



MSL1

* Pb Free Part

Customer Name	Standard Specification	TAIYO YUDEN Mobile Technology Co., Ltd.	
System	PCS/ DCS Rx (50/150ohms)	Date	March 31, 2010
Part Number	FAR-G6KT-1G9600-Y4RY	Version 2.0bb	

Table 1. Electrical specifications (Filter1)

Passband: 1930 ~ 1990 MHz						
Item	Condition	Specification			Unit	Remarks
		Min.	Typ.	Max.		
Insertion Loss	1930~1990 MHz	-	1.9	2.7	dB	
Ripple	1930~1990 MHz	-	0.6	1.5	dB	
Absolute attenuation	DC ~1830 MHz	25	32	-	dB	
	1830~1910 MHz	10	13	-	dB	
	2010~2070 MHz	7	15	-	dB	
	2070~2150 MHz	13	18	-	dB	
	2150~3000 MHz	25	30	-	dB	
	3000~6000 MHz	25	35	-	dB	
VSWR (Input)	1930~1990 MHz	-	1.6	2.0	-	
VSWR (Output)	1930~1990 MHz	-	1.6	2.0	-	
Amplitude Balance S21 / S31	1930~1990 MHz	-1.0	-0.2/+0.4	+1.0	dB	
Phase Balance (Φ S21- Φ S31)-180	1930~1990 MHz	-15	-8/+5	+15	deg.	
Input Impedance	Unbalanced	50//3.3nH			ohm	
Output Impedance	Balance	150//18nH			ohm	
Operating Temperature		-30 ~ +85			°C	

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Table 2. Electrical specifications (Filter2)

Passband: 1805 ~ 1880 MHz						
Item	Condition	Specification			Unit	Remarks
		Min.	Typ.	Max.		
Insertion Loss	1805~1880 MHz	-	1.8	2.5	dB	
Ripple	1805~1880 MHz	-	0.6	1.5	dB	
Absolute attenuation	DC ~1300 MHz	30	44	-	dB	
	1300~1705 MHz	20	30	-	dB	
	1705~1785 MHz	12	18	-	dB	
	1920~1980 MHz	15	20	-	dB	
	1980~3000 MHz	18	25	-	dB	
	3000~5000 MHz	25	36	-	dB	
	5000~6000 MHz	25	36	-	dB	
VSWR (Input)	1805~1880 MHz	-	1.5	2.3	-	
VSWR (Output)	1805~1880 MHz	-	1.8	2.3	-	
Amplitude Balance S ₂₁ / S ₃₁	1805~1880 MHz	-1.4	-0.6/+0.8	+1.4	dB	
Phase Balance (Φ S ₂₁ - Φ S ₃₁)-180	1805~1880 MHz	-10	-4.0/+4.0	+10	deg.	
Input Impedance	Unbalanced	50//3.3nH			ohm	
Output Impedance	Balance	150//15nH			ohm	
Operating Temperature		-30 ~ +85			°C	

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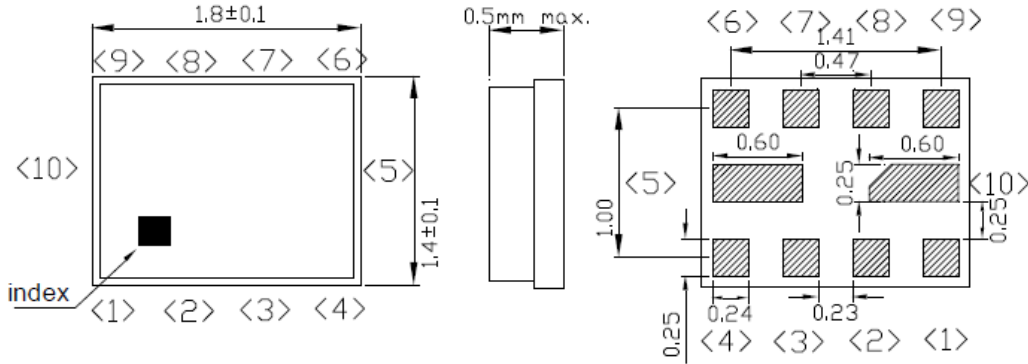
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Dimensions

Device size: 1.8typ. x 1.4typ. x 0.5max.



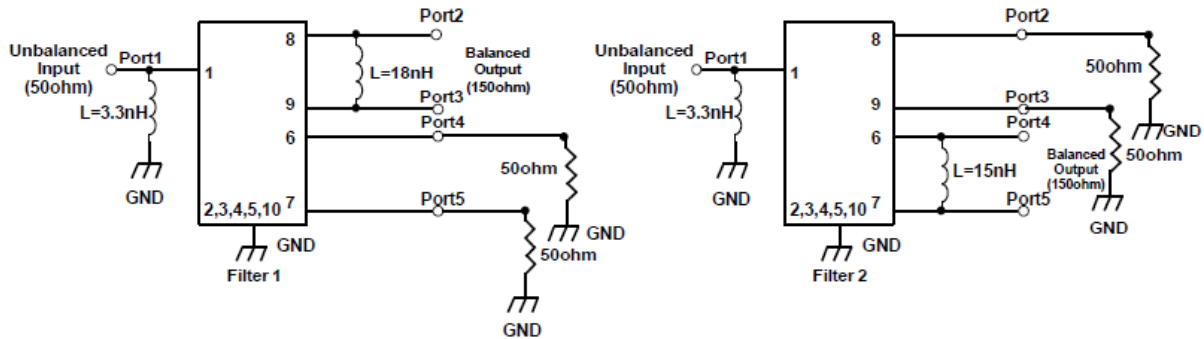
Unit: mm

Pin Configuration

Pin No.	Pin name	Description
1	IN	Filter1,2 input pin
2	GND	Ground
3	GND	Ground
4	GND	Ground
5	GND	Ground
6	OUT	Filter2 balanced output pin
7	OUT	Filter2 balanced output pin
8	OUT	Filter1 balanced output pin
9	OUT	Filter1 balanced output pin
10	GND	Ground

