



MSL1

\* Pb Free Part

Customer Name	Standard specification	TAIYO YUDEN Mobile Technology Co., Ltd.	
System	GSM1800/GSM1900 Rx (50/150ohms)	Date	March 31, 2010
Part Number	FAR-G6QC-1G9600-N2FA	Version 1.0aa	-

Table 1. Electrical specifications(Filter 1)

Pass Band (1805-1850MHz)						
Item	Condition (MHz)	Specification			Unit	Remark
		Min.	Typ.	Max.		
Insertion Loss	1805-1880	-	1.9	2.4	dB(*1)	
Ripple	1805-1880	-	0.6	1.2	dB	
Input VSWR	1805-1880	-	1.9	2.3	-	
Output VSWR	1805-1880	-	1.8	2.3	-	
Absolute attenuation	DC-1300	35	42	-	dB	
	1300-1705	25	33	-	dB	
	1705-1785	13	17	-	dB	
	1920-1980	19	22	-	dB	
	1980-3000	20	27	-		
	3000-5000	25	34	-	dB	
	5000-6000	20	32	-	dB	
Amplitude balance ( S21/S31 )	1805-1880	-1.5	-0.7/+0.7	1.5	dB	
Phase balance (( $\Phi$ S21- $\Phi$ S31)+180)	1805-1880	-10	-6/+2	10	deg	
Input impedance (Unbalanced)		50			Ohm	
Output impedance (Balanced)		150//18nH			Ohm	
Operating temperature		-30 to +85			°C	

(\*1) Specification of insertion loss includes loss that comes from the test board.



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Table 2.Electrical specifications(Filter 2)

Pass Band (1930-1990MHz)						
Item	Condition (MHz)	Specification			Unit	Remark
		Min.	Typ.	Max.		
Insertion Loss	1930-1990	-	1.7	2.4	dB(*1)	
Ripple	1930-1990	-	0.4	1.1	dB	
Input VSWR	1930-1990	-	1.5	2.0	-	
Output VSWR	1930-1990	-	1.6	2.0	-	
Absolute attenuation	DC-1850	30	36	-	dB	
	1850-1910	11	13	-	dB	
	2010-2070	12	17	-	dB	
	2070-2150	19	21	-	dB	
	2150-3000	25	31	-	dB	
	3000-6000	25	36	-	dB	
Amplitude balance ( S <sub>21</sub> /S <sub>31</sub>  )	1930-1990	-1.5	-0.7/+0.7	1.5	dB	
Phase balance ((∠S <sub>21</sub> -∠S <sub>31</sub> )+180)	1930-1990	-10	-4/+3	10	deg	
Input impedance (Unbalanced)		50			Ohm	
Output impedance (Balanced)		150//22nH			Ohm	
Operating temperature		-30 to +85			°C	

(\*1) Specification of insertion loss includes loss that comes from the test board.



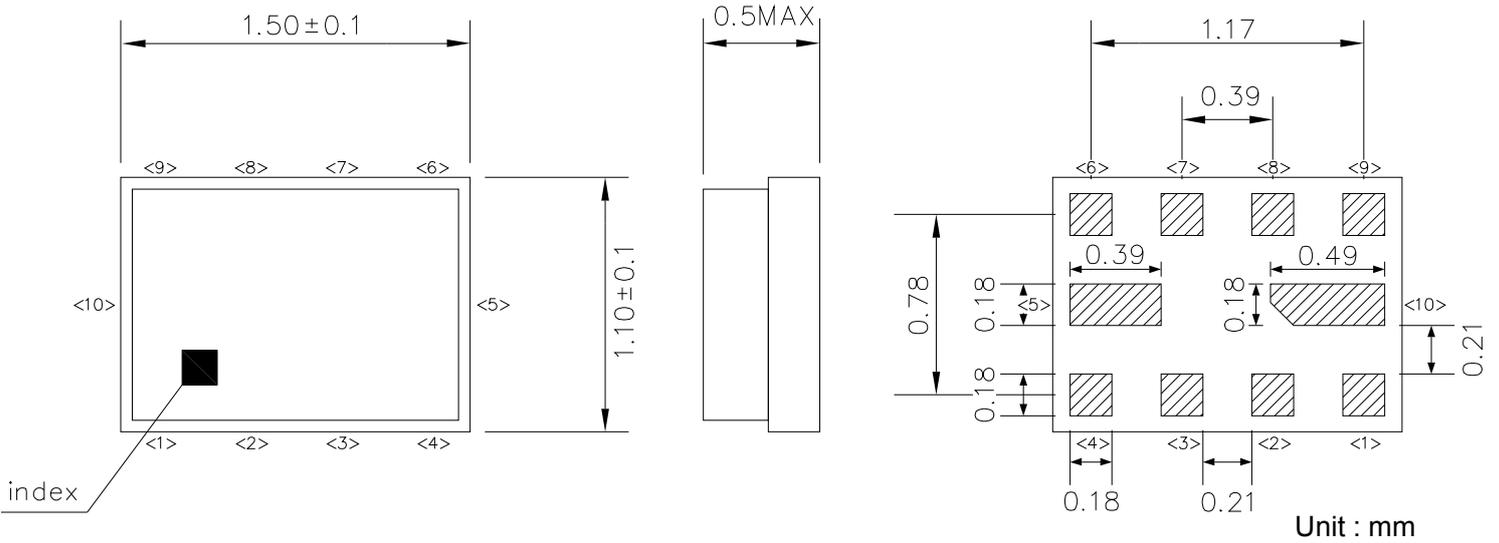
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**Dimensions**

Device size: 1.5yp. x 1.1typ. x 0.5max.



