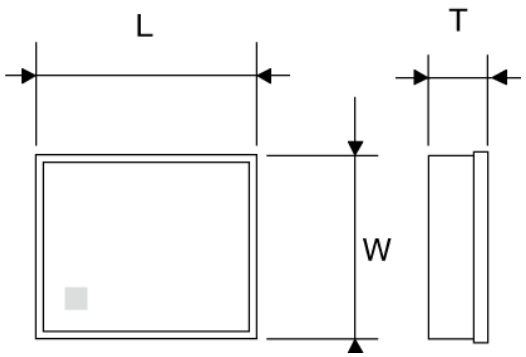
Spec Sheet

SAW Dual Filter

FAR-G6KC-1G9600-Y4YY



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℃
GSM	1900 /1800
Use	GSM
Transmitting / Receiving	Rx Dual Filter
Insertion Loss	1.9/1.6dB
Attenuation	14/16dB
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

RoHS MSL1

*Pb Free part

Customer Name	Standard specification	TAIYO YUDEN Mobile Technology Co.,Ltd.	
System	GSM1900/GSM1800 Rx (50/150ohms)	DATE	Jun., 22, 2011
Part Number	FAR-G6KC-1G9600-Y4YY	Version 1.1cc	

Table 1.Electrical specifications(Filter 1)

Pass Band (1930-1990MHz)						
Item	Condition (MHz)	Specification			Unit	Remark
		Min.	Typ.	Max.		
Insertion Loss	1930-1990	-	1.9	2.5	dB(*1)	
Ripple	1930-1990	-	0.5	1.2	dB	
Input VSWR	1930-1990	-	1.6	2.0	-	
Output VSWR	1930-1990	-	1.6	2.0	-	
Absolute attenuation	DC-1850	30	38	-	dB	
	1850-1910	11	14	-	dB	
	2010-2070	9	17	-	dB	
	2070-2150	20	22	-	dB	
	2150-3000	25	33	-	dB	
	3000-6000	30	38	-	dB	
Amplitude balance (|S21/S31|)	1930-1990	-1.5	-0.6/+0.4	+1.5	dB	
Phase balance ((ΦS21-ΦS31)+180)	1930-1990	-12	-9/+2	+12	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.

Pb-free RoHS 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	-	1.8	2.5	dB(*1)	
Ripple	1805-1880	-	0.4	1.3	dB	
Input VSWR	1805-1880	-	1.7	2.1	-	
Output VSWR	1805-1880	-	1.6	2.1	-	
Absolute attenuation	DC-1300	40	44	-	dB	
	1300-1705	30	36	-	dB	
	1705-1785	13	16	-	dB	
	1920-1980	19	21	-	dB	
	1980-3000	20	26	-	dB	
	3000-5000	35	42	-	dB	
	5000-6000	30	40	-	dB	
Amplitude balance (|S21/S31|)	1805-1880	-1.5	-0.3/+1.0	+1.5	dB	
Phase balance ((ΦS21-ΦS31)+180)	1805-1880	-10	-3/+6	+10	deg	
Input impedance (Unbalanced)		50			Ohm	
Output impedance (Balanced)		150//15nH			Ohm	
Operating temperature		-30 to +85			°C	

