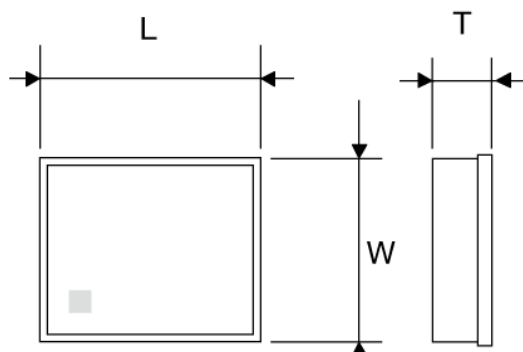


## SAW Dual Filter

## FAR-G6QC-1 G9600-N2CB



## ■ Features

- Item Summary  
GSM1900/1800 , Rx, 604
- Lifecycle Stage  
Mass Production
- Standard packaging quantity (minimum)  
Taping Embossed 5000 , 15000pcs

## ■ Products characteristics table

Temperature Range	-30 to +85°C
GSM	1900 / 1800
Use	GSM
Transmitting / Receiving	Rx Dual Filter
Insertion Loss	1.7/1.7dB
Attenuation	15/16dB
RoHS Compliance	Yes
Halogen Free	Yes
Soldering Method	Reflow

## ■ External Dimensions

L	1.5mm +0.1:-0.1
W	1.1mm +0.1:-0.1
T	0.5mm max

2015.06.03

The data is reference only. Electrical characteristics vary depending on environment or measurement condition.  
 TAIYO YUDEN reserves the right to make change to the Date at any time without notice.  
 Before making final selection, please check product specification.



MSL1

\* Pb Free Part

Customer Name	Standard specification	TAIYO YUDEN Mobile Technology Co., Ltd.	
System	GSM1900/GSM1800 Rx (50/150ohms)	Date	March 31, 2010
Part Number	FAR-G6QC-1G9600-N2CB	Version 3.1cc	

Table 1. Electrical specifications(Filter 1)

Pass Band (1930-1990MHz)						
Item	Condition (MHz)	Specification			Unit	Remarks
		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	-	1.6	2.0	-	
Output VSWR	1930-1990	-	1.6	2.0	-	
Absolute attenuation	DC-1850	30	36	-	dB	
	1850-1910	11	15	-	dB	
	2010-2070	12	17	-	dB	
	2070-2150	20	22	-	dB	
	2150-3000	25	32	-	dB	
	3000-6000	25	32	-	dB	
Amplitude balance ( S <sub>21</sub> /S <sub>31</sub>  )	1930-1990	-1.5	-0.6/+0.6	+1.5	dB	
Phase balance (( $\Phi$ S <sub>21</sub> - $\Phi$ S <sub>31</sub> )+180)	1930-1990	-10	-6/+0	+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.



MSL1

\* Pb Free Part

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Table 2.Electrical specifications(Filter 2)

Pass Band (1805-1880MHz)						
Item	Condition (MHz)	Specification			Unit	Remark
		Min.	Typ.	Max.		
Insertion Loss	1805-1880	-	1.7	2.4	dB(*1)	
Ripple	1805-1880	-	0.4	1.2	dB	
Input VSWR	1805-1880	-	1.7	2.1	-	
Output VSWR	1805-1880	-	1.6	2.1	-	
Absolute attenuation	DC-1300	40	46	-	dB	
	1300-1705	30	38	-	dB	
	1705-1785	13	16	-	dB	
	1920-1980	19	22	-	dB	
	1980-3000	20	25	-	dB	
	3000-5000	35	39	-	dB	
5000-6000	25	36	-	dB		
Amplitude balance ( S <sub>21</sub> /S <sub>31</sub>  )	1805-1880	-1.5	-0.8/+1.0	+1.5	dB	
Phase balance ((∠S <sub>21</sub> -∠S <sub>31</sub> )+180)	1805-1880	-10	-5/+4	+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.