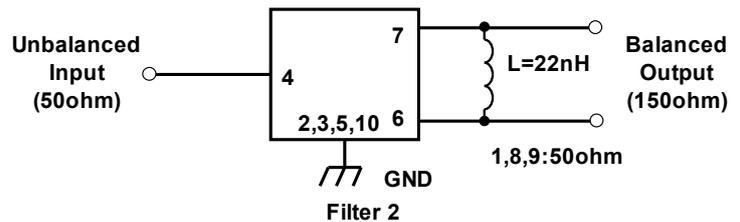
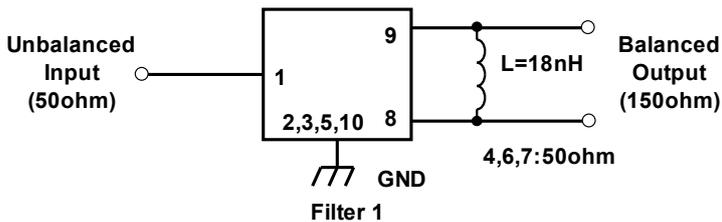
Unit : mm

**Pin Configuration**

Pin No.	Pin name	Description
1	IN	Filter1 input pin
2	GND	Ground
3	GND	Ground
4	IN	Filter2 input pin
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.	Passband(MHz)	System
1	1805 ~ 1880	GSM1800-Rx
2	1930 ~ 1990	GSM1900-Rx

**Evaluation Circuit**





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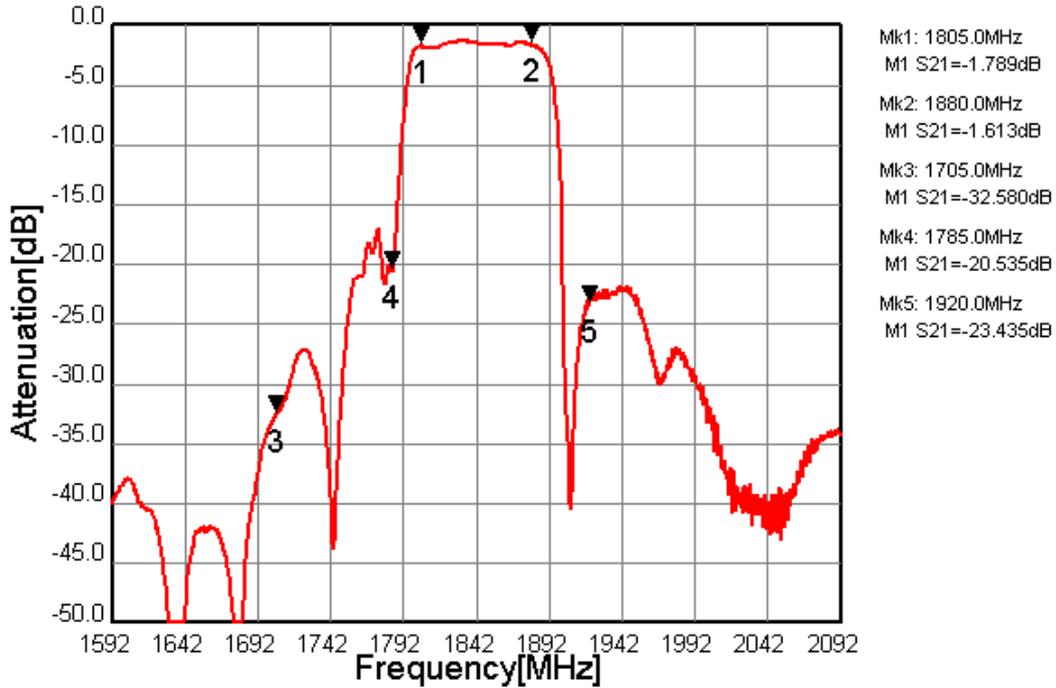


Fig.1 Pass-band Characteristic (Filter1)

