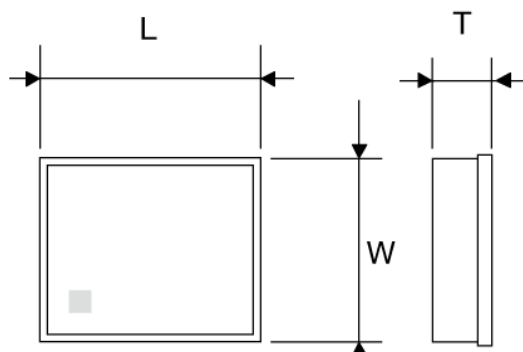


SAW Dual Filter

FAR-G6KW-1G9600-Y4YC



■ Features

- Item Summary
GSM1900/1800 , Rx, 705
- Lifecycle Stage
Mass Production
- Standard packaging quantity (minimum)
Taping Embossed 3000 , 15000pcs

■ Products characteristics table

Temperature Range	-30 to +85°C
GSM	1900 / 1800
Use	GSM
Transmitting / Receiving	Rx Dual Filter
Insertion Loss	2.2/3.1dB
Attenuation	13/15dB
RoHS Compliance	Yes
Halogen Free	Yes
Soldering Method	Reflow

■ External Dimensions

L	1.8mm +0.1:-0.1
W	1.4mm +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.



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*Pb Free part

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Customer Name	Standard specification	TAIYO YUDEN Mobile Technology Co.,Ltd.	
System	GSM1900/GSM1800 Rx (50/170ohms)	DATE	Nov. 21, 2011
Part Number	FAR-G6KW-1G9600-Y4YC	Version 4.1ee	Preliminary

Table 1. Electrical specifications (Filter1)

Passband: 1930 ~ 1990 MHz						
Item	Condition (MHz)	specification			Unit	Remark
		Min.	Typ.	Max.		
Insertion Loss	1930~1990	-	2.2	3.1	dB	
Ripple	1930~1990	-	0.6	1.6	dB	
Absolute attenuation	DC ~1850	30	36	-	dB	
	1850~1910	10	13	-	dB	+25degC
	2010~2070	10	13	-	dB	+25degC
	2070~2150	25	34	-	dB	
	2150~3000	30	38	-	dB	
	3000~6000	25	34	-	dB	
VSWR (Input)	1930~1990	-	1.8	2.3	-	
VSWR (Output)	1930~1990	-	1.8	2.3	-	
Amplitude balance (S ₂₁ /S ₃₁)	1930~1990	-3.0	-2.5+0.2	+3.0	dB	
Phase balance (∠S ₂₁ -∠S ₃₁)+180)	1930~1990	-15	-9/+3	+15	deg	
Input Impedance	Unbalanced	50			ohm	
Output Impedance	Balance	170//8.2nH*			ohm	*5.6nH recommended for XMM2130 Platform
Operating Temperature		-30 ~ +85			°C	



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Part Number	FAR-G6KW-1G9600-Y4YC	Version 4.1ee	Preliminary

Table 2. Electrical specifications (Filter2)

Passband: 1805 ~ 1880 MHz						
Item	Condition (MHz)	specification			Unit	Remark
		Min.	Typ.	Max.		
Insertion Loss	1805~1880	-	3.1	3.5	dB	
Ripple	1805~1880	-	0.8	2.1	dB	
Absolute attenuation	DC ~1300	40	50	-	dB	
	1300~1705	30	36	-	dB	
	1705~1785	10	15	-	dB	
	1920~1980	20	34	-	dB	
	1980~3000	30	34	-	dB	
	3000~5000	25	35	-	dB	
	5000~6000	25	34	-	dB	
VSWR (Input)	1805~1880	-	2.5	2.9	-	
VSWR (Output)	1805~1880	-	2.5	2.9	-	
Amplitude balance (S21/S31)	1805~1880	-3.0	-2.0+0.5	+3.0	dB	
Phase balance ((Φ S21- Φ S31)+180)	1805~1880	-15	-9/+9	+15	deg	
Input Impedance	Unbalanced	50			ohm	
Output Impedance	Balance	170//8.2nH*			ohm	*5.6nH recommended for XMM2130 Platform
Operating Temperature		-30 ~ +85			°C	



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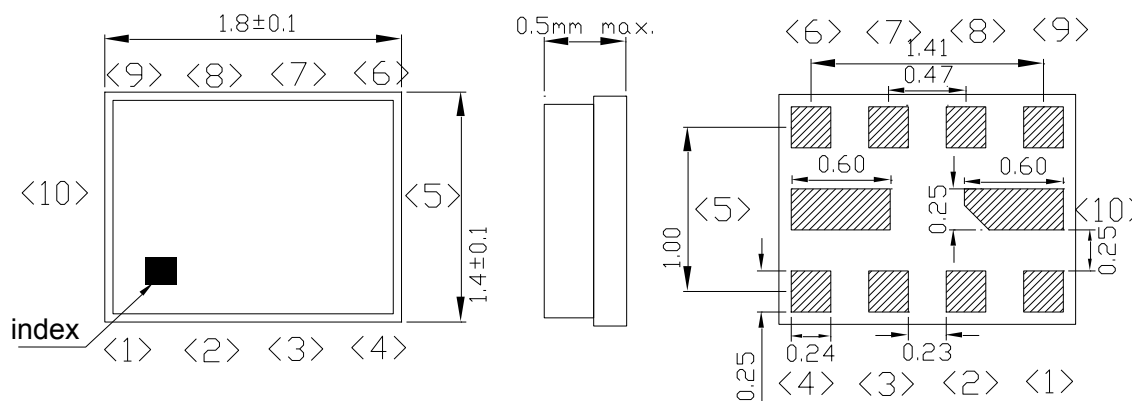
*Pb Free part

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Customer Name	Standard specification	TAIYO YUDEN Mobile Technology Co.,Ltd.	
System	GSM1900/GSM1800 Rx (50/170ohms)	DATE	Nov. 21, 2011
Part Number	FAR-G6KW-1G9600-Y4YC	Version 4.1ee	Preliminary