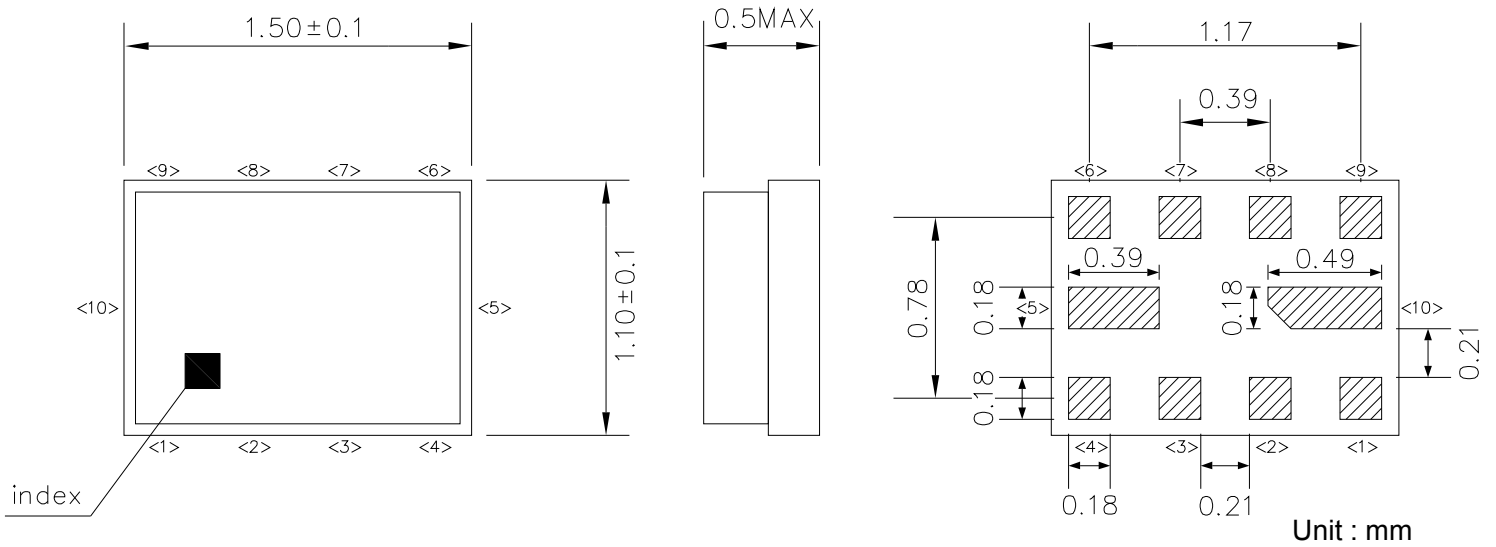
MSL1

\* Pb Free Part

Customer Name	Standard specification	TAIYO YUDEN Mobile Technology Co.,Ltd.	
System	GSM1900/GSM1800 Rx (50/150ohms)	Date	March 31, 2010
Part Number	FAR-G6QC-1G9600-N2CB	Version 3.1cc	

### Dimensions

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

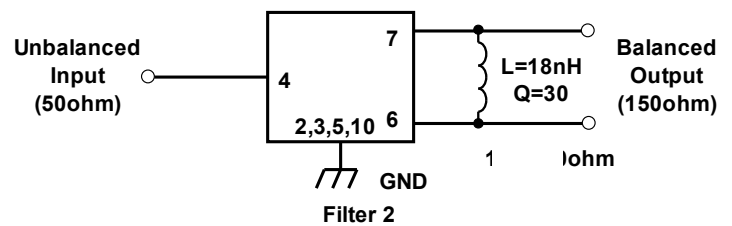
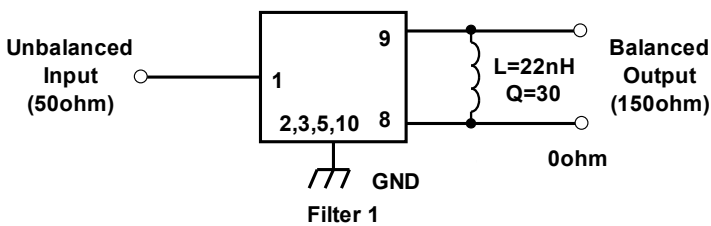


### Pin Configuration

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	1930 ~ 1990	GSM1900-Rx
2	1805 ~ 1880	GSM1800-Rx

### Evaluation Circuit





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\* Pb Free Part

Customer Name	Standard specification	TAIYO YUDEN Mobile Technology Co.,Ltd.	
System	GSM1900/GSM1800 Rx (50/150ohms)	Date	March 31, 2010
Part Number	FAR-G6QC-1G9600-N2CB	Version 3.1cc	

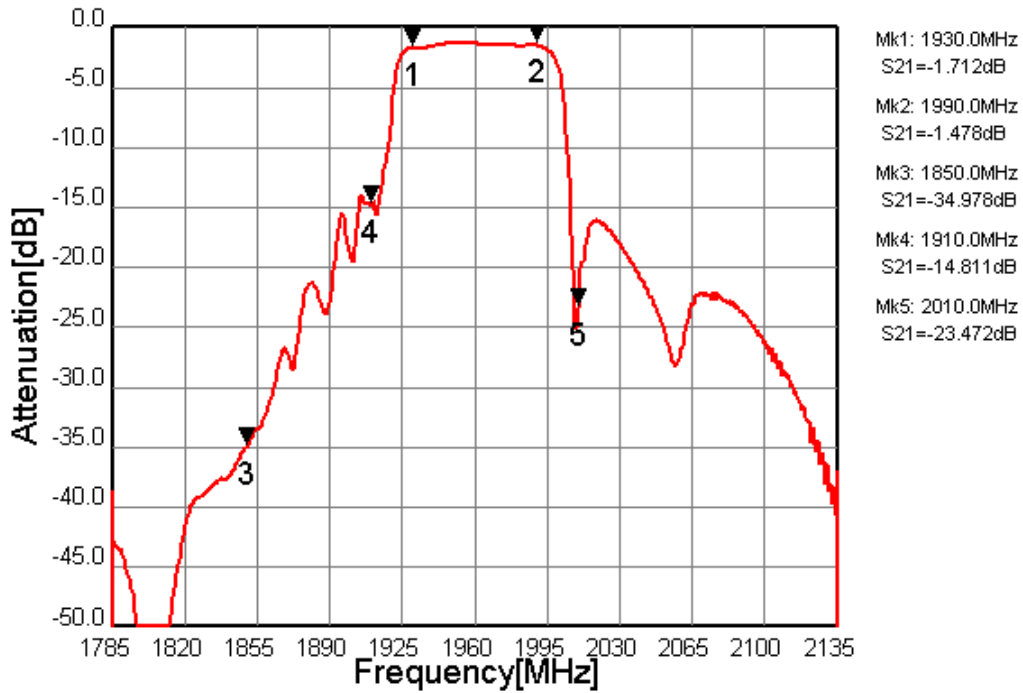


Fig.1 Pass-band Characteristic (Filter1)