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

Pb-free RoHS MSL1

*Pb Free part

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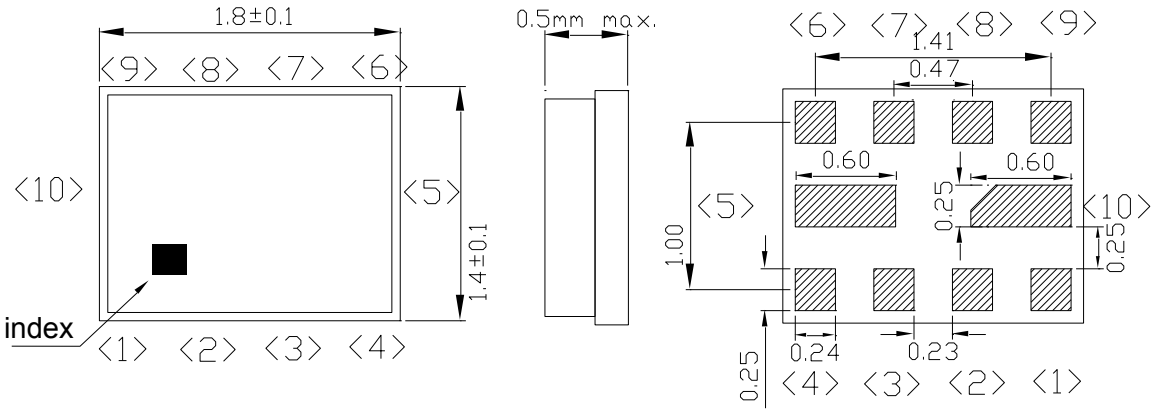
Part Number	FAR-G6KC-1G9600-Y4YY	Version 1.1cc	

Dimensions

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



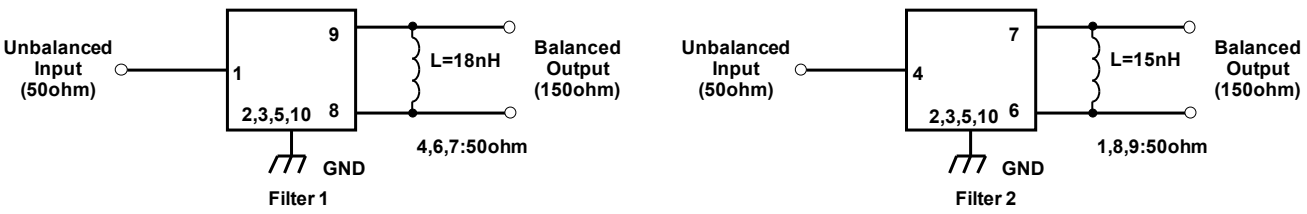
Unit : mm

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	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



MSL1

*Pb Free part

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System	GSM1900/GSM1800 Rx (50/150ohms)	DATE	Jun., 22, 2011
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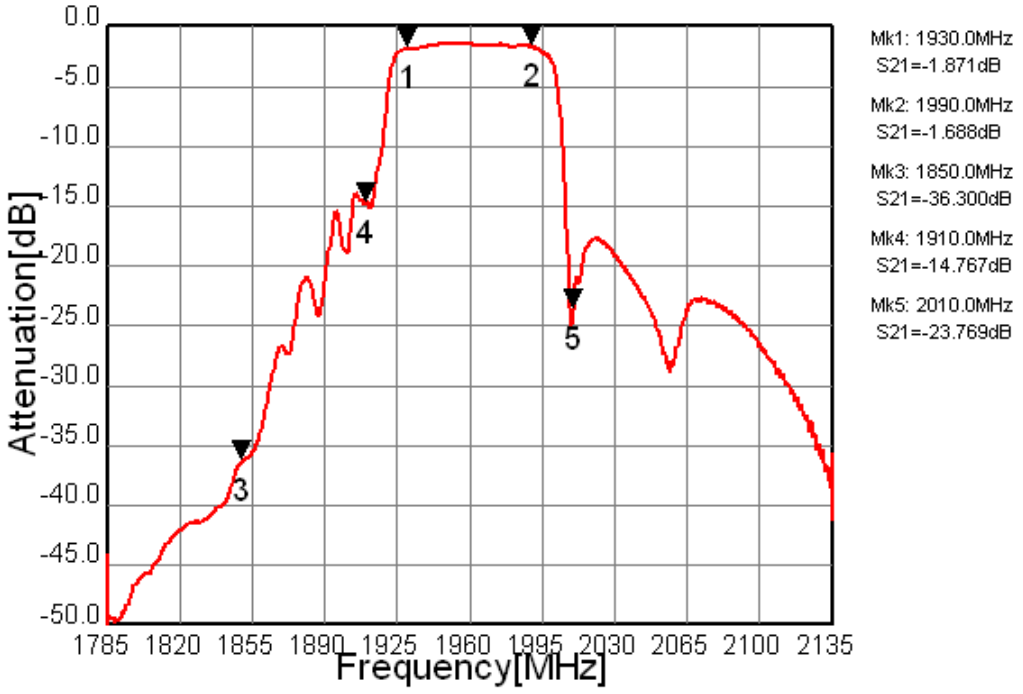