Dimensions

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



Unit: mm

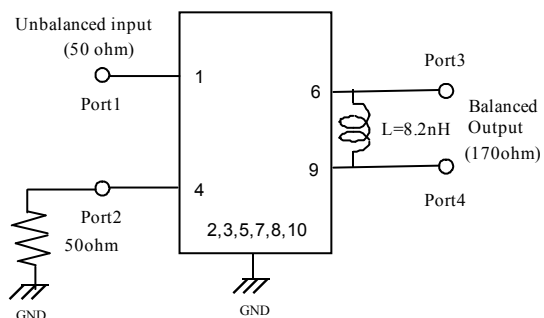
Pin Configuration

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	Filter1/Filter2 balanced output pin
7	N/C	-
8	N/C	-
9	OUT	Filter1/Filter2 balanced output pin
10	GND	Ground

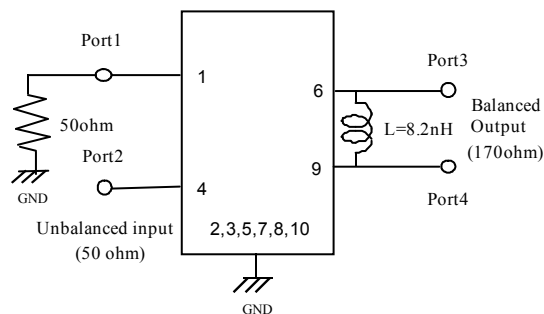
Filter No.	Pass band (MHz)	System
1	1930 ~ 1990	GSM1900-Rx
2	1805 ~ 1880	GSM1800-Rx

Evaluation Circuit

<Filter1>



<Filter2>





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Part Number	FAR-G6KW-1G9600-Y4YC	Version 4.1ee	Preliminary

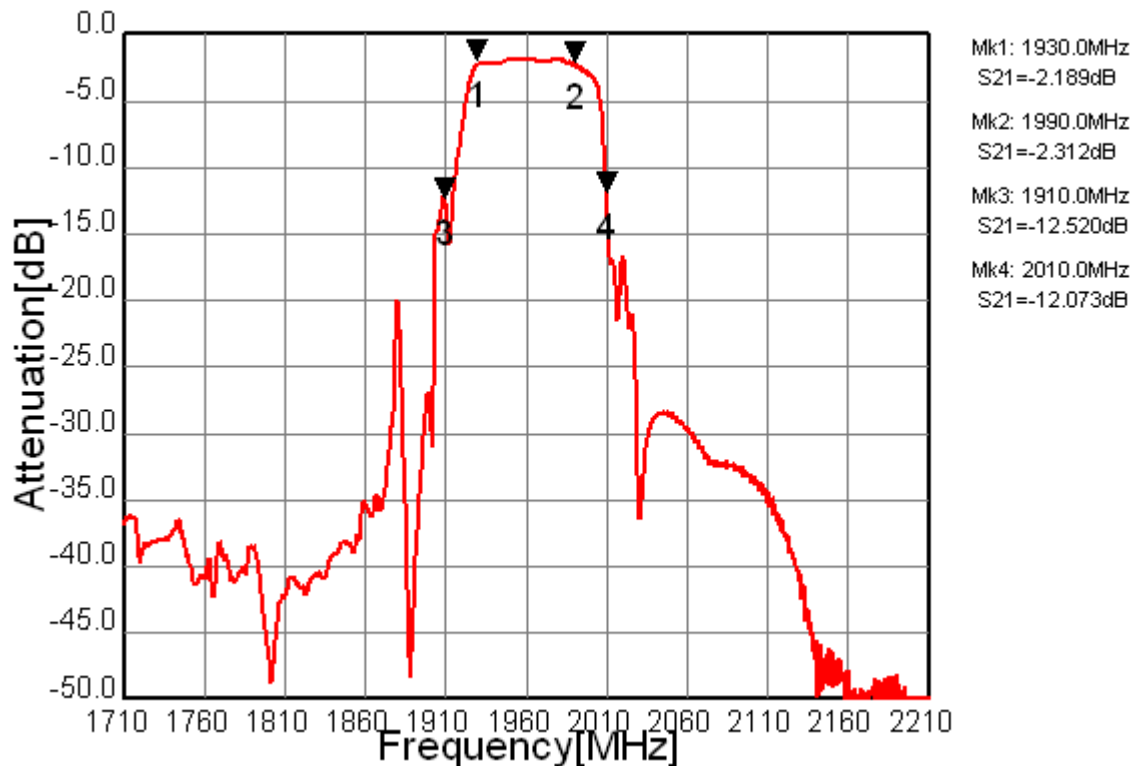


Fig.1 Pass-band Characteristics (Filter1)