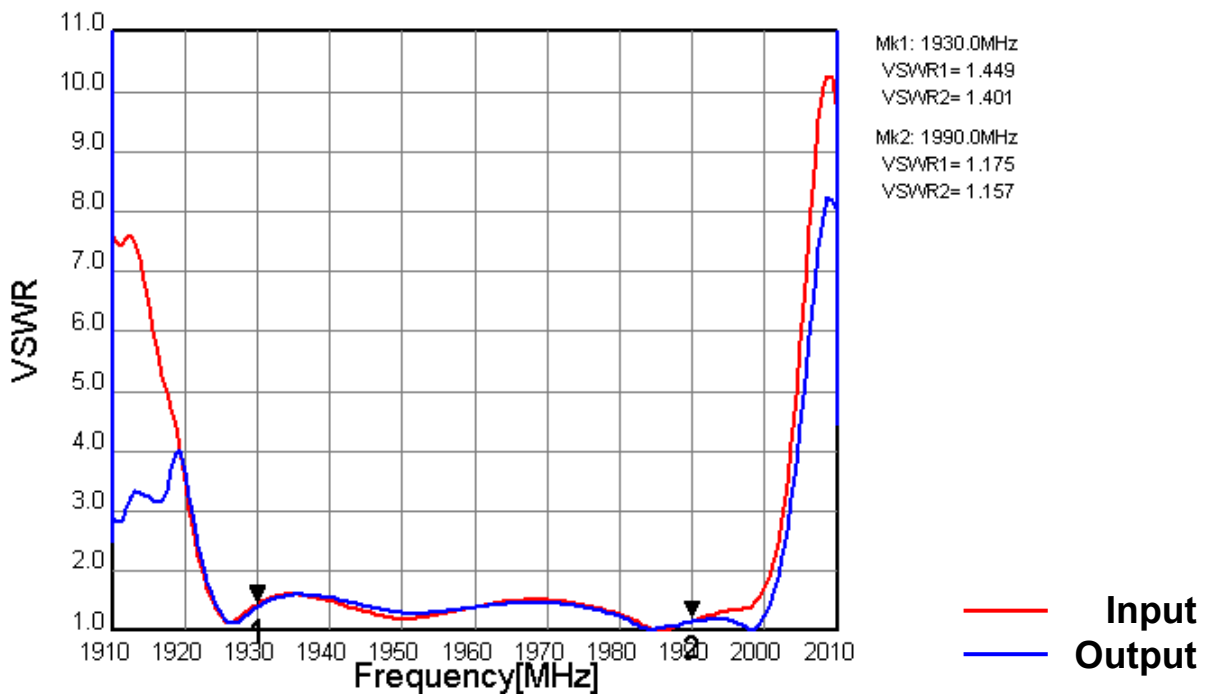


Fig.2 VSWR (Filter1)



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\* Pb Free Part

Customer Name	Standard specification	TAIYO YUDEN Mobile Technology Co.,Ltd.	
System	GSM1900/GSM1800 Rx (50/150ohms)	Date	March 31, 2010
Part Number	FAR-G6QC-1G9600-N2CB	Version 3.1cc	

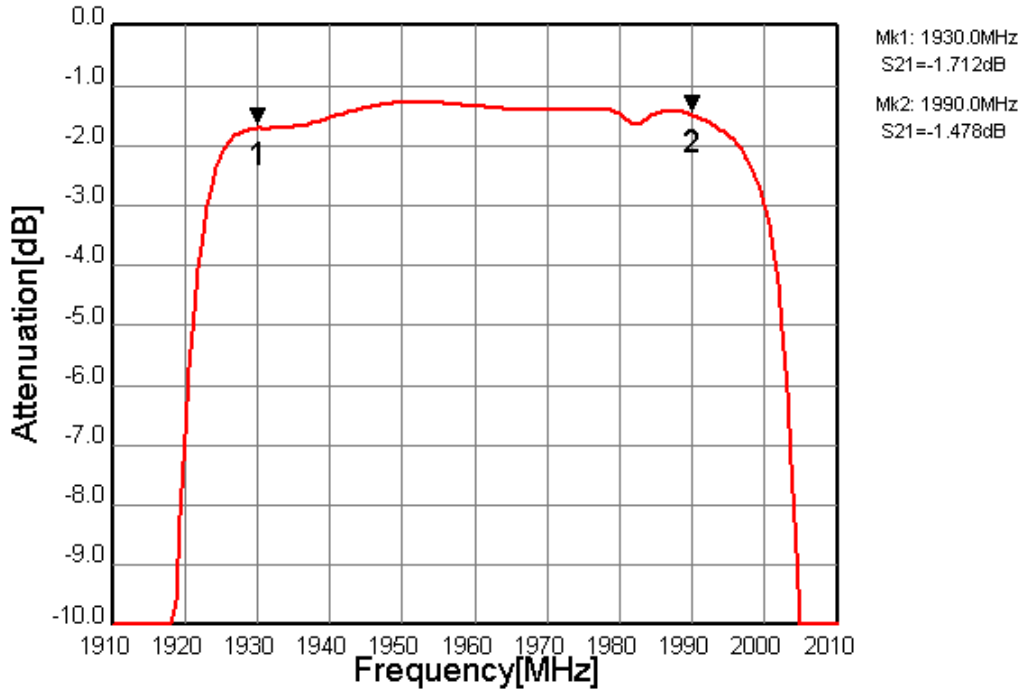


Fig.3 In-band Characteristic (Filter1)