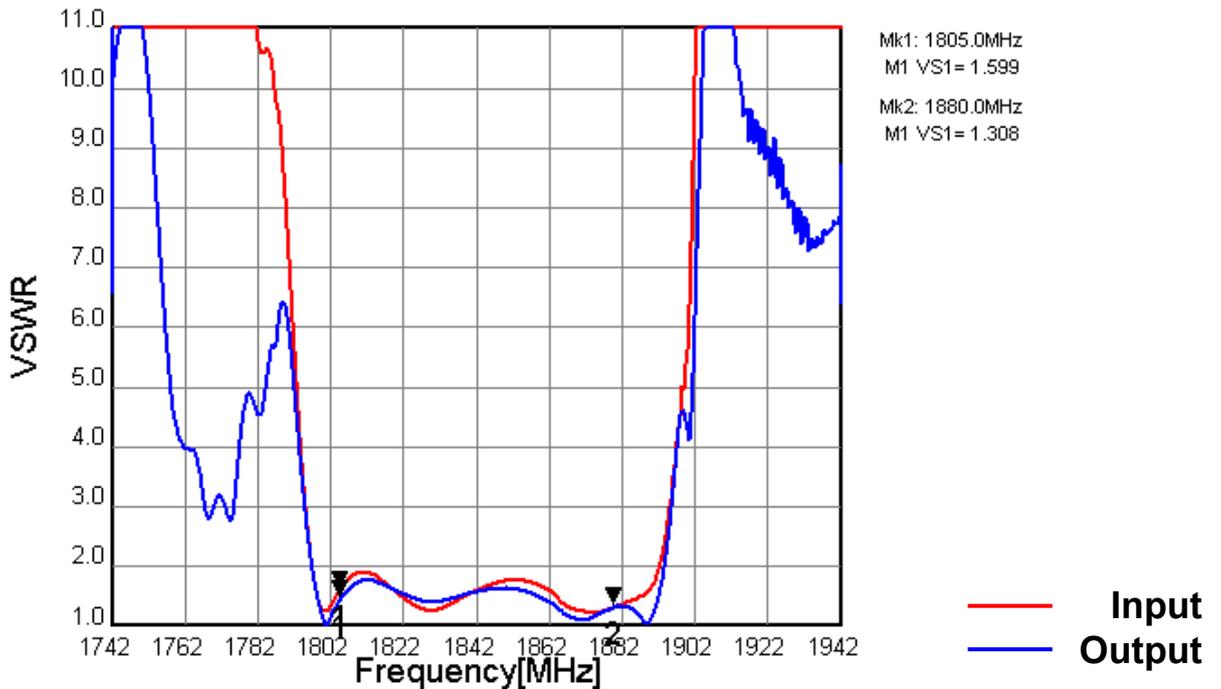


Fig.2 VSWR (Filter1)



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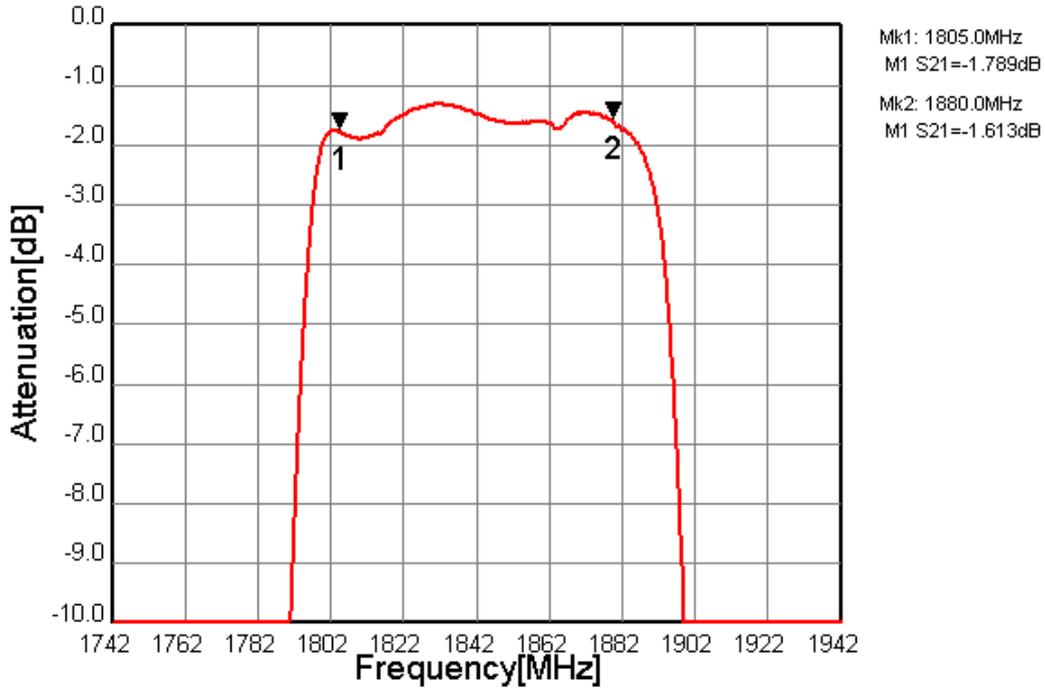


Fig.3 In-band Characteristic (Filter1)

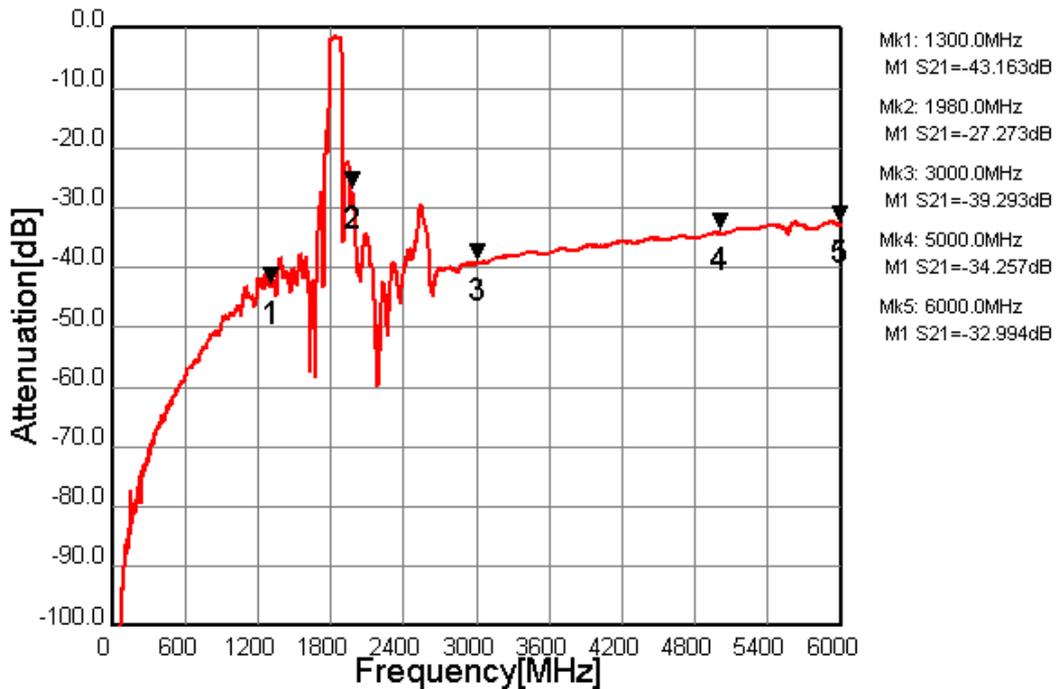


Fig.4 Wide-band Characteristic (Filter1)