Filter No.	Pass band (MHz)	System
1	1930 ~ 1990	PCS-Rx
2	1805 ~ 1880	DCS-Rx

Evaluation Circuit



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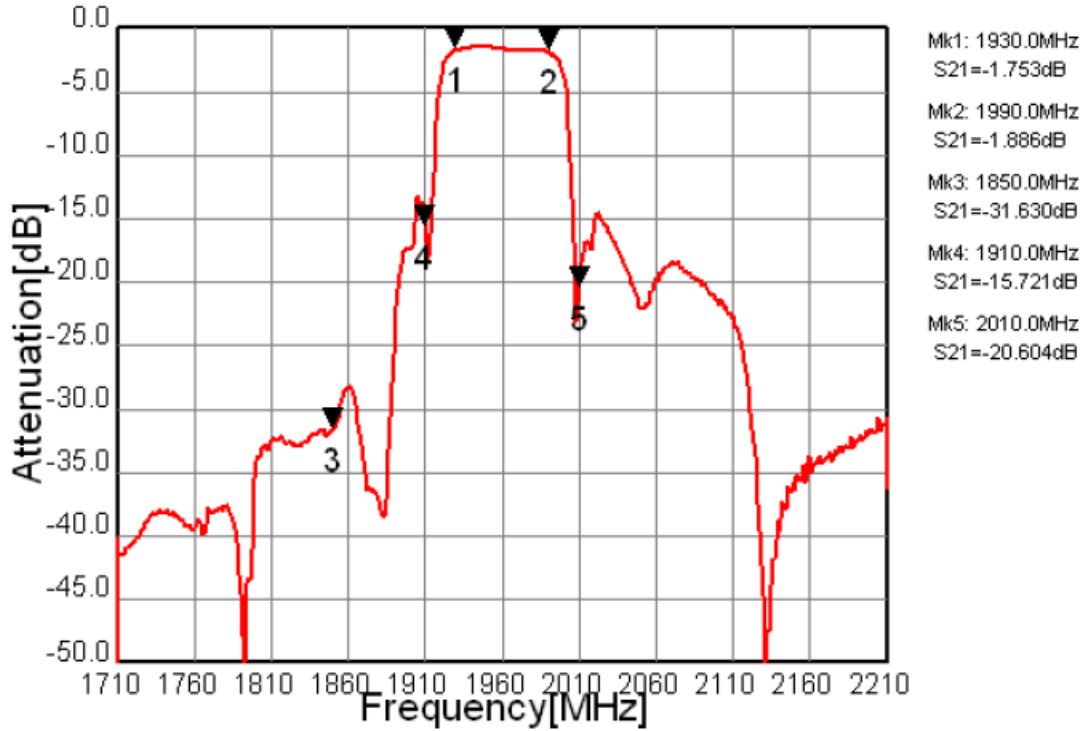


Fig.1 Pass-band Characteristics (Filter1)

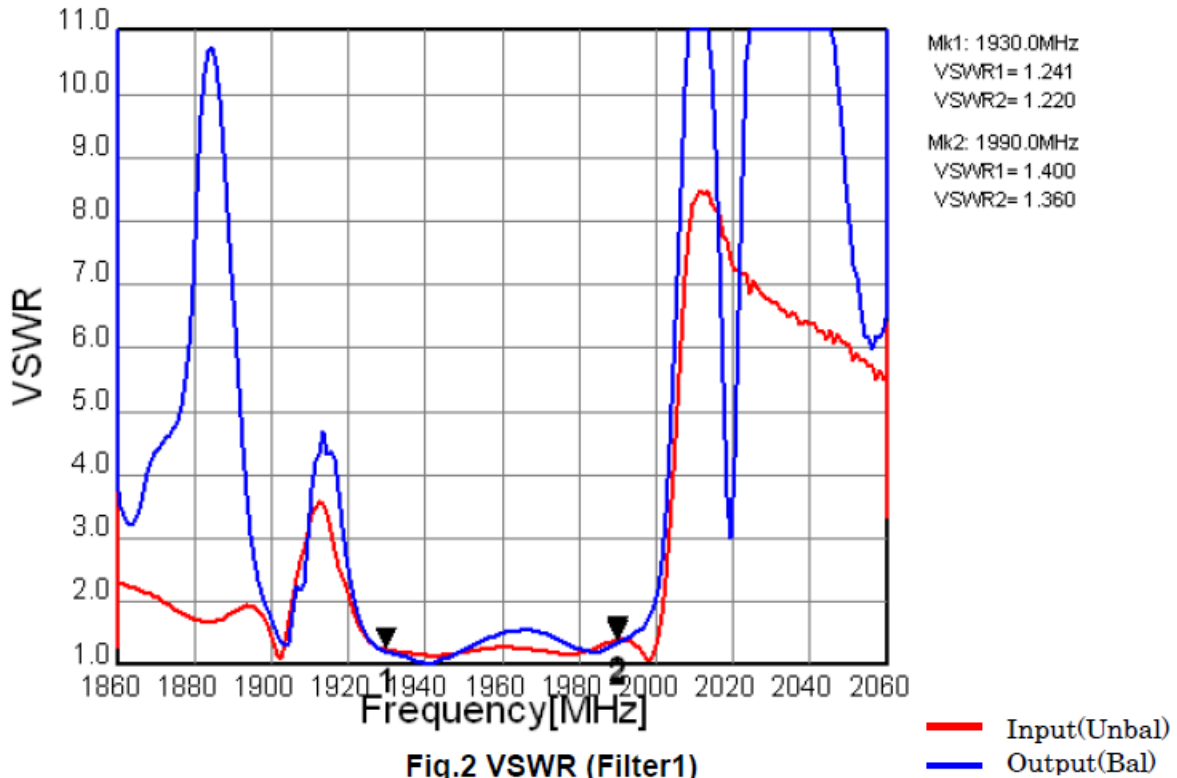


Fig.2 VSWR (Filter1)