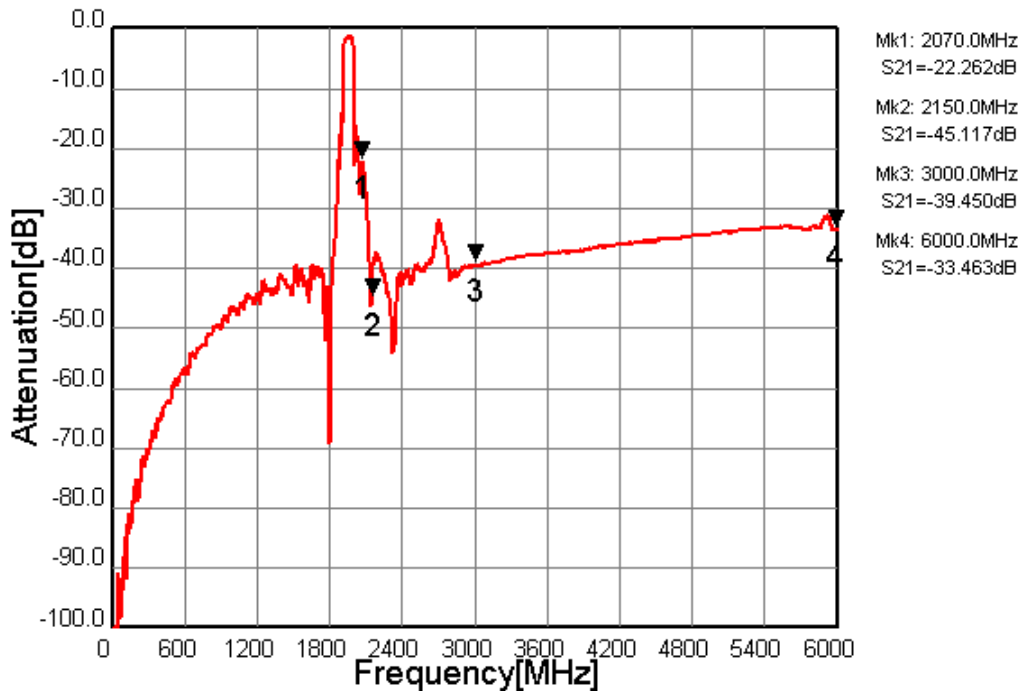


Fig.4 Wide-band Characteristic (Filter1)



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\* Pb Free Part

Customer Name	Standard specification	TAIYO YUDEN Mobile Technology Co.,Ltd.	
System	GSM1900/GSM1800 Rx (50/150ohms)	Date	March 31, 2010
Part Number	FAR-G6QC-1G9600-N2CB	Version 3.1cc	

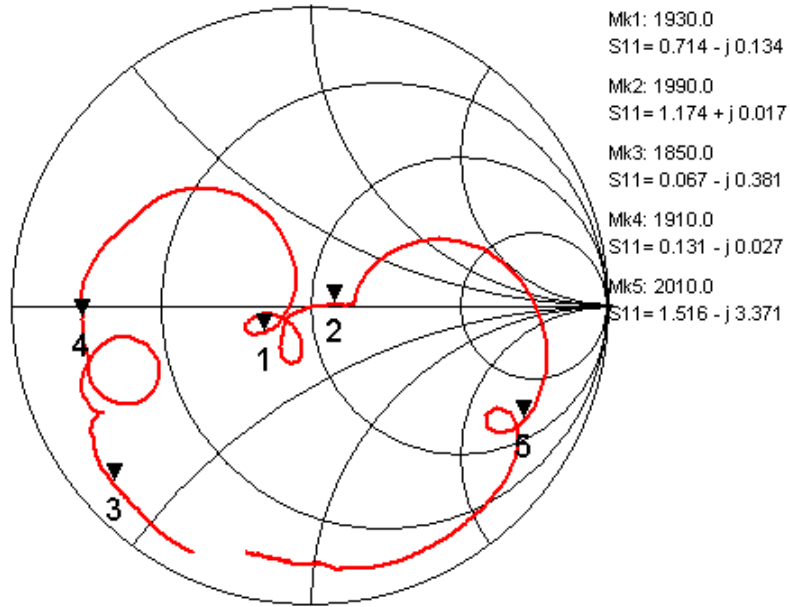


Fig.5 Impedance (S11) (Filter1)

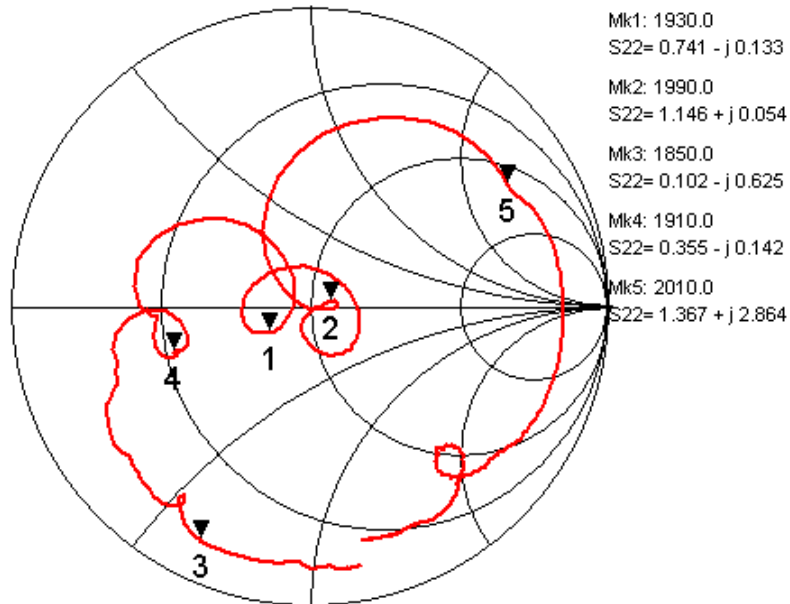


Fig.6 Impedance (S22) (Filter1)



MSL1

\* Pb Free Part

Customer Name	Standard specification	TAIYO YUDEN Mobile Technology Co.,Ltd.	
System	GSM1900/GSM1800 Rx (50/150ohms)	Date	March 31, 2010
Part Number	FAR-G6QC-1G9600-N2CB	Version 3.1cc	