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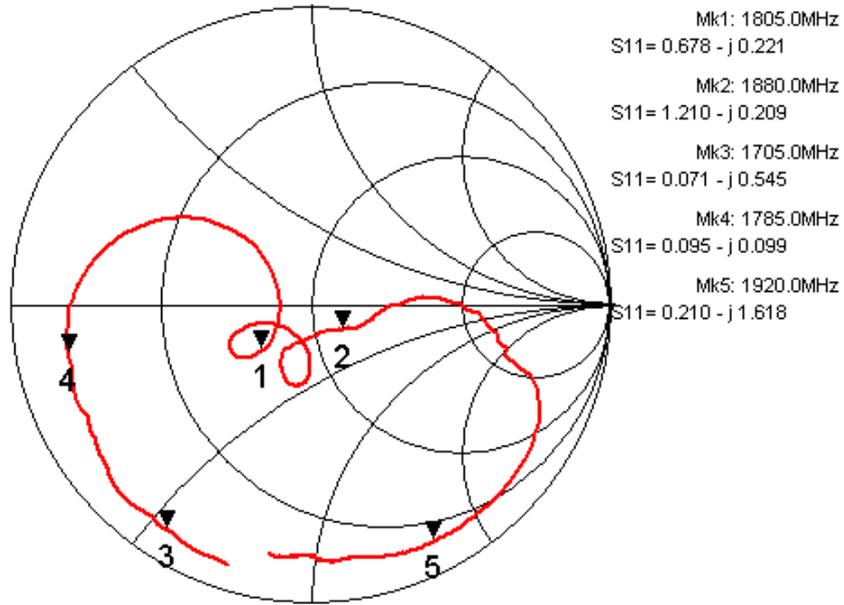


Fig.5 Impedance (S11) (Filter1)

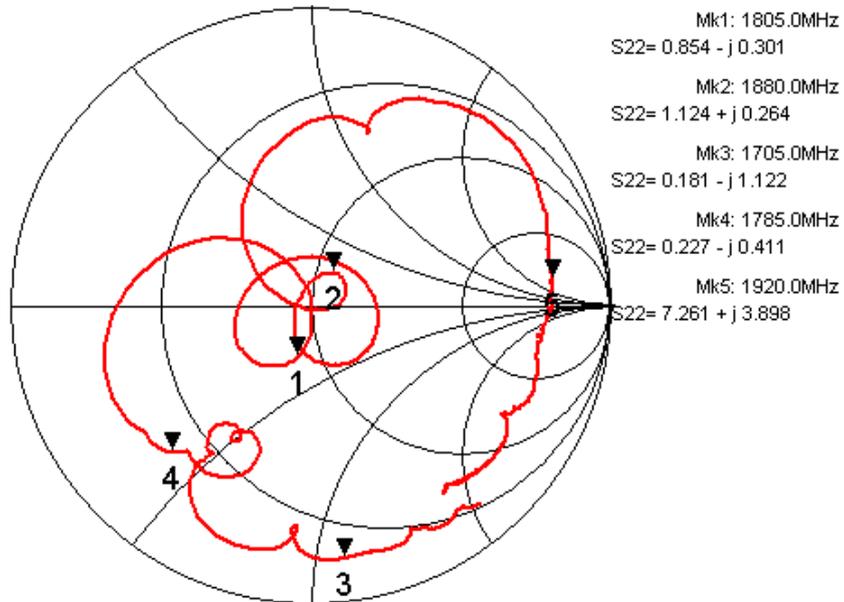


Fig.6 Impedance (S22) (Filter1)