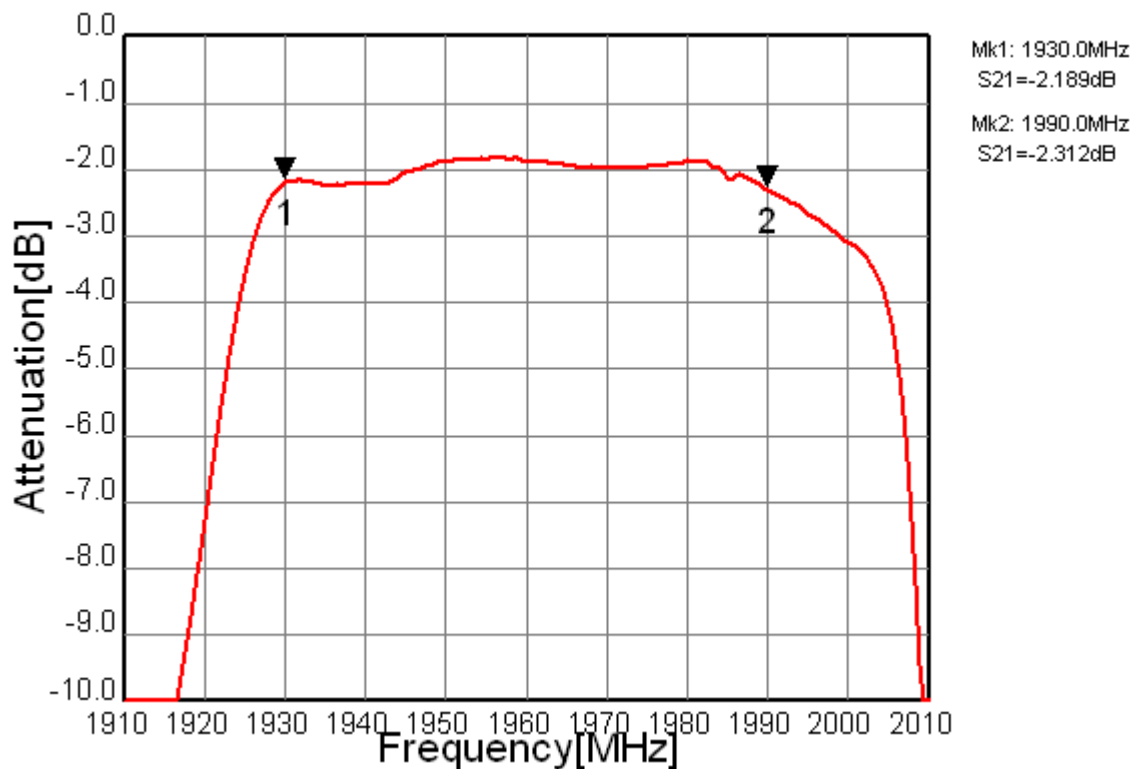


Fig.2 In-band Characteristics (Filter1)



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System	GSM1900/GSM1800 Rx (50/170ohms)	DATE	Nov. 21, 2011
Part Number	FAR-G6KW-1G9600-Y4YC	Version 4.1ee	Preliminary

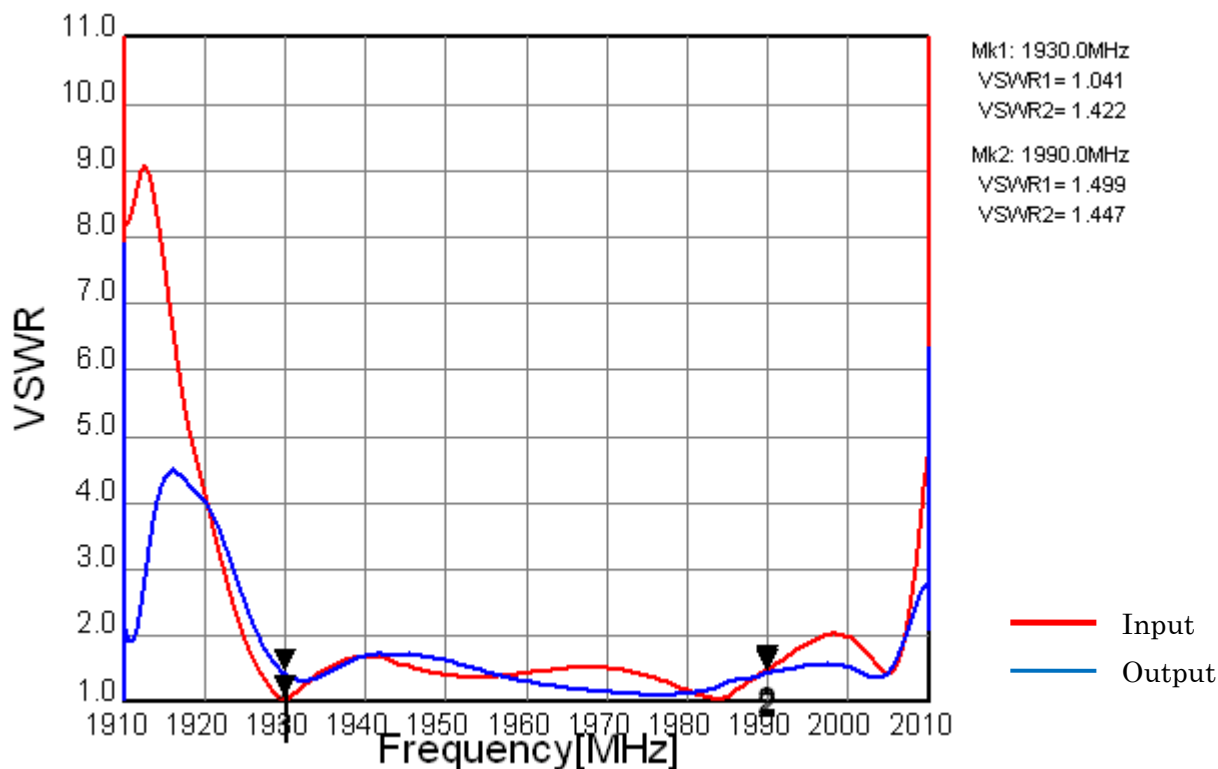


Fig.3 VSWR (Filter1)