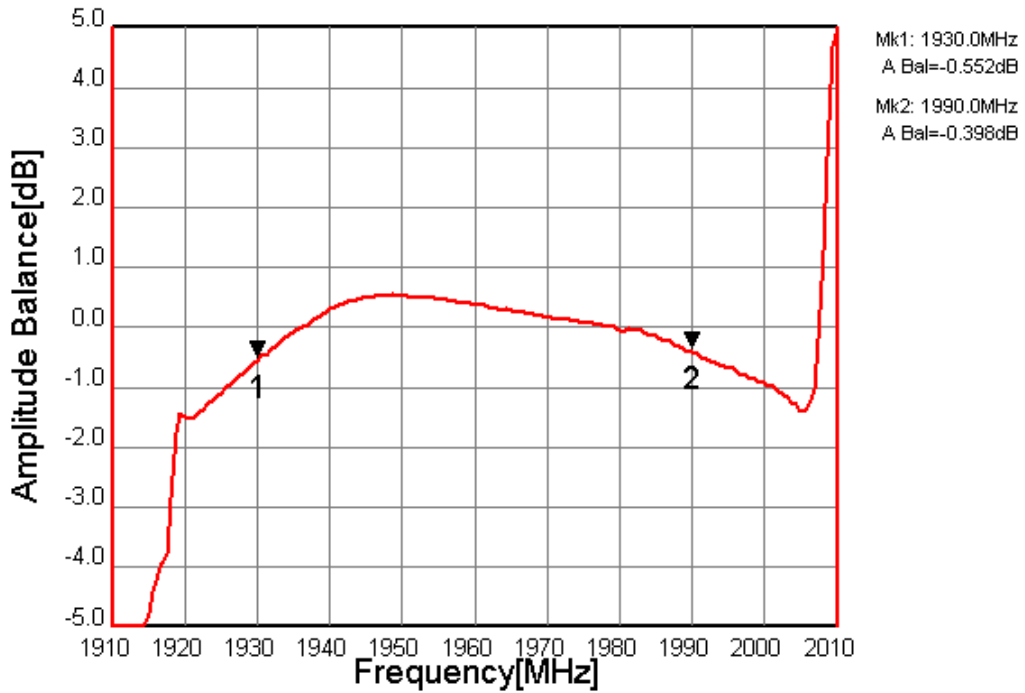


Fig.7 Amplitude Balance (Filter1)

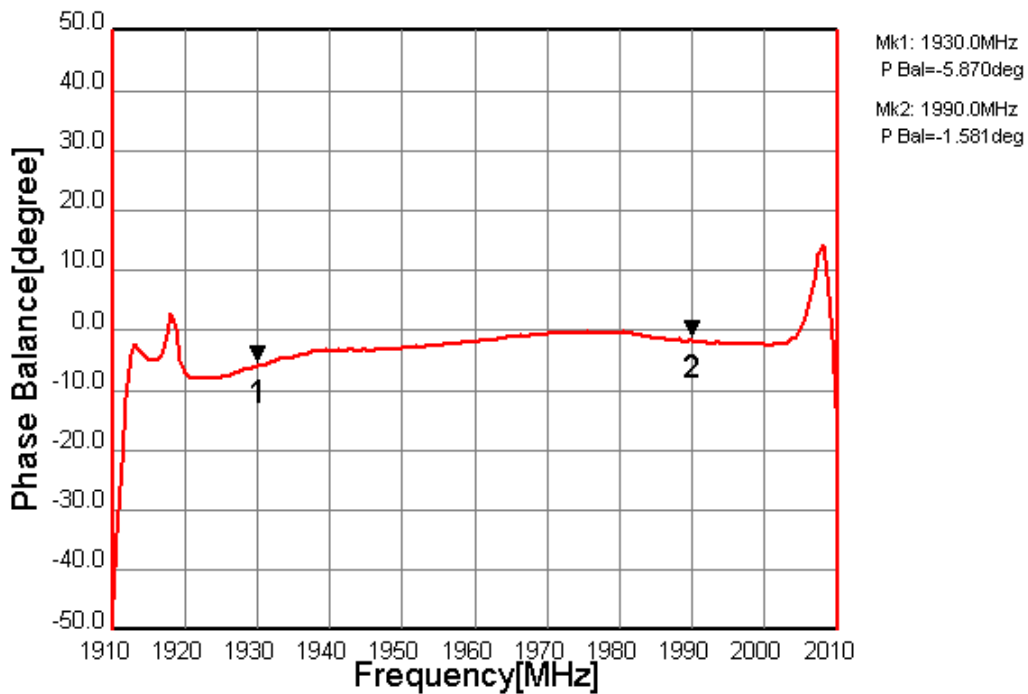


Fig.8 Phase Balance (Filter1)





MSL1

\* Pb Free Part

Customer Name	Standard specification	TAIYO YUDEN Mobile Technology Co.,Ltd.	
System	GSM1900/GSM1800 Rx (50/150ohms)	Date	March 31, 2010
Part Number	FAR-G6QC-1G9600-N2CB	Version 3.1cc	