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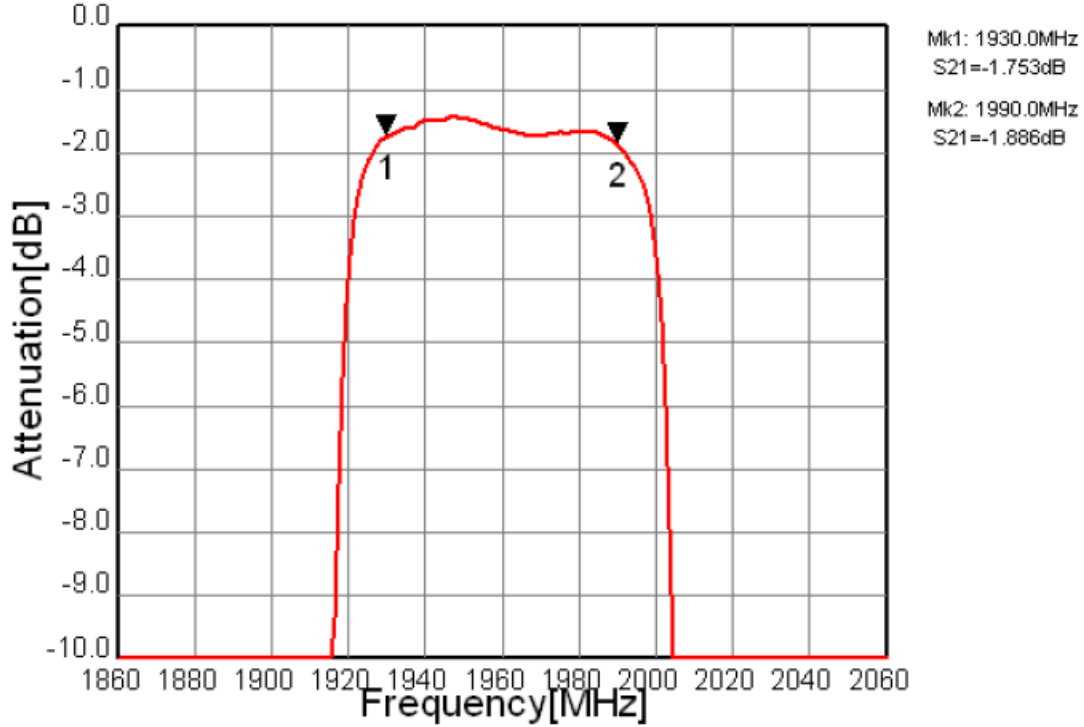


Fig.3 In-band Characteristics (Filter1)

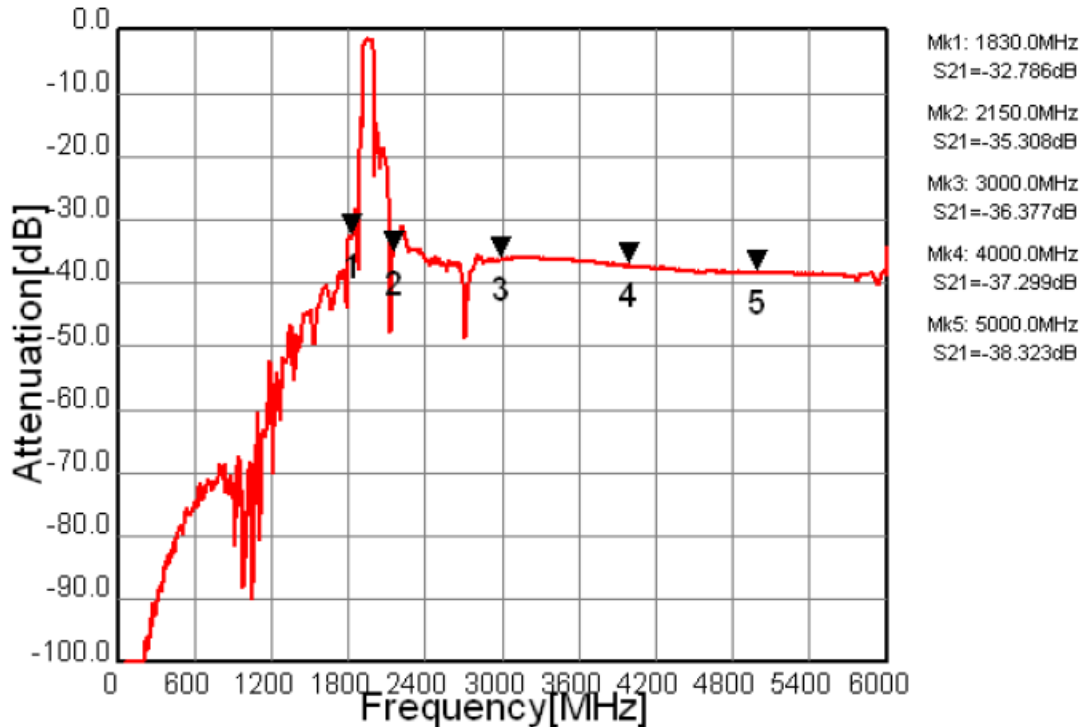


Fig. 4 Wide-band Characteristics (Filter1)