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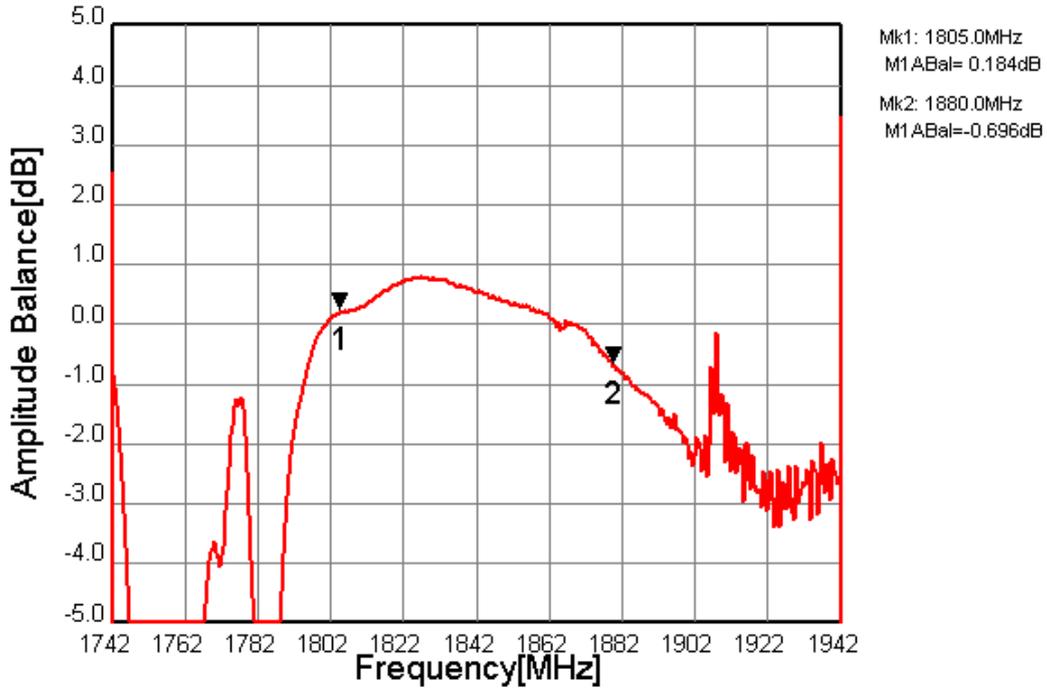


Fig.7 Amplitude Balance (Filter1)

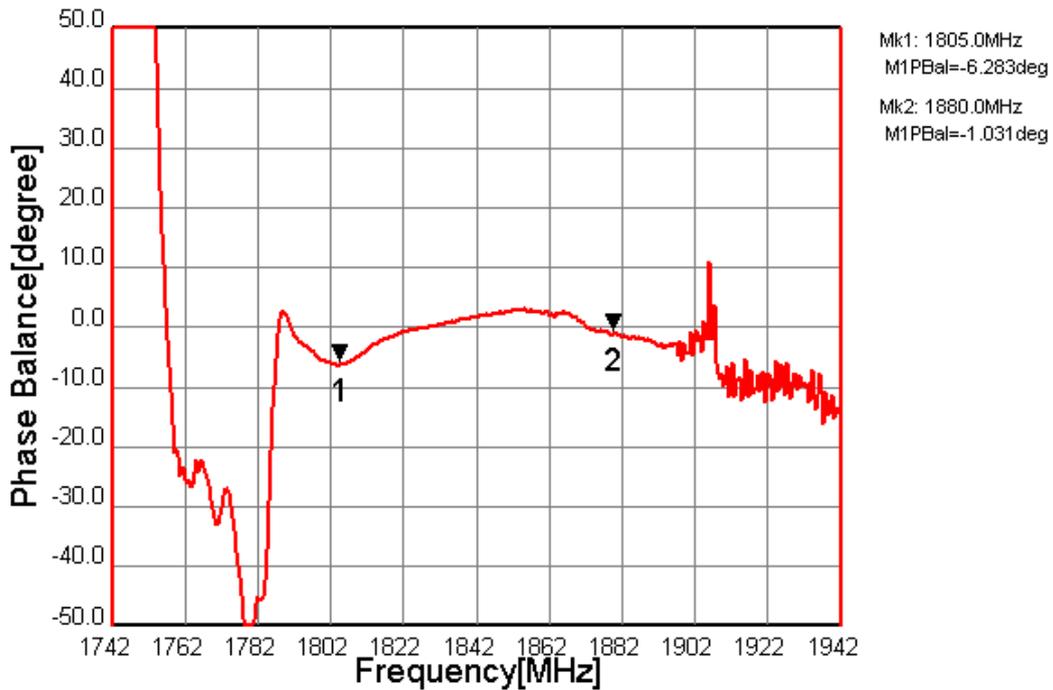


Fig.8 Phase Balance (Filter1)



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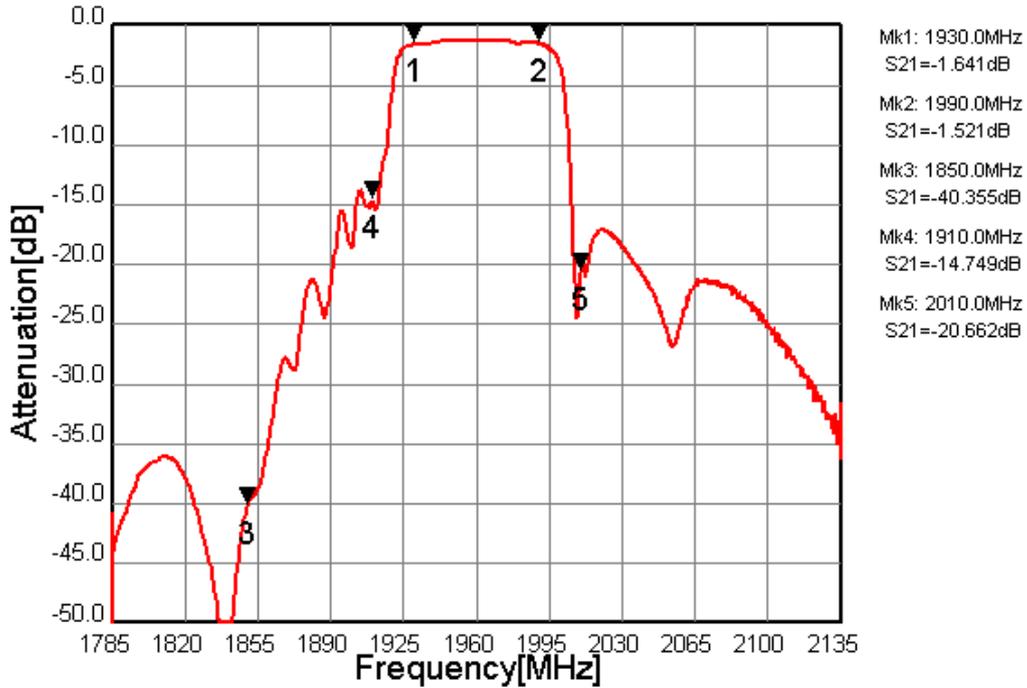


