Item	Specifications
1	Unbalance Port Impedance	50Ω
2	Balance Port Impedance	Conjugate to MT6616
3	Center Frequency fo	2450.0 MHz
4	Insertion Loss	≤3.5dB (@25℃±5℃) ≤3.8dB (@-40℃~85℃)
5	Band Width	2400~2500 MHz
6	V.S.W.R at Unbalance Port (in BW)	≤2.0 (2400~2500 MHz)
7	Attenuation	≥30 (880~960 MHz) ≥25 (1710~1990 MHz) ≥35 (4800~5000 MHz)
8	Phase difference	180±10 Deg.

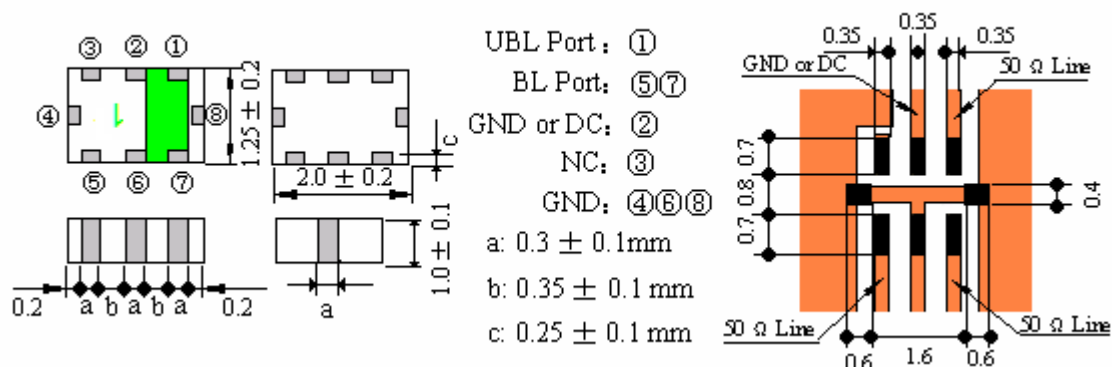
3. Characteristic curve



Multilayer Chip Balance Filter

Part No: MBF21M2450P69-M20

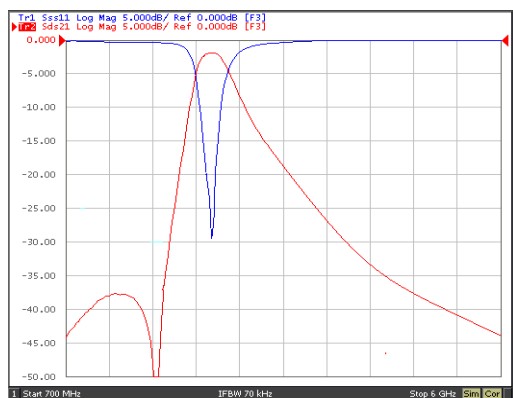
1. Dimensions (Unit: mm)



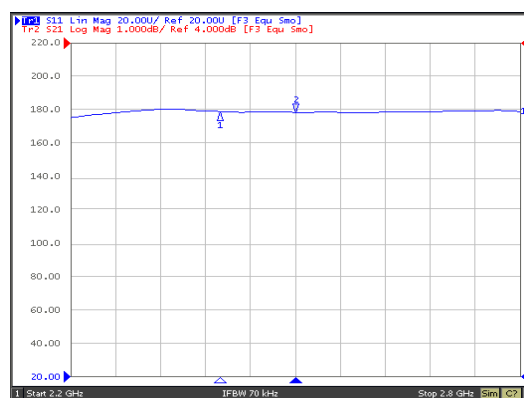
2. Electrical Characteristics

No.	Item	Specifications
1	Unbalance Port Impedance	50Ω
2	Balance Port Impedance	100 (50+50)
3	Center Frequency f_0	2450.0 MHz
4	Insertion Loss	≤ 3.0 dB (@25°C±5°C) ≤ 3.3 dB (@ -40°C~85°C)
5	Band Width	2400~2500 MHz
6	V.S.W.R at Unbalance Port (in BW)	≤ 2.0 (2400~2500 MHz)
7	Attenuation	≥ 30 (880~960 MHz) ≥ 30 (1710~1990 MHz) ≥ 25 (4800~5000 MHz)
8	Phase difference	180±10 Deg.

3. Characteristic curve



S-Parameters curve

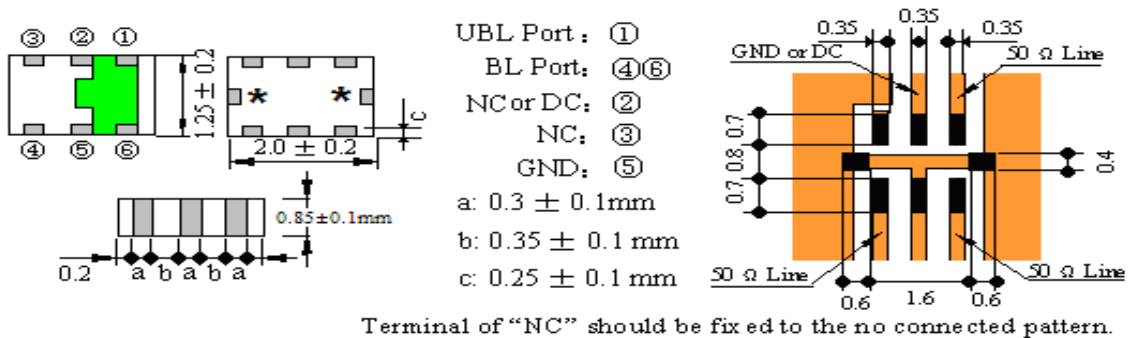


Phase-difference curve

Multilayer Chip Balance Filter

Part No: MBF21M2450P69-M21

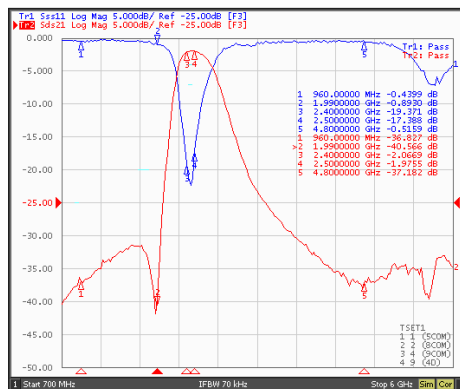
1. Dimensions (Unit: mm)