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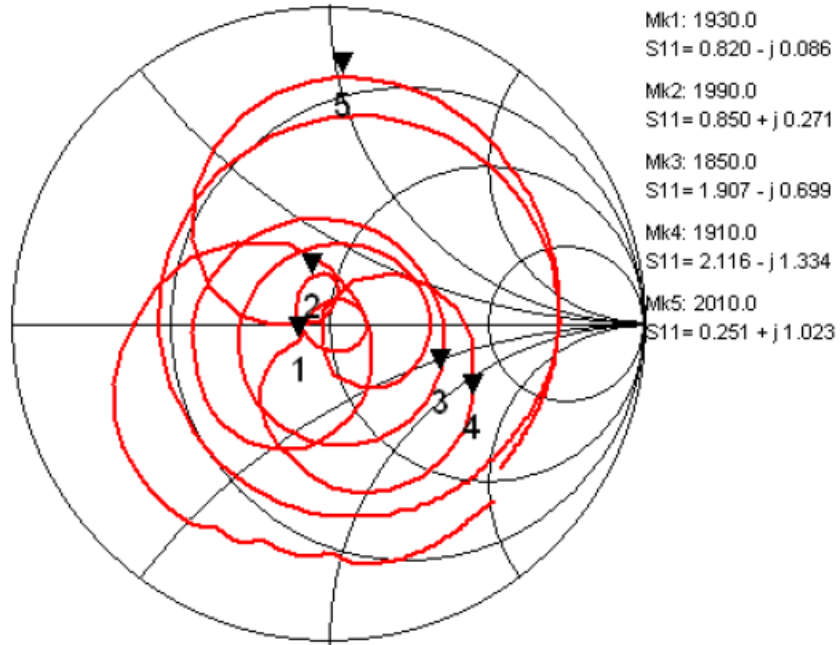


Fig. 5 Input Impedance (Unbalance) (Filter1)

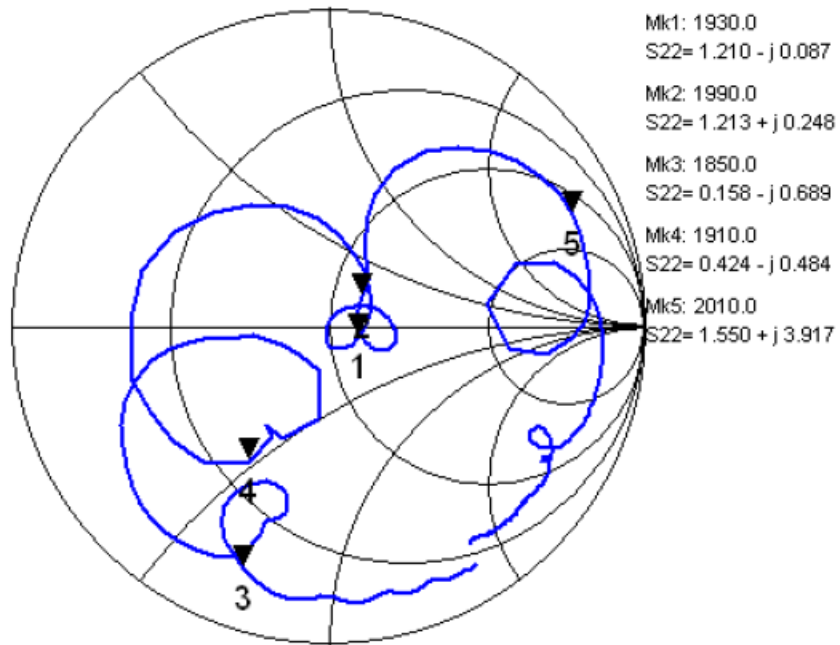


Fig. 6 Output Impedance (Balance) (Filter1)

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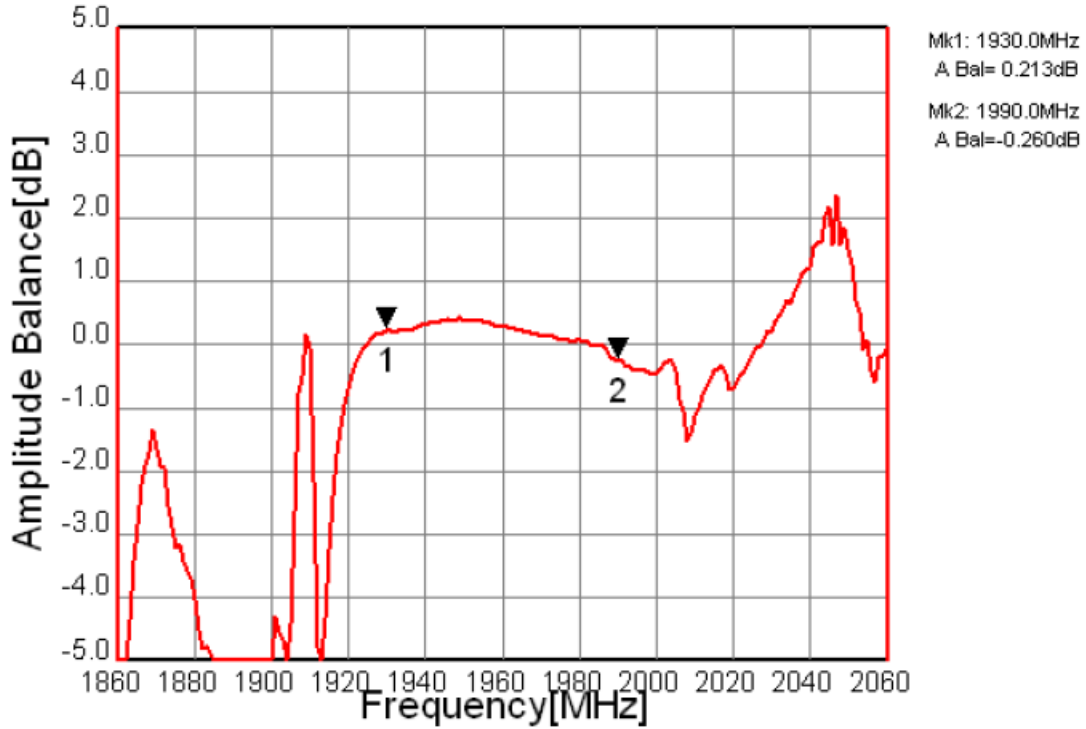