Fig.1 Pass-band Characteristic (Filter1)

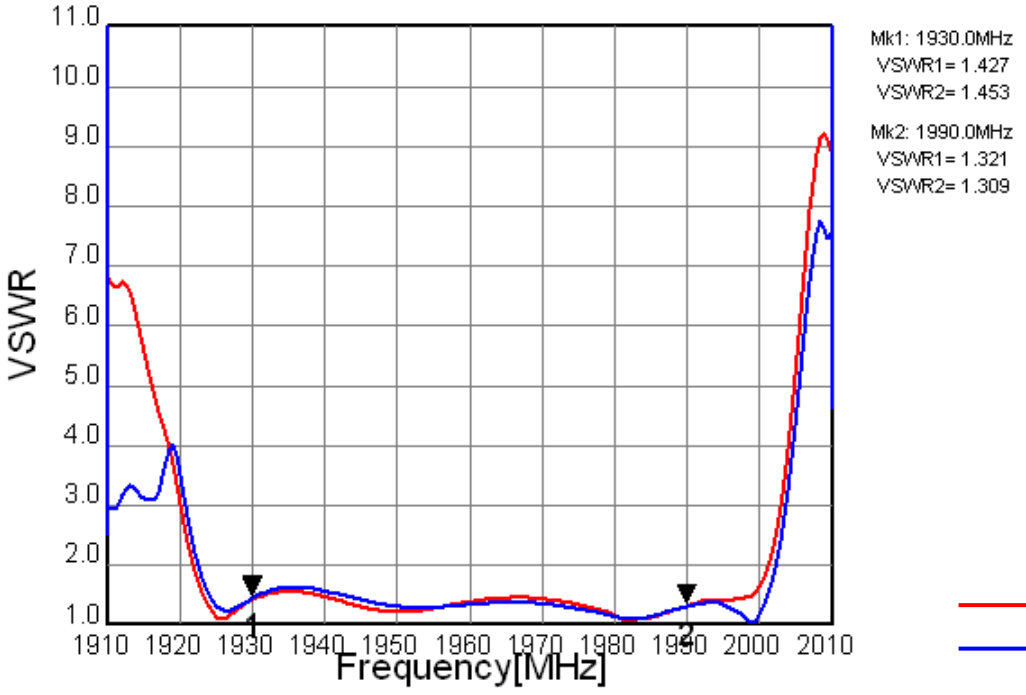

Fig.2 VSWR (Filter1)