Fig.9 Pass-band Characteristic (Filter2)

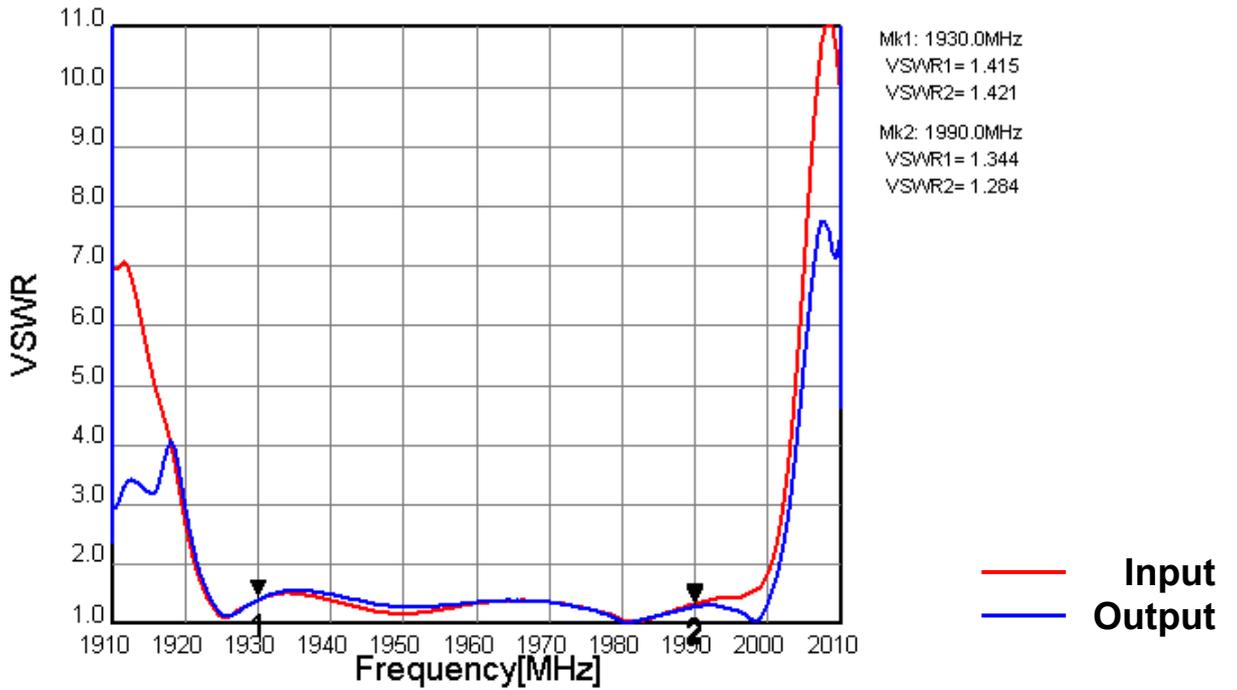


Fig.10 VSWR (Filter2)



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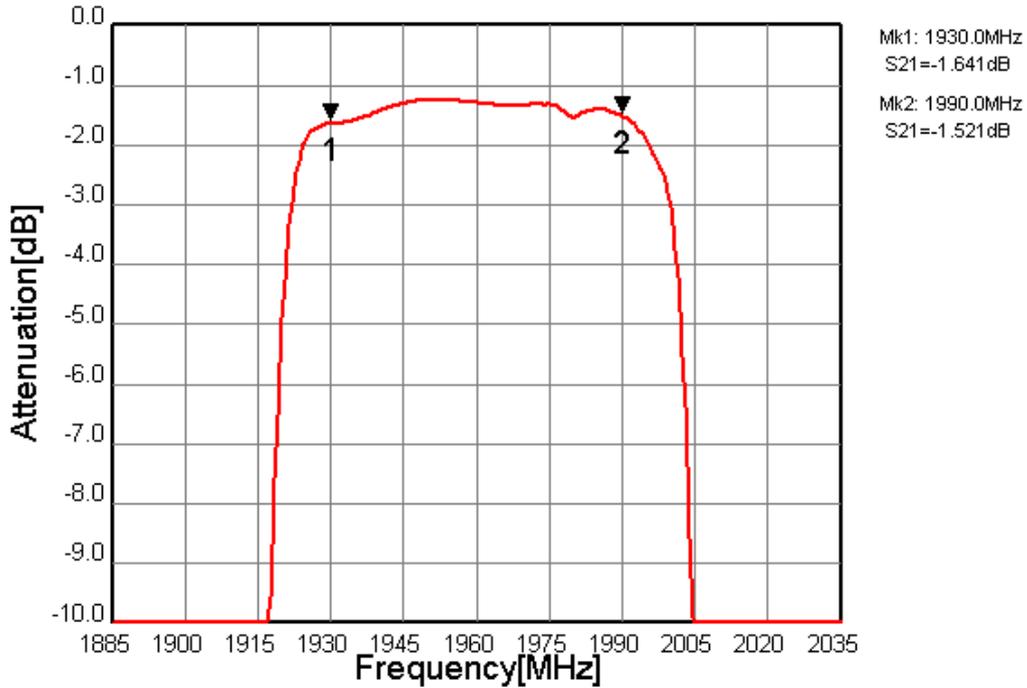