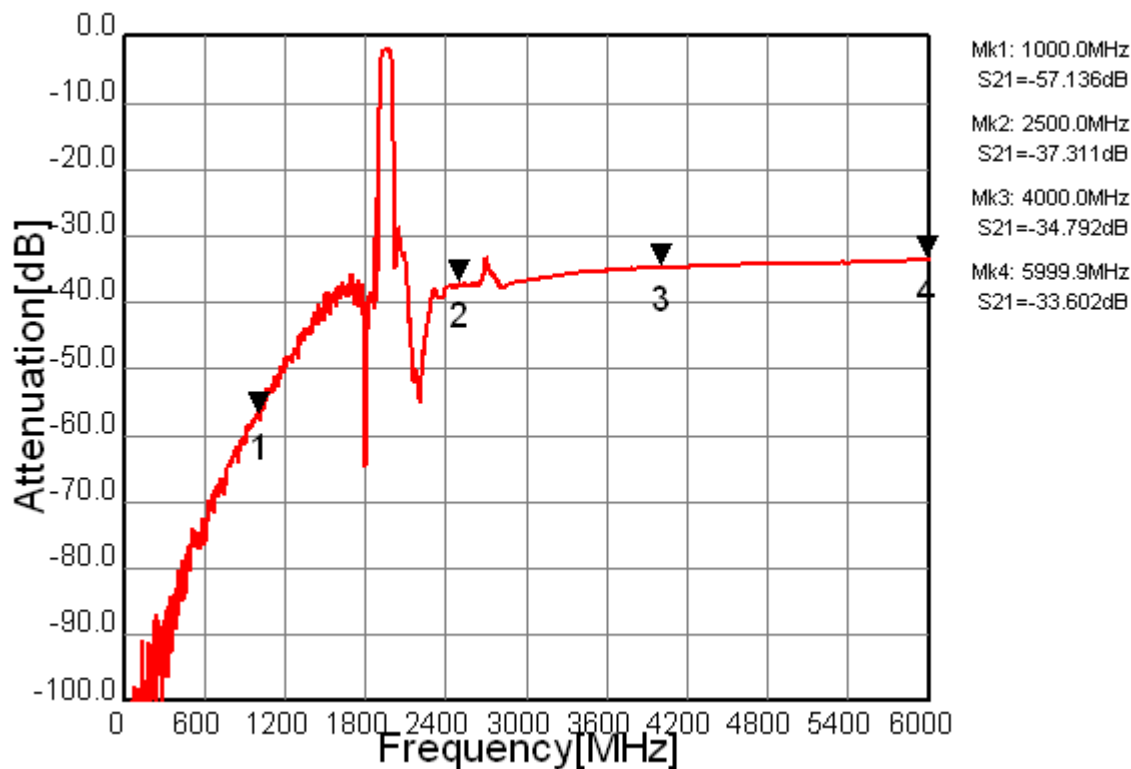


Fig. 4 Wide-band Characteristics (Filter1)

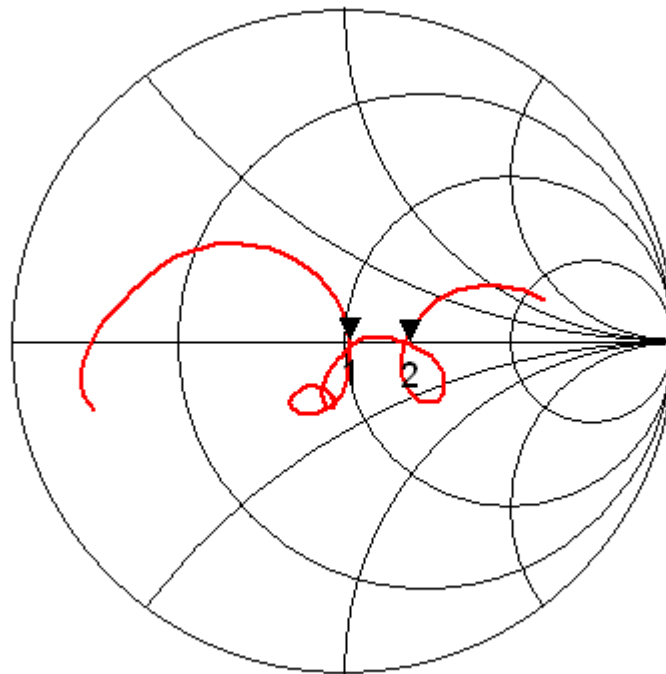


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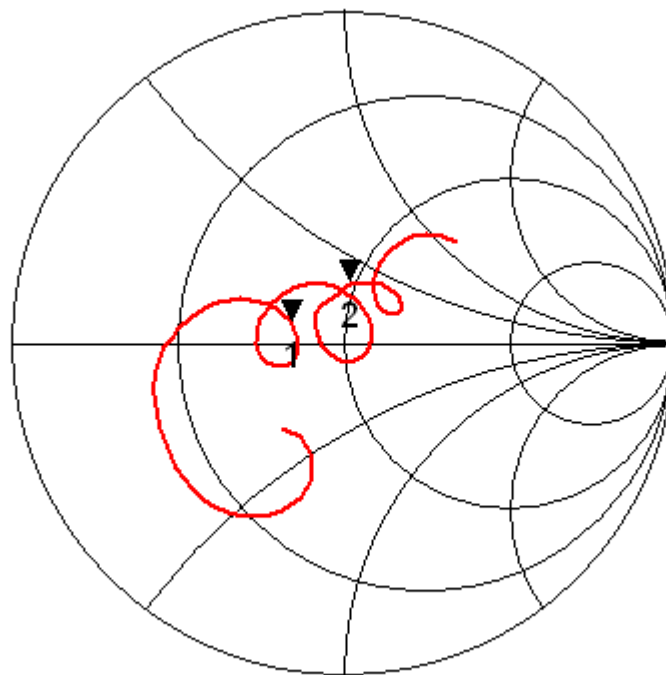
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Customer Name	Standard specification	TAIYO YUDEN Mobile Technology Co.,Ltd.	
System	GSM1900/GSM1800 Rx (50/170ohms)	DATE	Nov. 21, 2011
Part Number	FAR-G6KW-1G9600-Y4YC	Version 4.1ee	Preliminary



Mk1: 1930.0
 $S_{11} = 1.040 - j0.009$
 Mk2: 1990.0
 $S_{11} = 1.499 - j0.024$

Fig. 5 Input Impedance (Unbalance) (Filter1)



Mk1: 1930.0
 $S_{22} = 0.716 + j0.096$
 Mk2: 1990.0
 $S_{22} = 0.974 + j0.366$

Fig. 6 Output Impedance (Balance) (Filter1)



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Part Number	FAR-G6KW-1G9600-Y4YC	Version 4.1ee	Preliminary