Fig. 7 Amplitude Balance (Filter1)

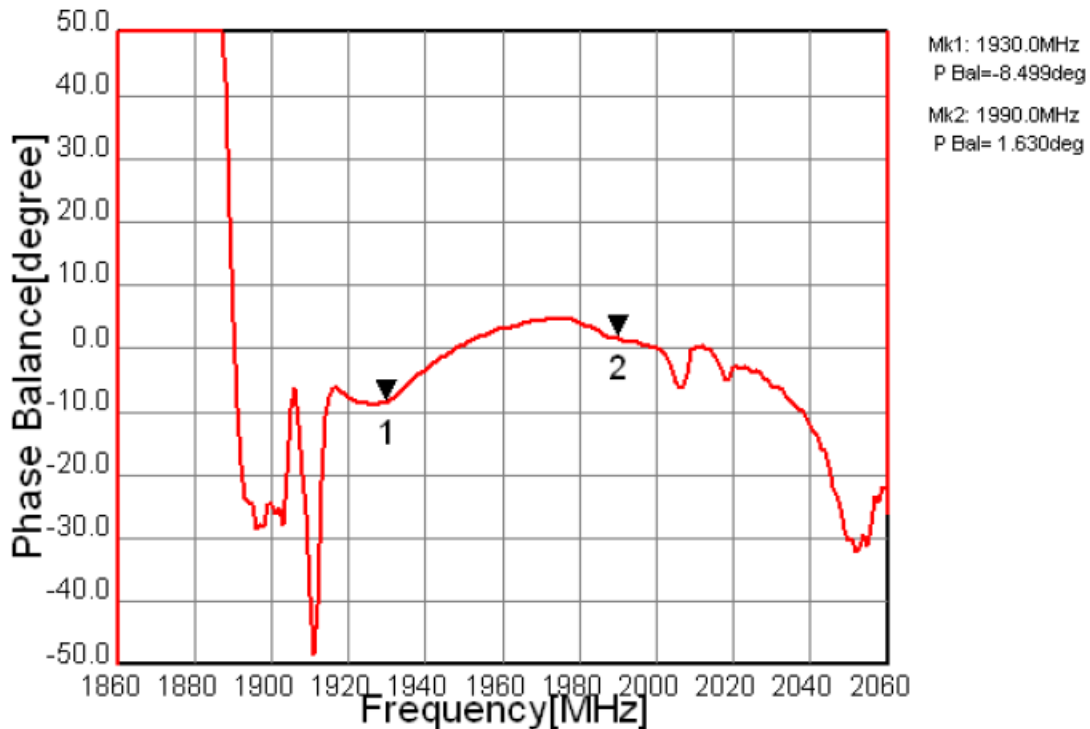


Fig. 8 Phase Balance (Filter1)

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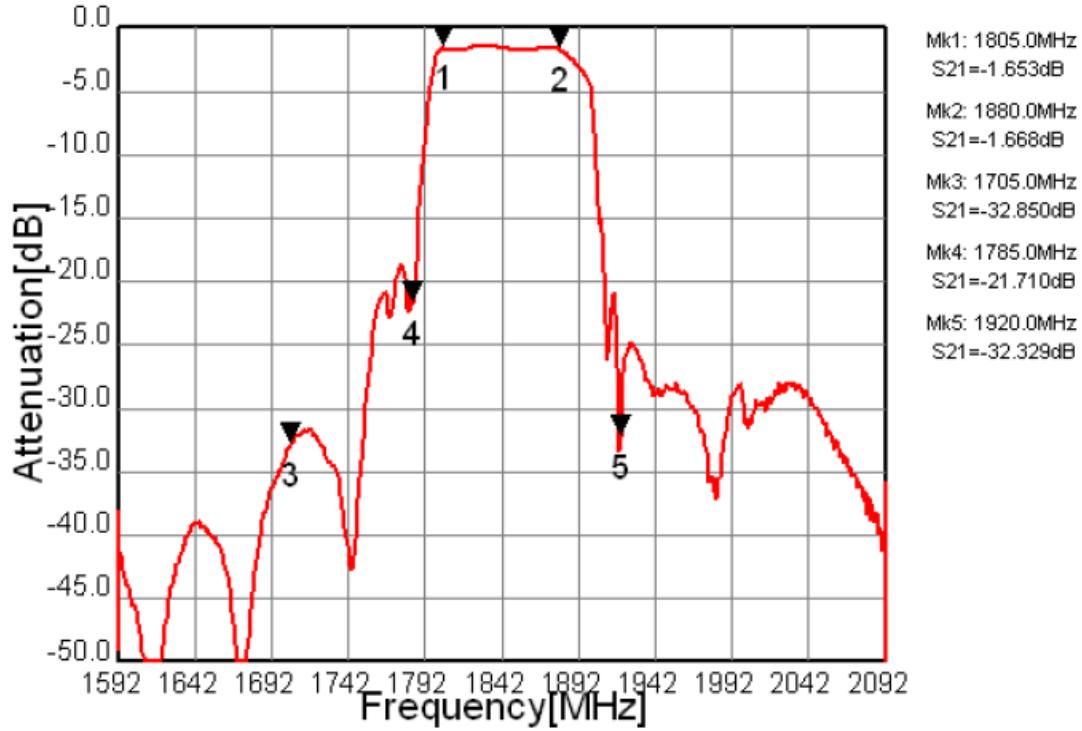


Fig.9 Pass-band Characteristics (Filter2)