Fig.11 In-band Characteristic (Filter2)

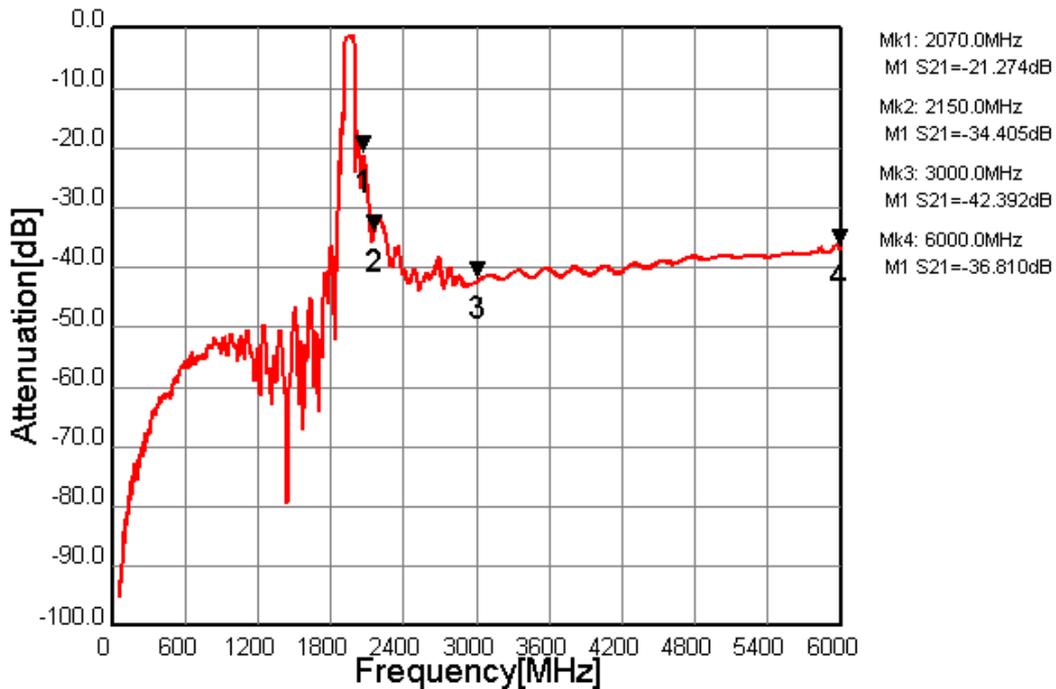


Fig.12 Wide-band Characteristic (Filter2)



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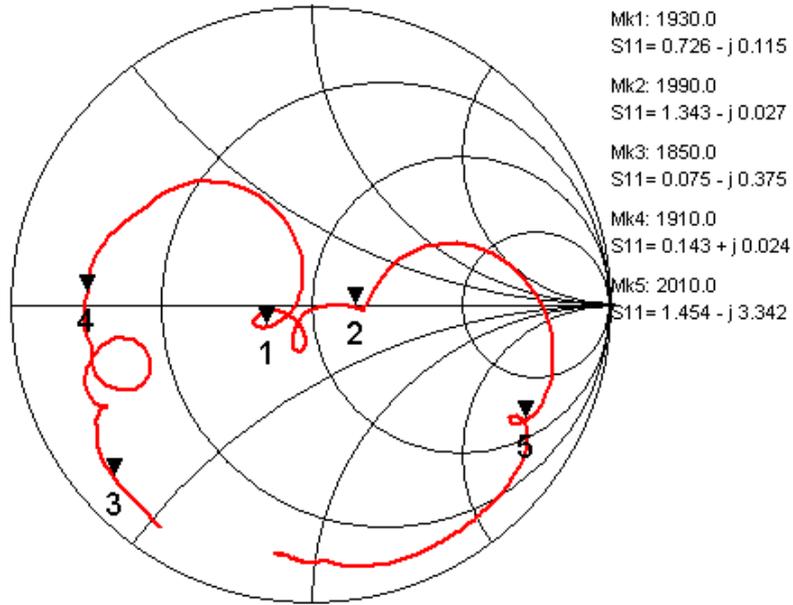


Fig.13 Impedance (S11) (Filter2)

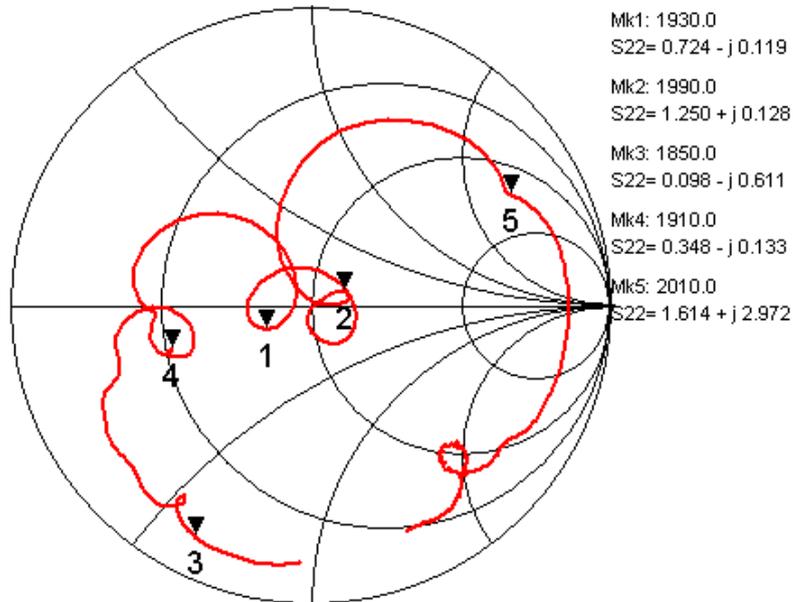


Fig.14 Impedance (S22) (Filter2)