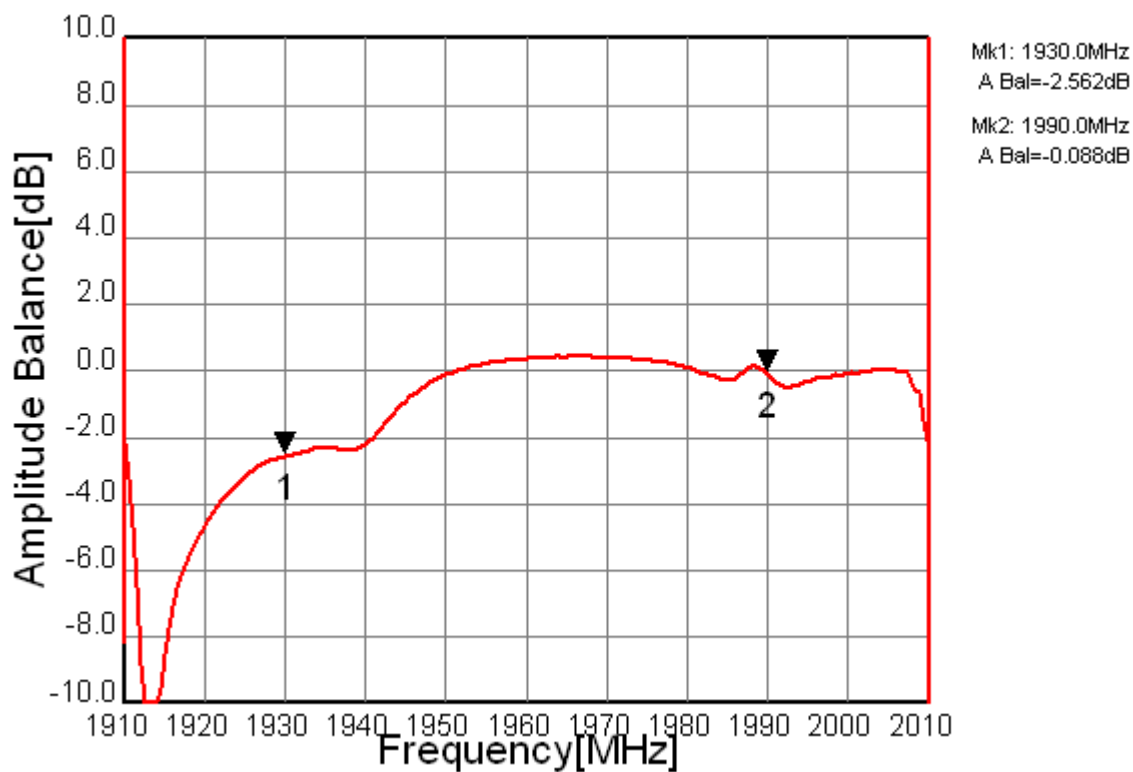


Fig. 7 Amplitude Balance (Filter1)

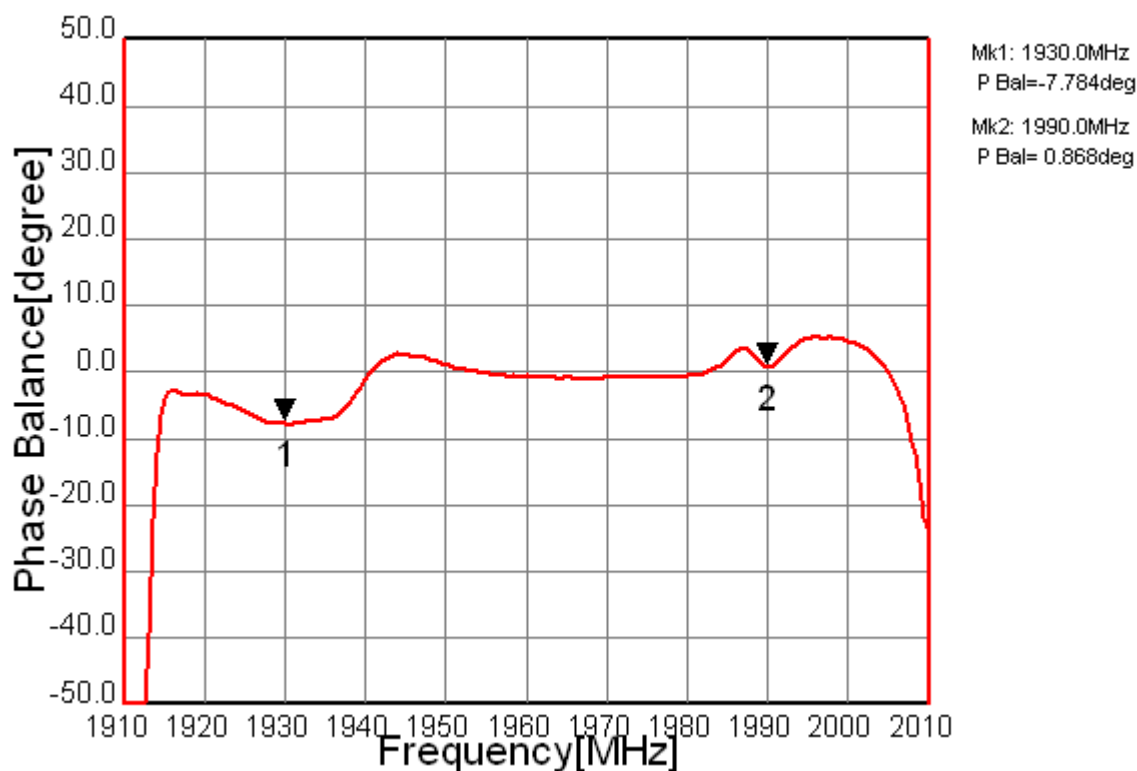


Fig.8 Phase Balance (Filter1)

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Part Number	FAR-G6KW-1G9600-Y4YC	Version 4.1ee	Preliminary