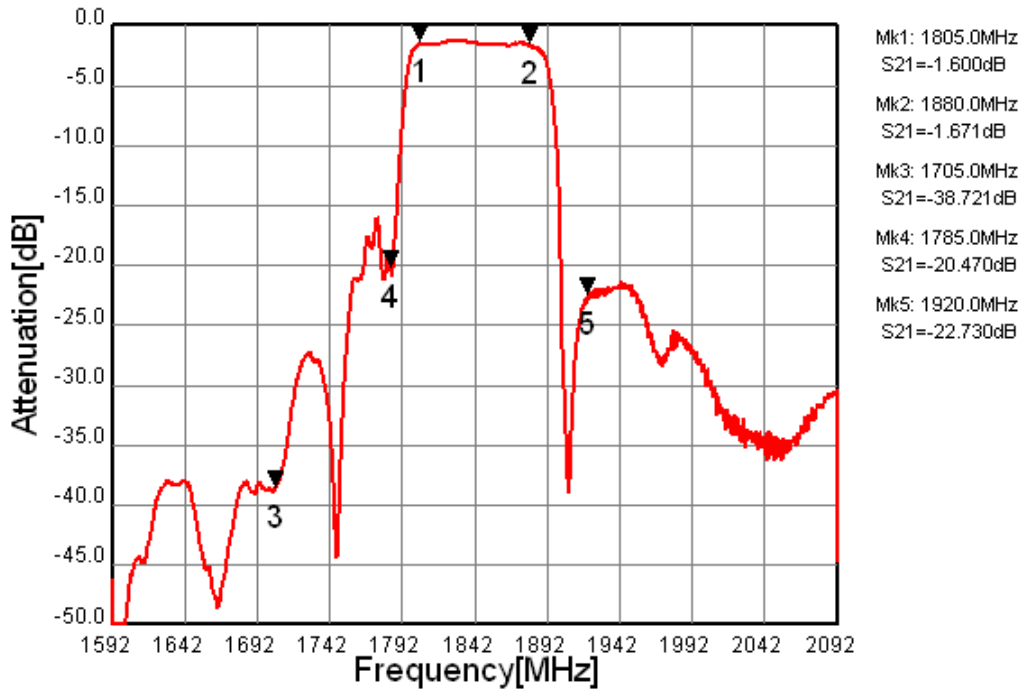


Fig.9 Pass-band Characteristic (Filter2)

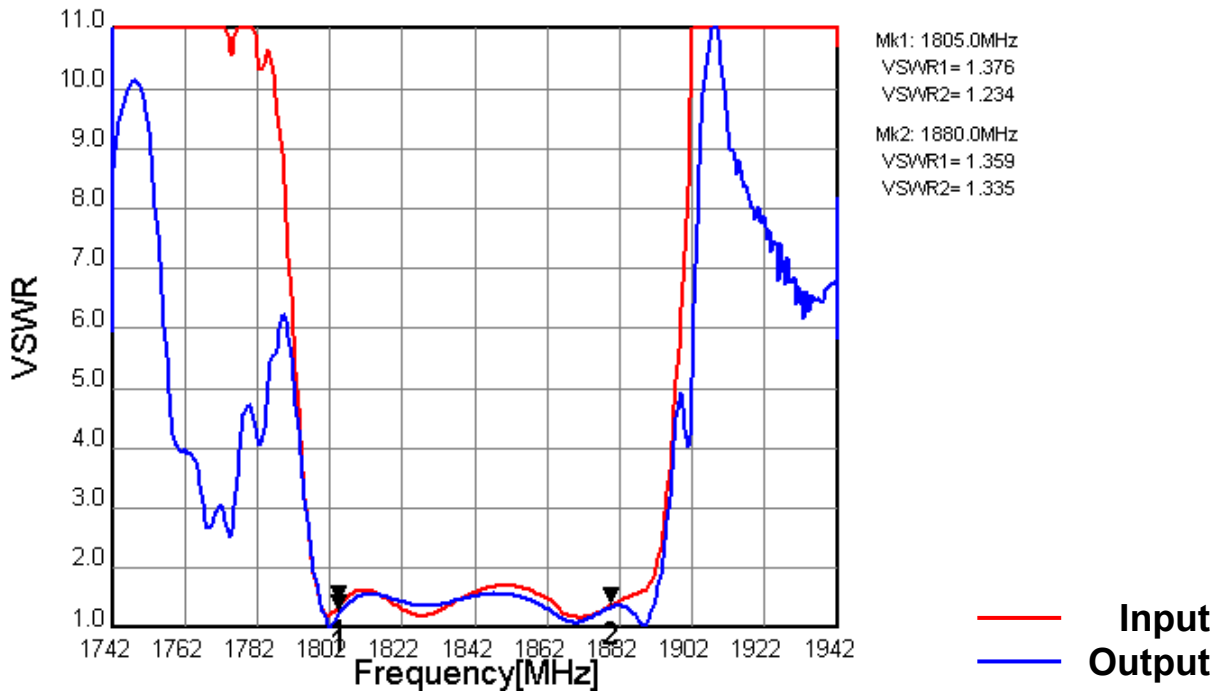


Fig.10 VSWR (Filter2)



MSL1

\* Pb Free Part

Customer Name	Standard specification	TAIYO YUDEN Mobile Technology Co.,Ltd.	
System	GSM1900/GSM1800 Rx (50/150ohms)	Date	March 31, 2010
Part Number	FAR-G6QC-1G9600-N2CB	Version 3.1cc	

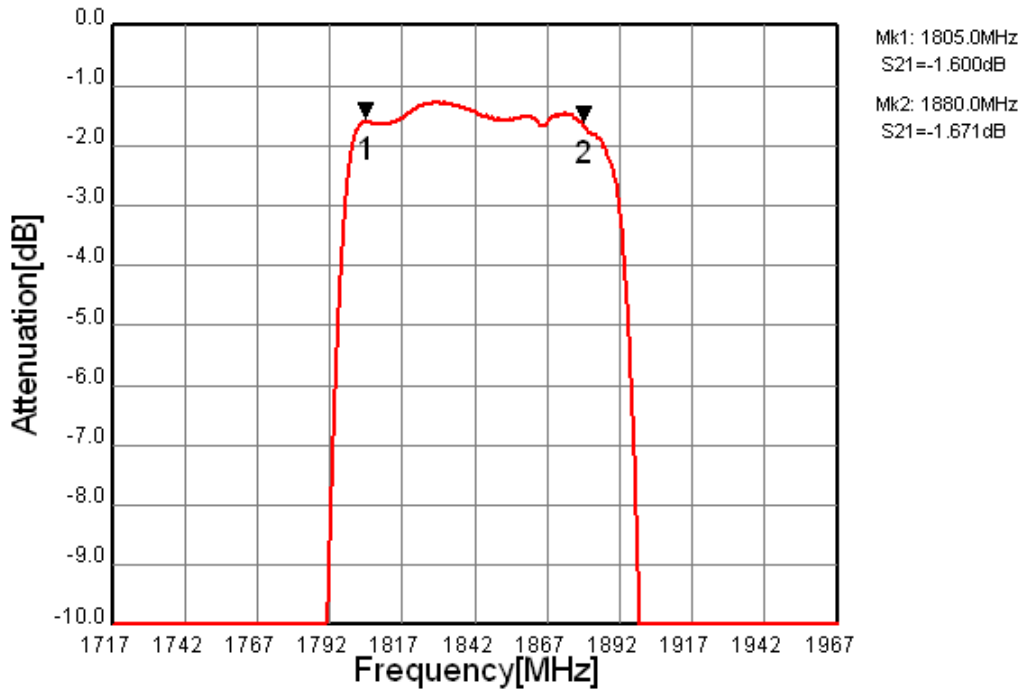


Fig.11 In-band Characteristic (Filter2)