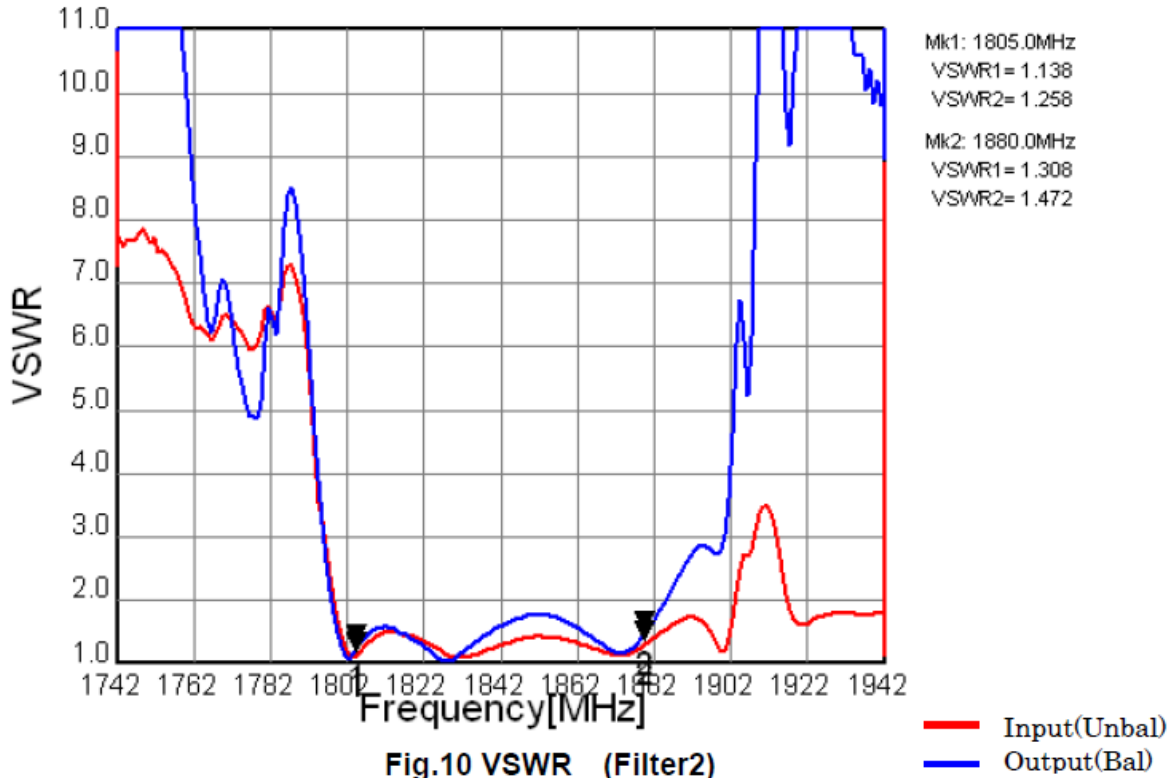


Fig.10 VSWR (Filter2)

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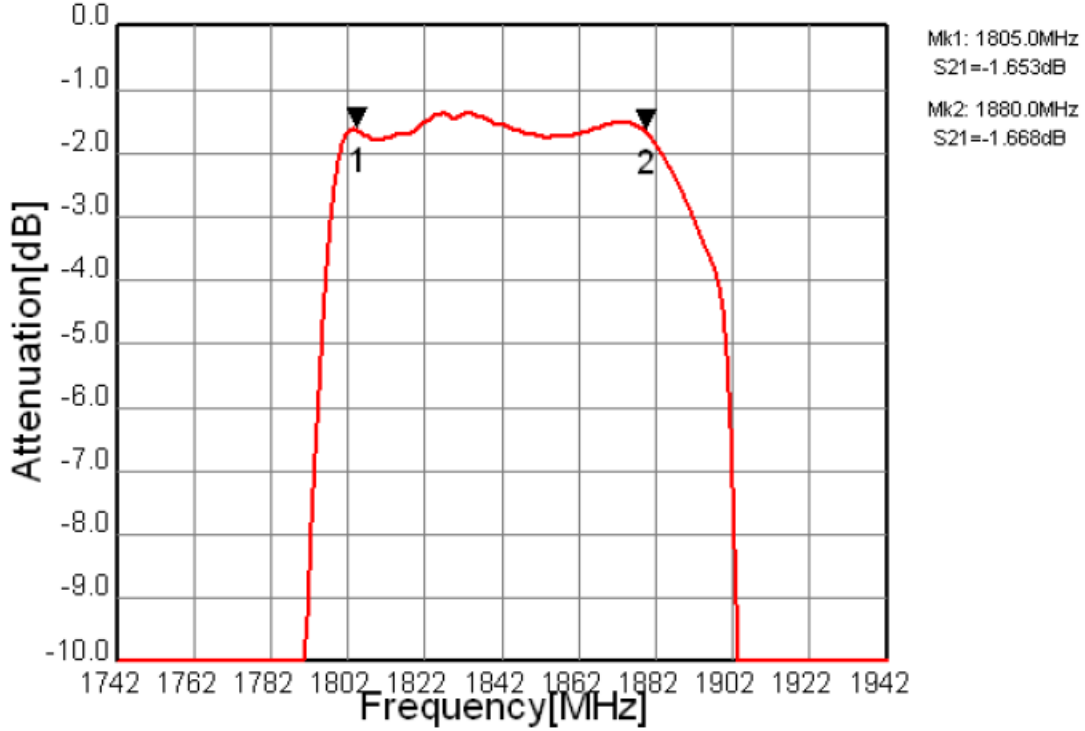


Fig.11 In-band Characteristics (Filter2)