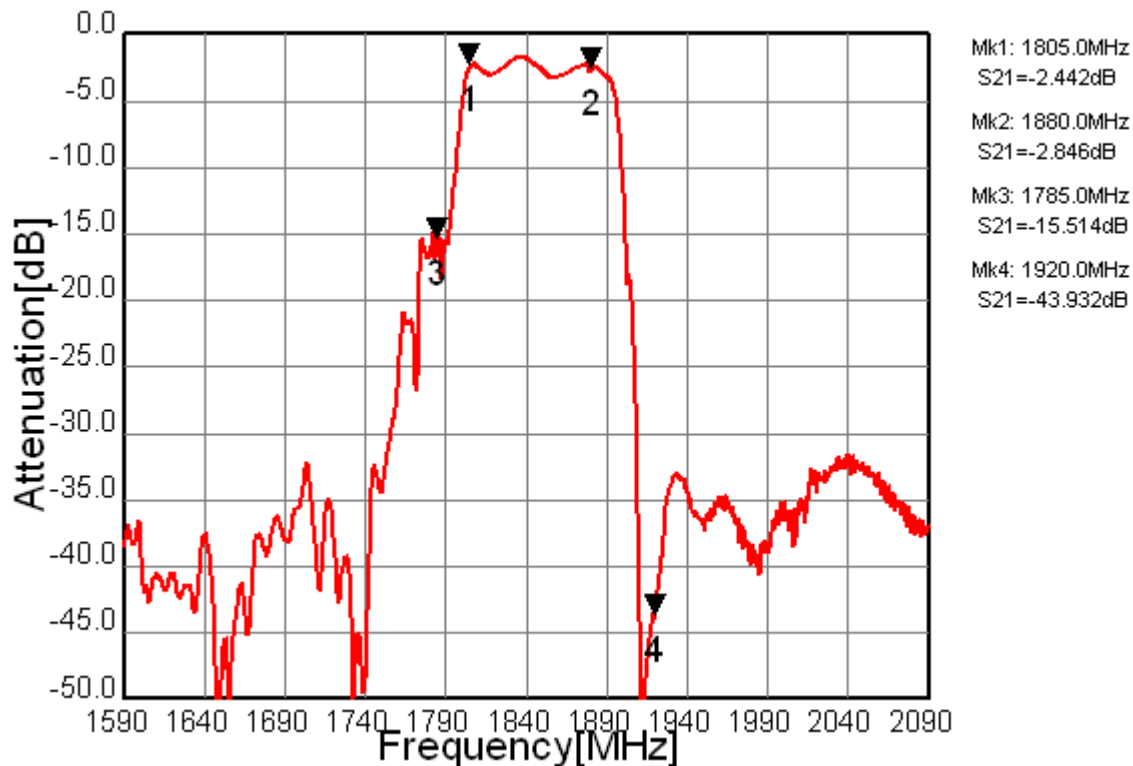


Fig.9 Pass-band Characteristics (Filter2)

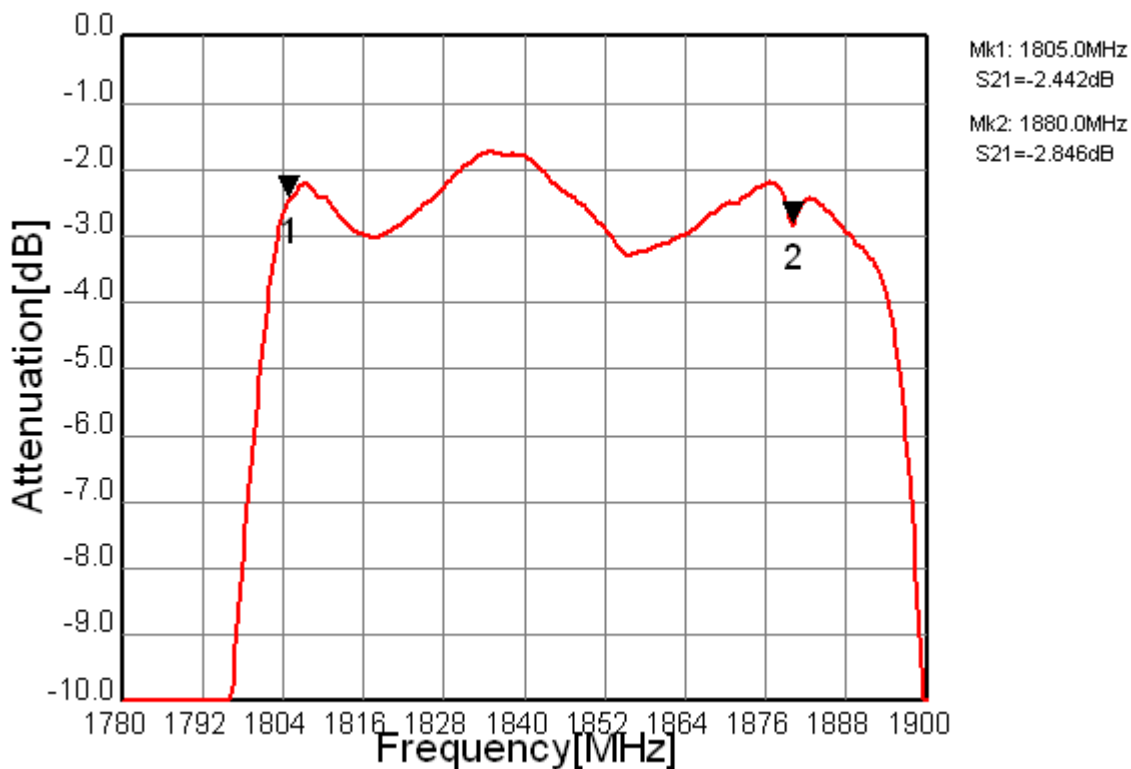


Fig.10 In-band Characteristics (Filter2)



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Customer Name	Standard specification	TAIYO YUDEN Mobile Technology Co.,Ltd.	
System	GSM1900/GSM1800 Rx (50/170ohms)	DATE	Nov. 21, 2011
Part Number	FAR-G6KW-1G9600-Y4YC	Version 4.1ee	Preliminary