MSL1

*Pb Free part

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System	GSM1900/GSM1800 Rx (50/150ohms)	DATE	Jun., 22, 2011
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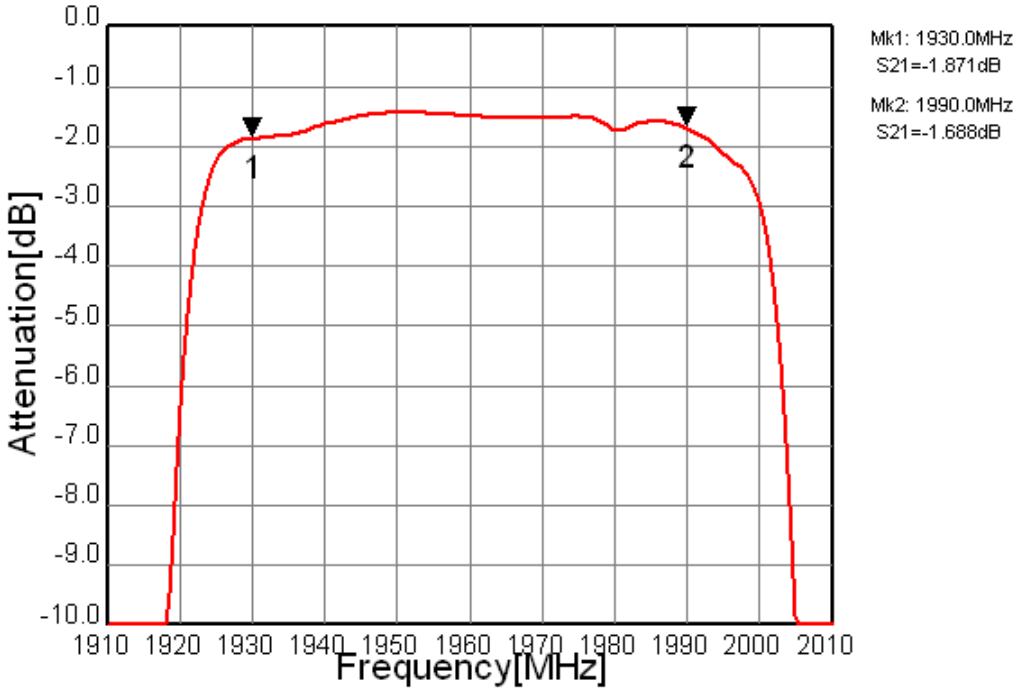

Fig.3 In-band Characteristic (Filter1)

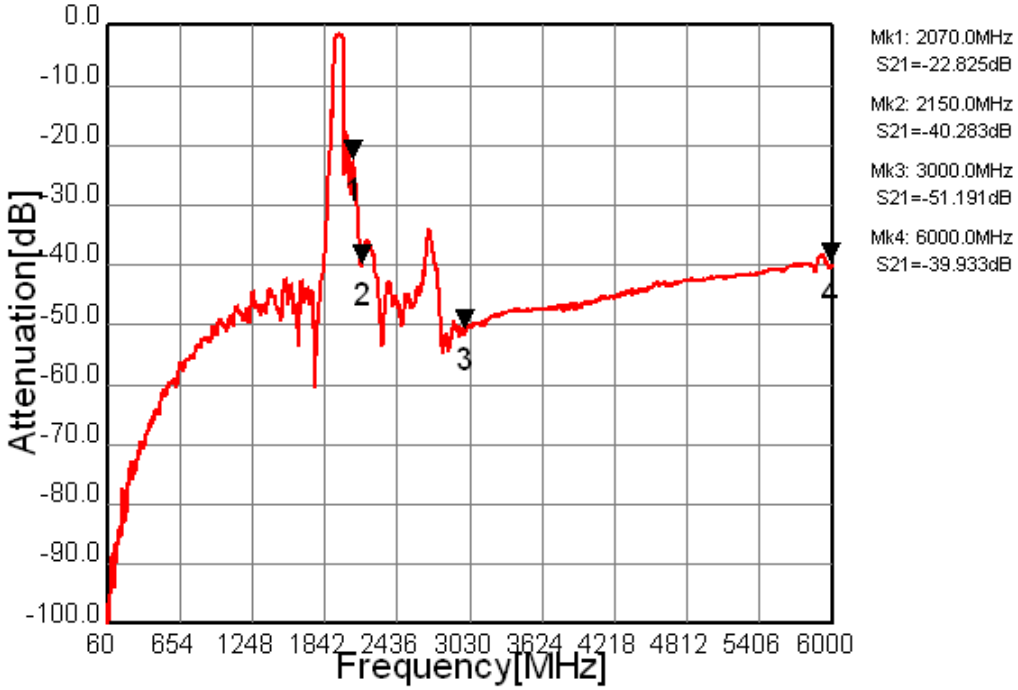

Fig.4 Wide-band Characteristic (Filter1)