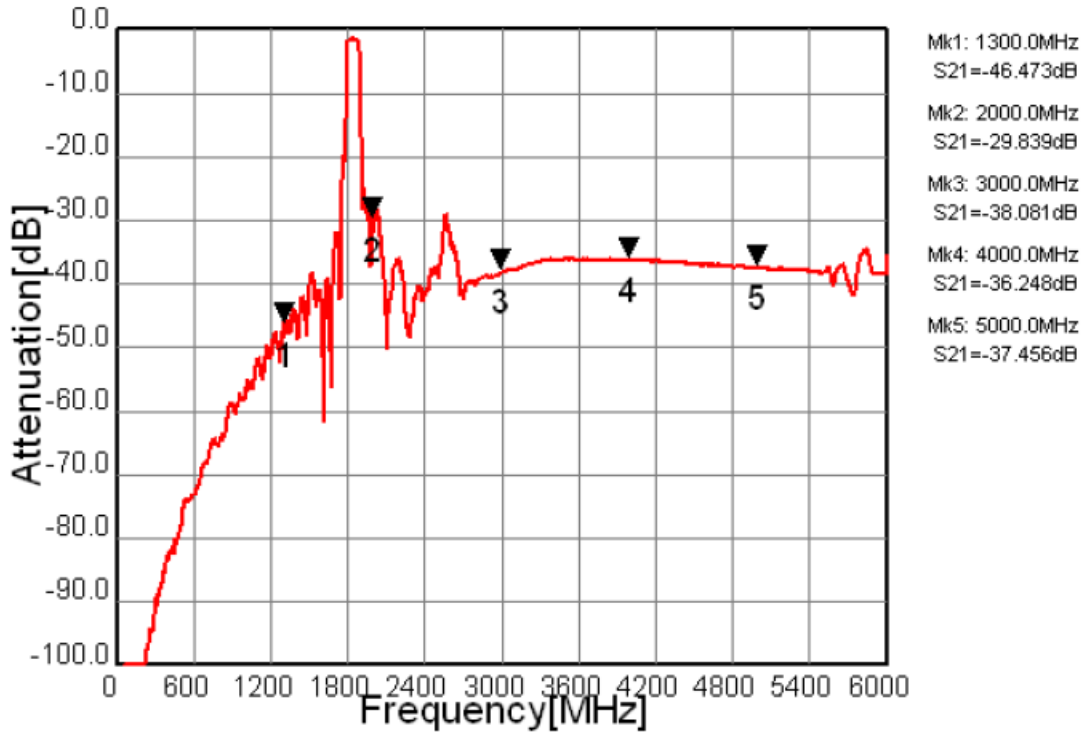


Fig.12 Wide-band Characteristics (Filter2)

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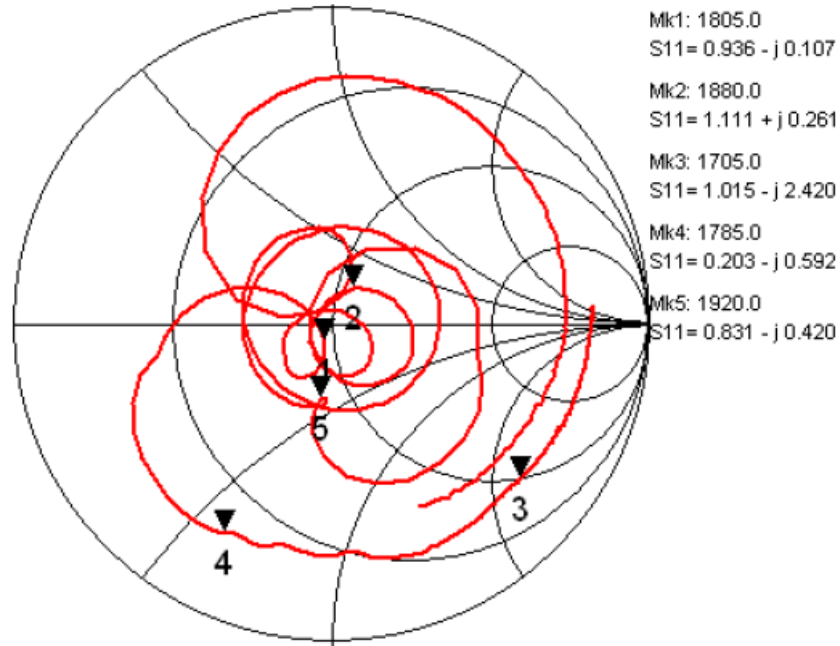


Fig.13 Input Impedance (Unbalance) (Filter2)

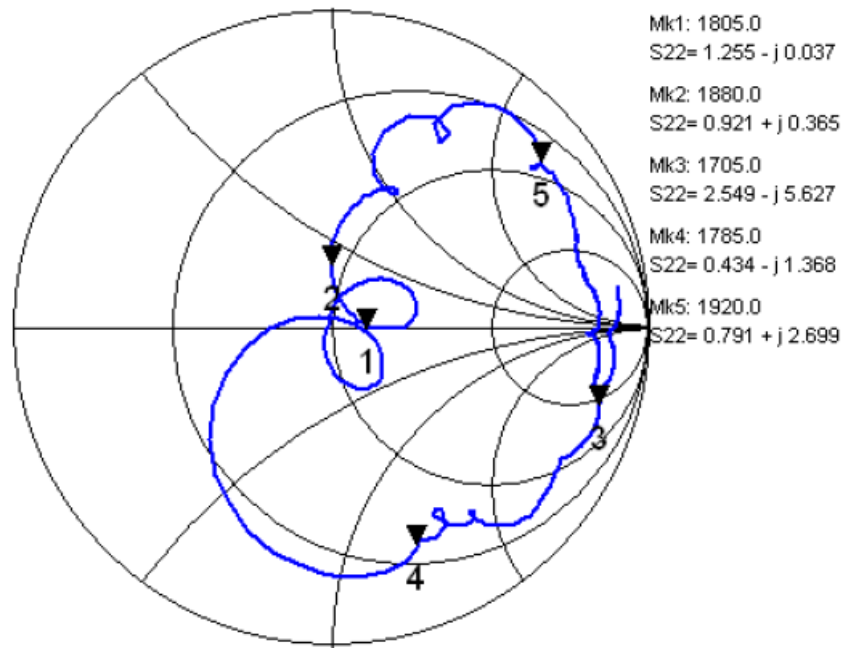


Fig.14 Output Impedance (Balance) (Filter2)