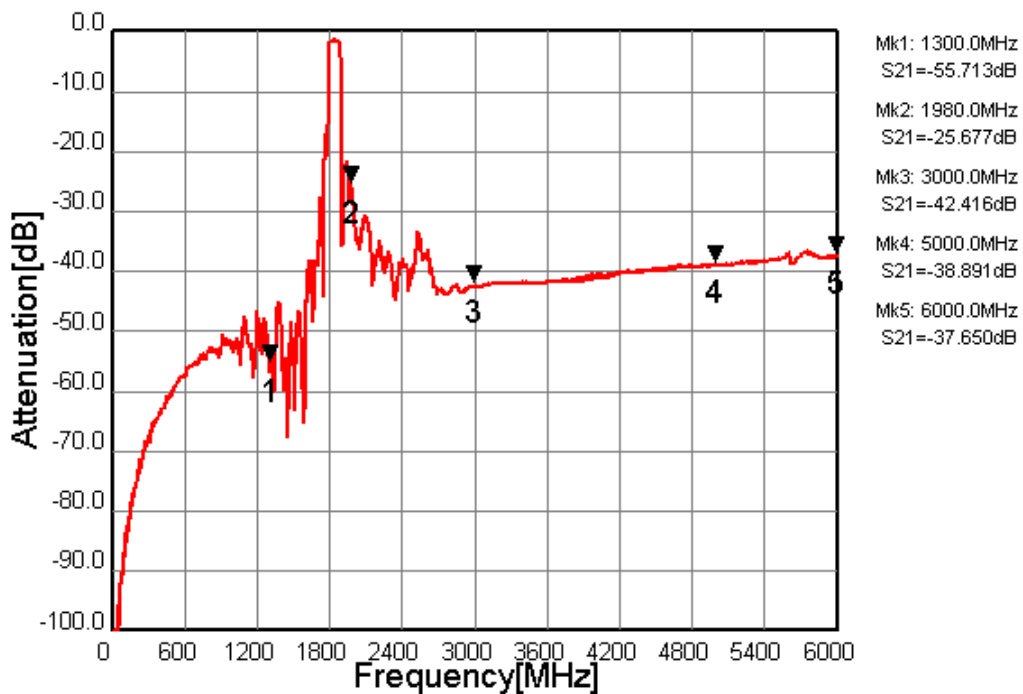


Fig.12 Wide-band Characteristic (Filter2)



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\* Pb Free Part

Customer Name	Standard specification	TAIYO YUDEN Mobile Technology Co.,Ltd.	
System	GSM1900/GSM1800 Rx (50/150ohms)	Date	March 31, 2010
Part Number	FAR-G6QC-1G9600-N2CB	Version 3.1cc	

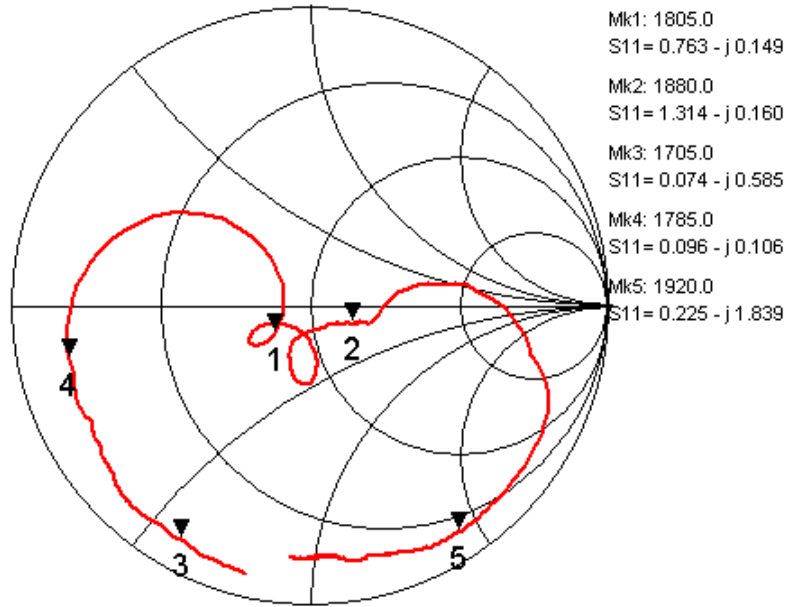


Fig.13 Impedance (S11) (Filter2)

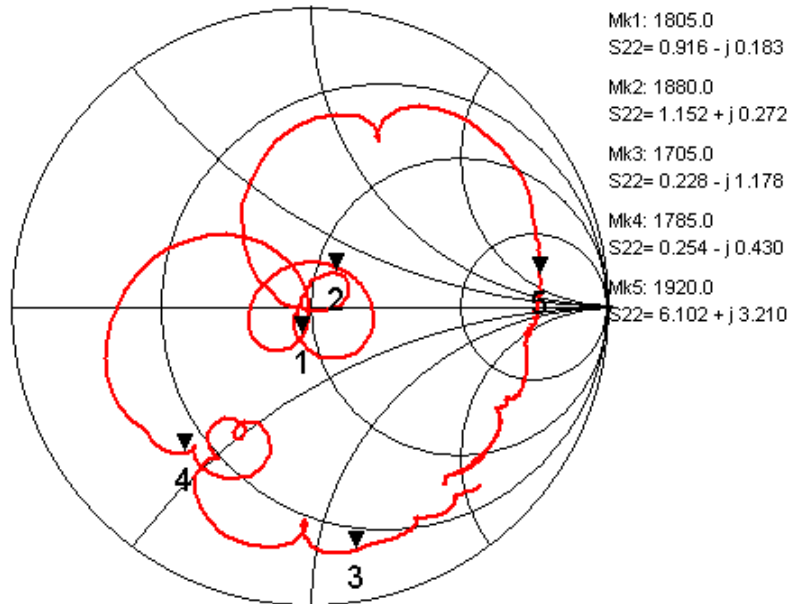


Fig.14 Impedance (S22) (Filter2)