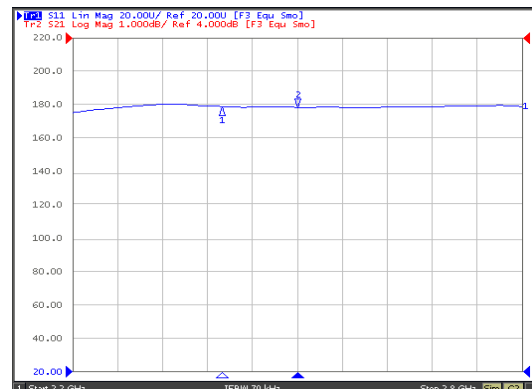
2. Electrical Characteristics

No.	Item	Specifications
1	Unbalance Port Impedance	50Ω
2	Balance Port Impedance	50Ω
3	Center Frequency fo	2450.0 MHz
4	Insertion Loss	≤2.5dB (@25°C±5°C) ≤2.8dB (@-40°C~85°C)
5	Band Width	2400~2500 MHz
6	V.S.W.R at Unbalance Port (in BW)	≤2.0 (2400~2500 MHz)
7	Attenuation	≥30 (880~960 MHz) ≥30 (1710~1990 MHz) ≥25 (4800~5000 MHz)
8	Phase difference	180±10 Deg.

3. Characteristic curve



S-Parameters curve

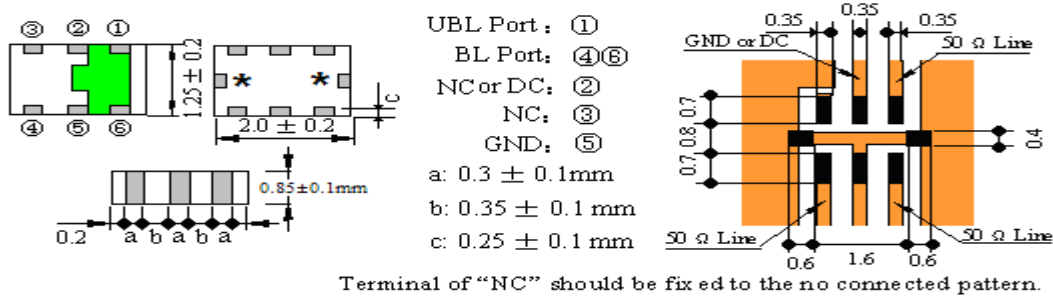


Phase-difference curve

Multilayer Chip Balance Filter

Part No: MBF21M2450P69-M28

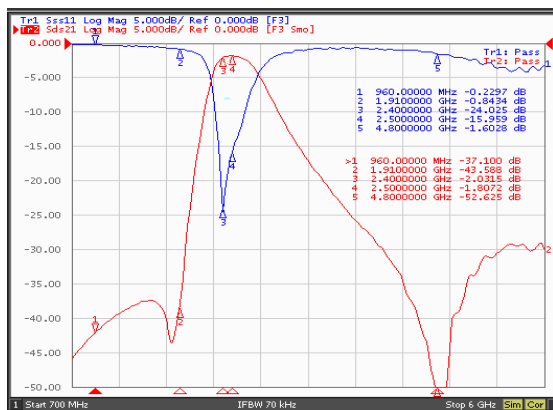
1. Dimensions (Unit: mm)



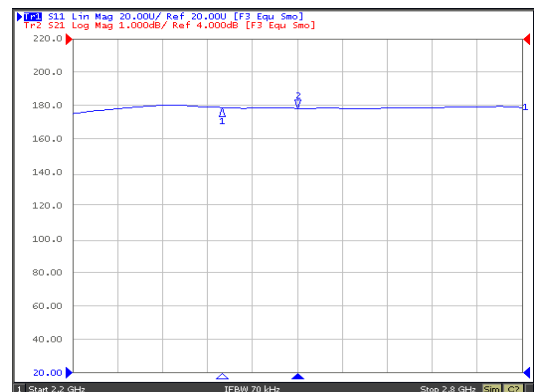
2. Electrical Characteristics

No.	Item	Specifications
1	Unbalance Port Impedance	50Ω
2	Balance Port Impedance	50Ω
3	Center Frequency f_0	2450.0 MHz
4	Insertion Loss	≤ 2.5 dB (@25°C±5°C) ≤ 2.8 dB (@ -40°C~85°C)
5	Band Width	2400~2500 MHz
6	V.S.W.R at Unbalance Port (in BW)	≤ 2.0 (2400~2500 MHz)
7	Attenuation	≥ 30 (880~960 MHz) ≥ 30 (1710~1990 MHz) ≥ 25 (4800~5000 MHz)
8	Phase difference	180±10 Deg.

3. Characteristic curve



S-Parameters curve



Phase-difference curve