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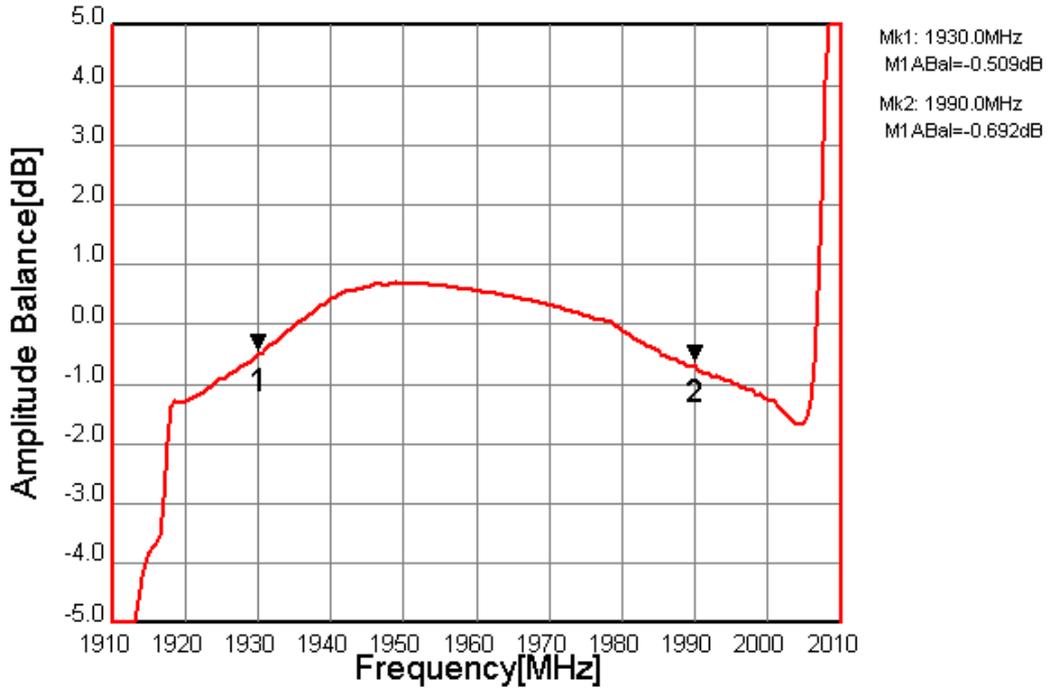


Fig.15 Amplitude Balance (Filter2)

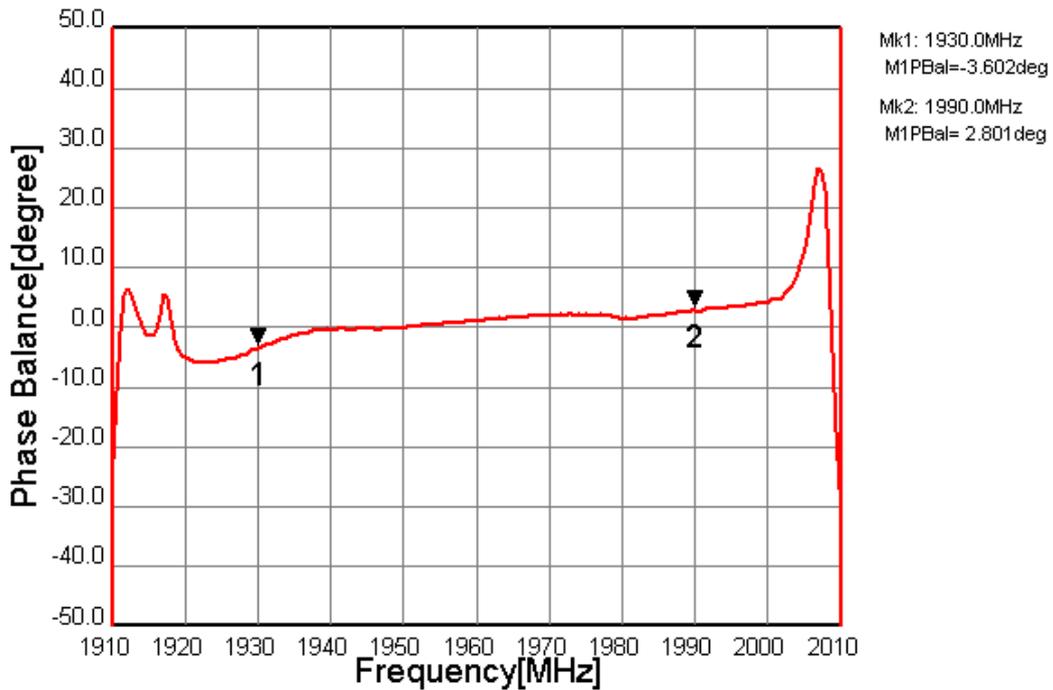


Fig.16 Phase Balance (Filter2)