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\* Pb Free Part

Customer Name	Standard specification	TAIYO YUDEN Mobile Technology Co.,Ltd.	
System	GSM1900/GSM1800 Rx (50/150ohms)	Date	March 31, 2010
Part Number	FAR-G6QC-1G9600-N2CB	Version 3.1cc	

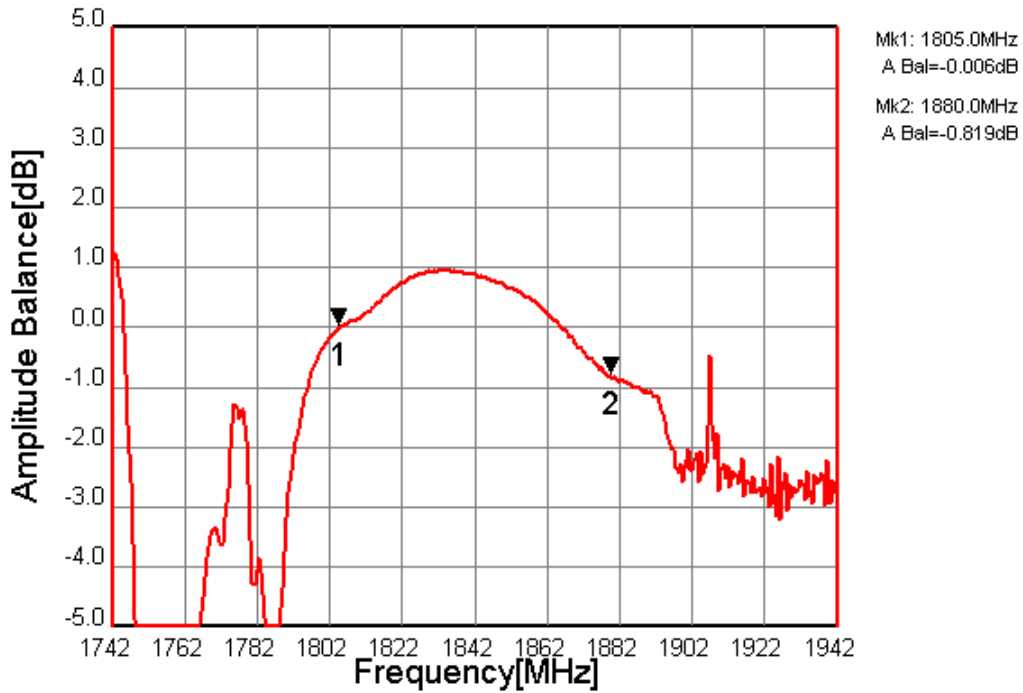


Fig.15 Amplitude Balance (Filter2)

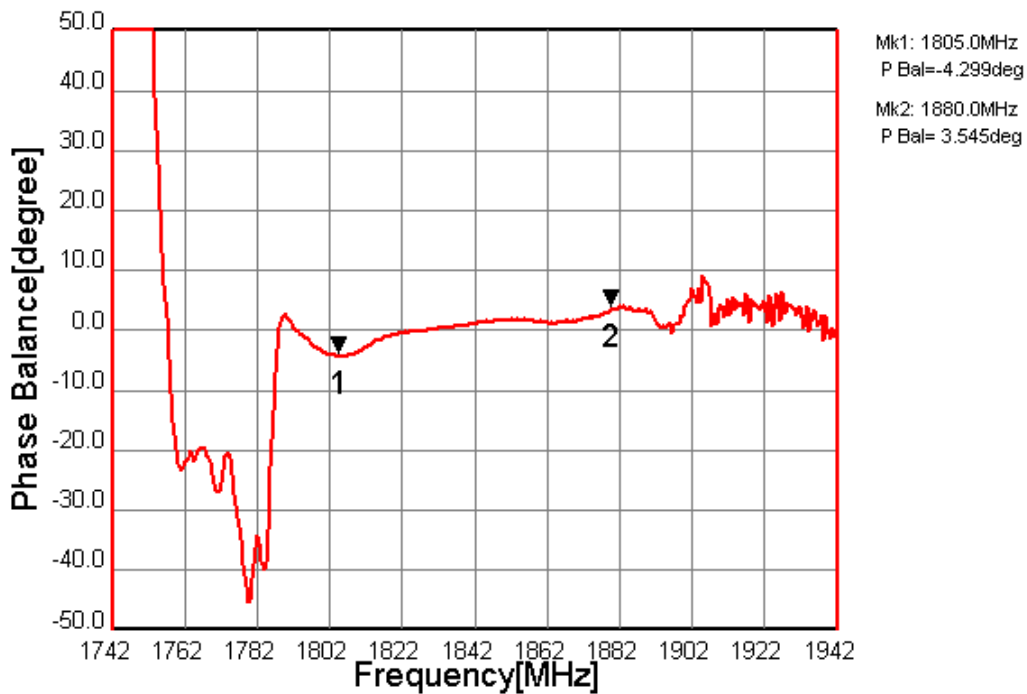


Fig.16 Phase Balance (Filter2)