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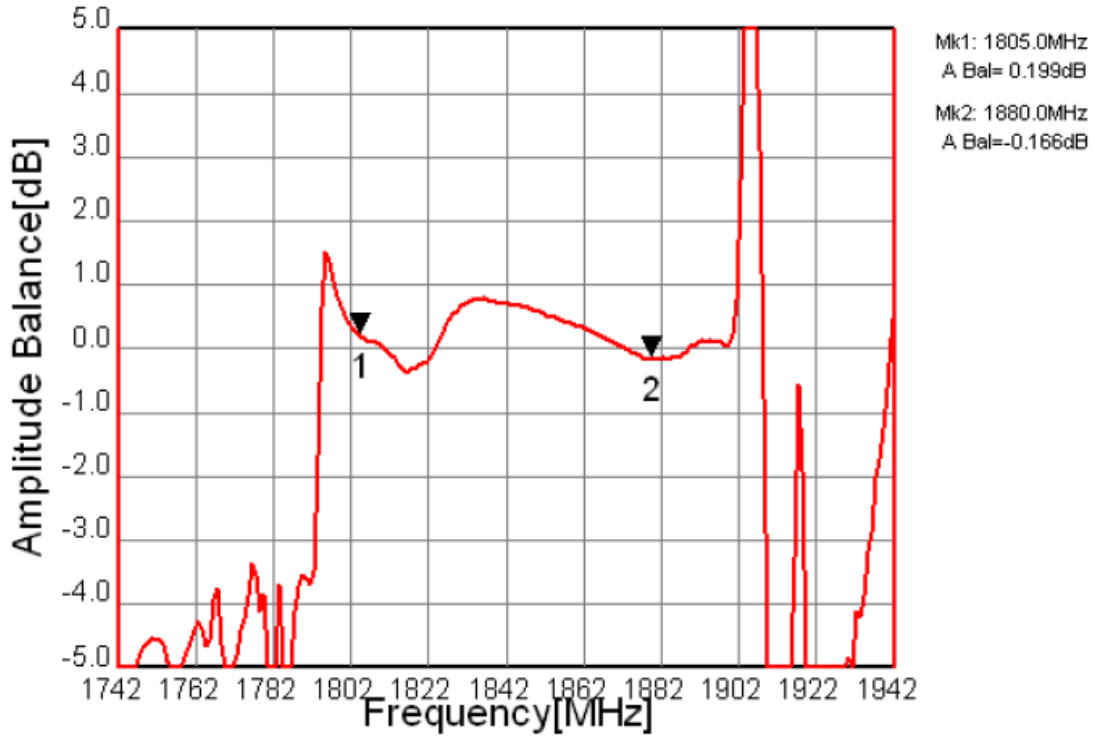


Fig.15 Amplitude Balance (Filter2)

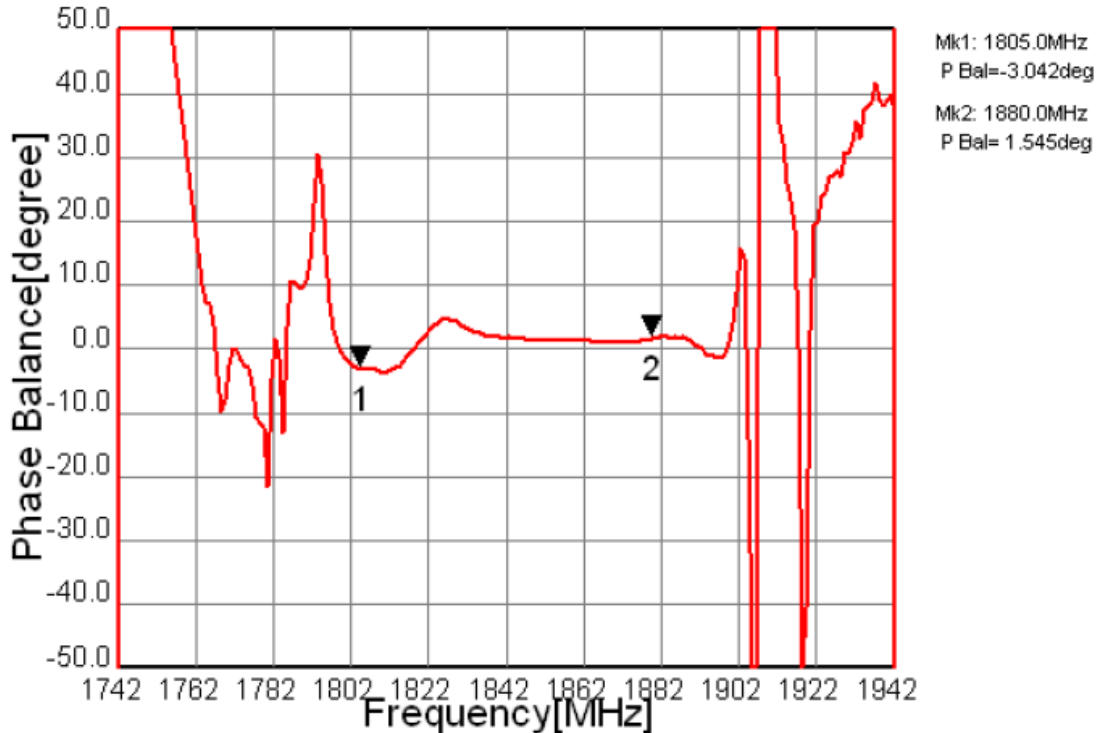


Fig.16 Phase Balance (Filter2)

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