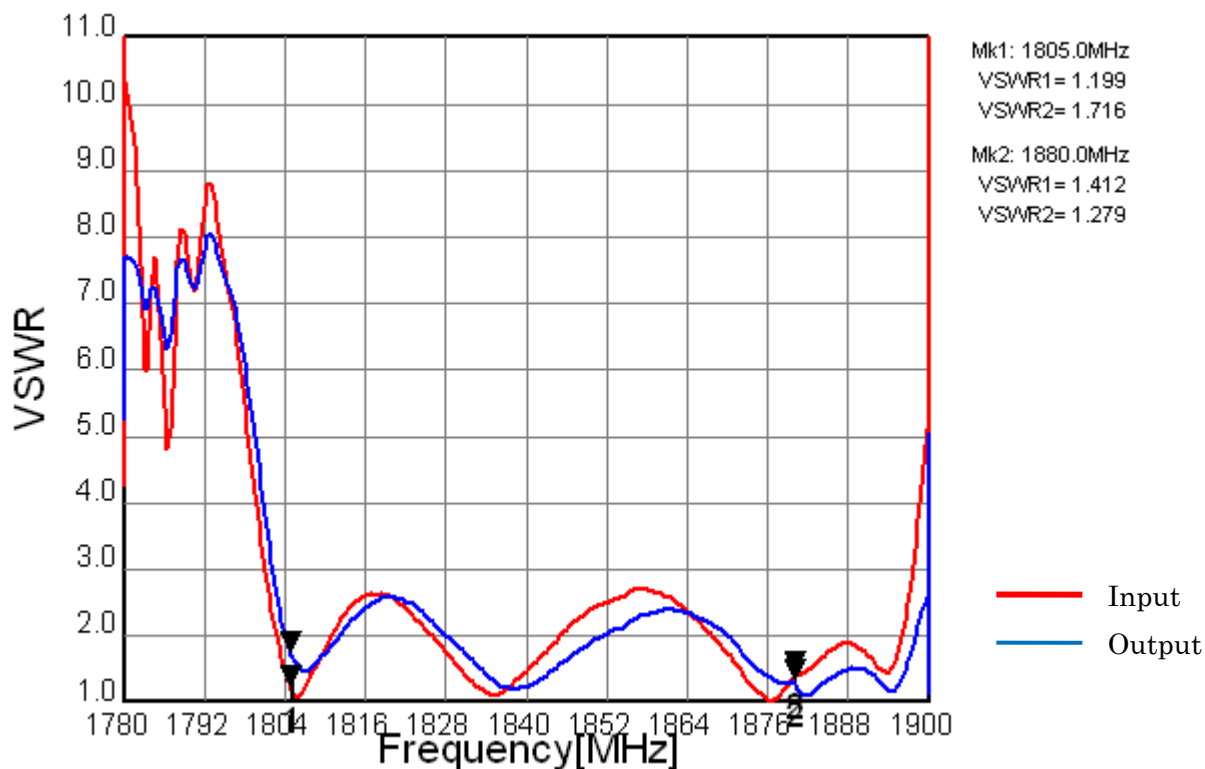


Fig.11 VSWR (Filter2)

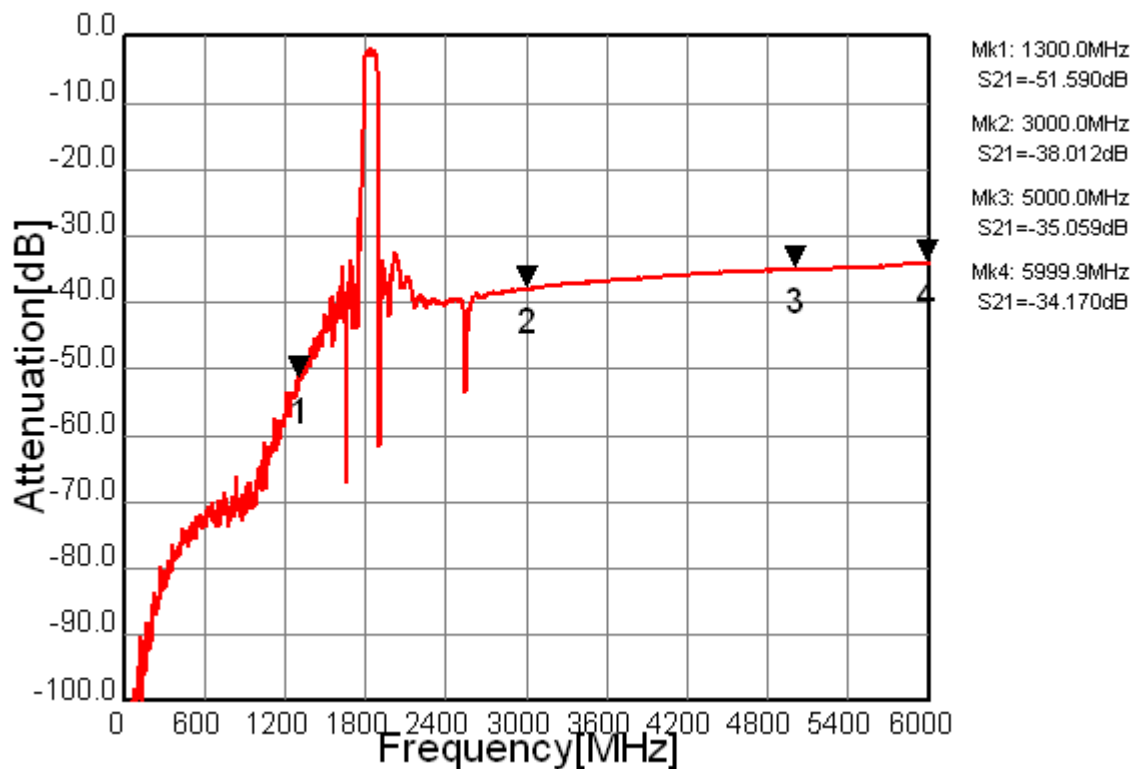


Fig.12 Wide-band Characteristics (Filter2)

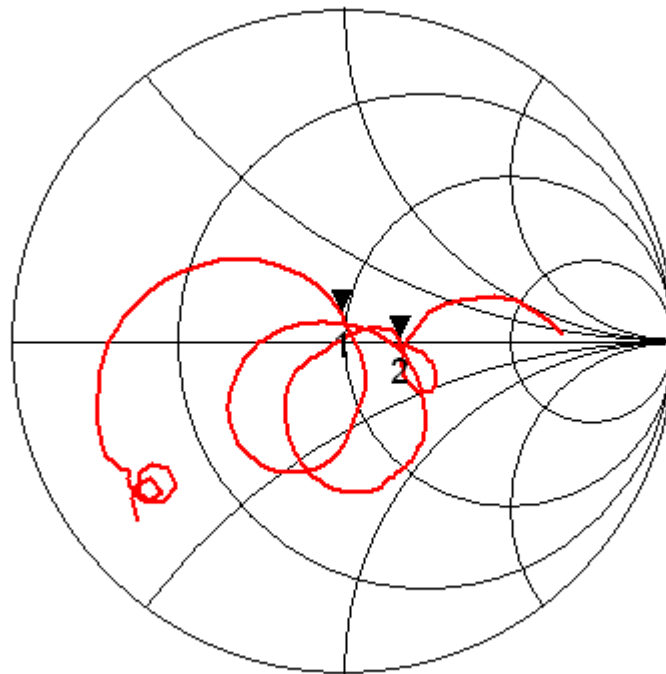


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*Pb Free part

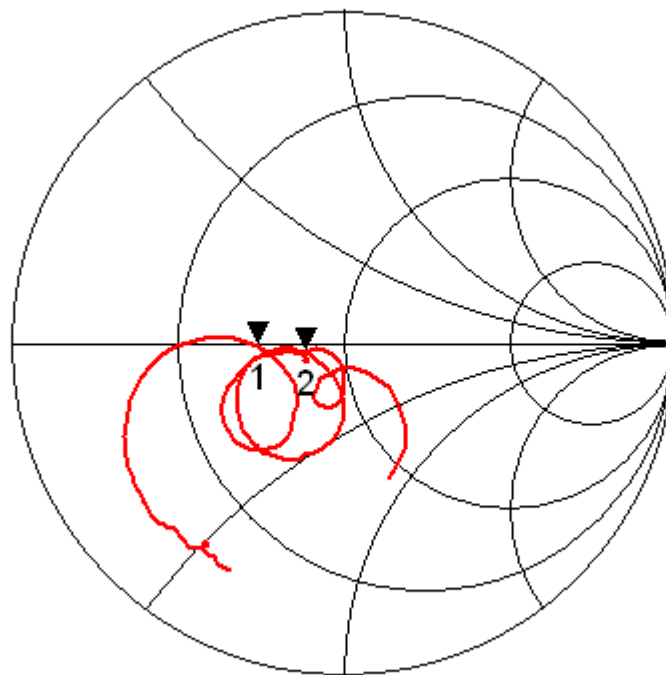
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Customer Name	Standard specification	TAIYO YUDEN Mobile Technology Co.,Ltd.	
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Part Number	FAR-G6KW-1G9600-Y4YC	Version 4.1ee	Preliminary



Mk1: 1805.0
 $S_{11} = 0.964 + j0.175$
 Mk2: 1880.0
 $S_{11} = 1.410 + j0.033$

Fig.13 Input Impedance (Unbalance) (Filter2)



Mk1: 1805.0
 $S_{22} = 0.583 - j0.013$
 Mk2: 1880.0
 $S_{22} = 0.786 - j0.048$

Fig.14 Output Impedance (Balance) (Filter2)



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Fig.15 Amplitude Balance (Filter2)

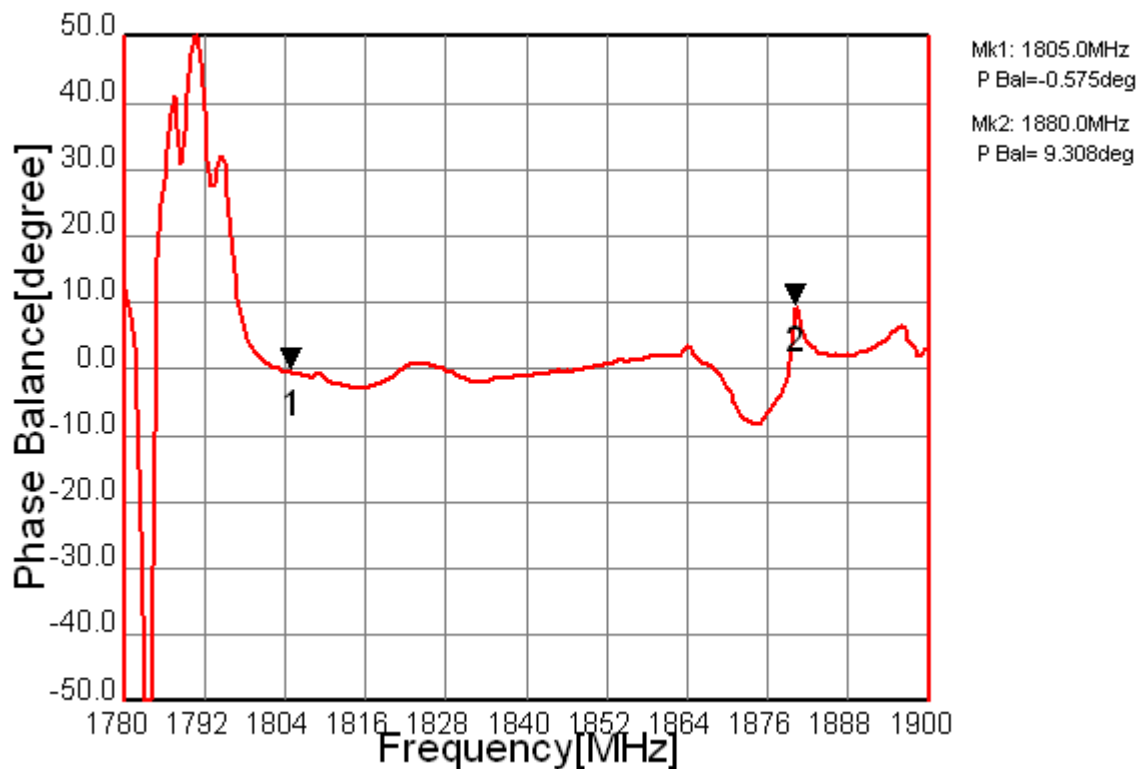


Fig.16 Phase Balance (Filter2)