Pb-free RoHS MSL1

*Pb Free part

Customer Name	Standard specification	TAIYO YUDEN Mobile Technology Co.,Ltd.	
System	GSM1900/GSM1800 Rx (50/150ohms)	DATE	Jun., 22, 2011
Part Number	FAR-G6KC-1G9600-Y4YY	Version 1.1cc	

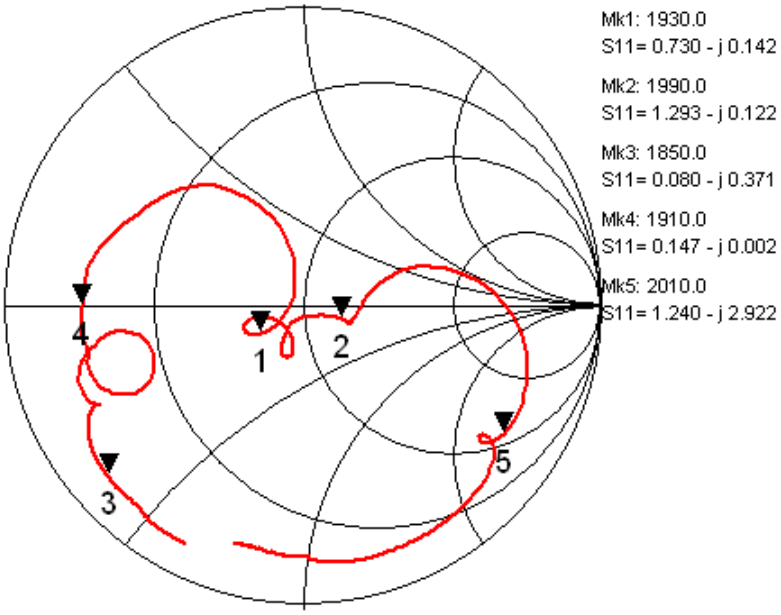

Fig.5 Impedance (S11) (Filter1)

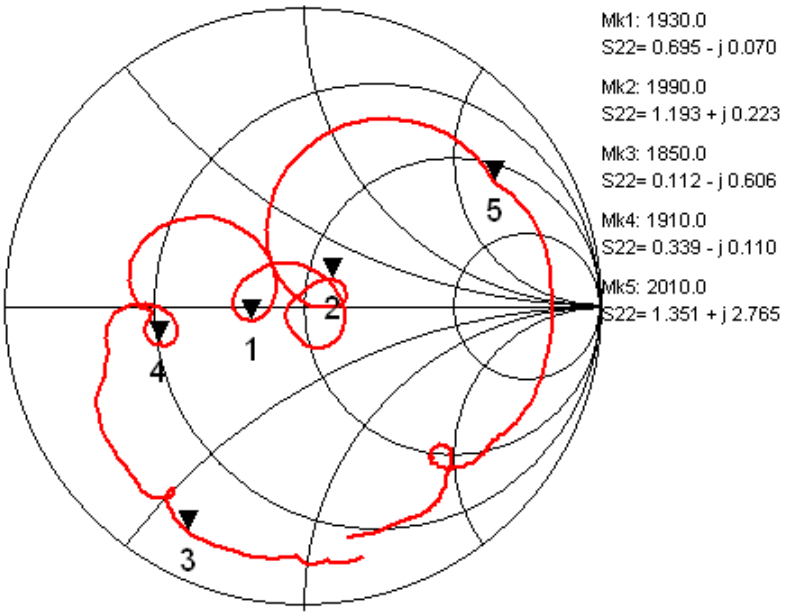

Fig.6 Impedance (S22) (Filter1)

Pb-free RoHS MSL1

*Pb Free part

Customer Name	Standard specification	TAIYO YUDEN Mobile Technology Co.,Ltd.	
System	GSM1900/GSM1800 Rx (50/150ohms)	DATE	Jun., 22, 2011
Part Number	FAR-G6KC-1G9600-Y4YY	Version 1.1cc	

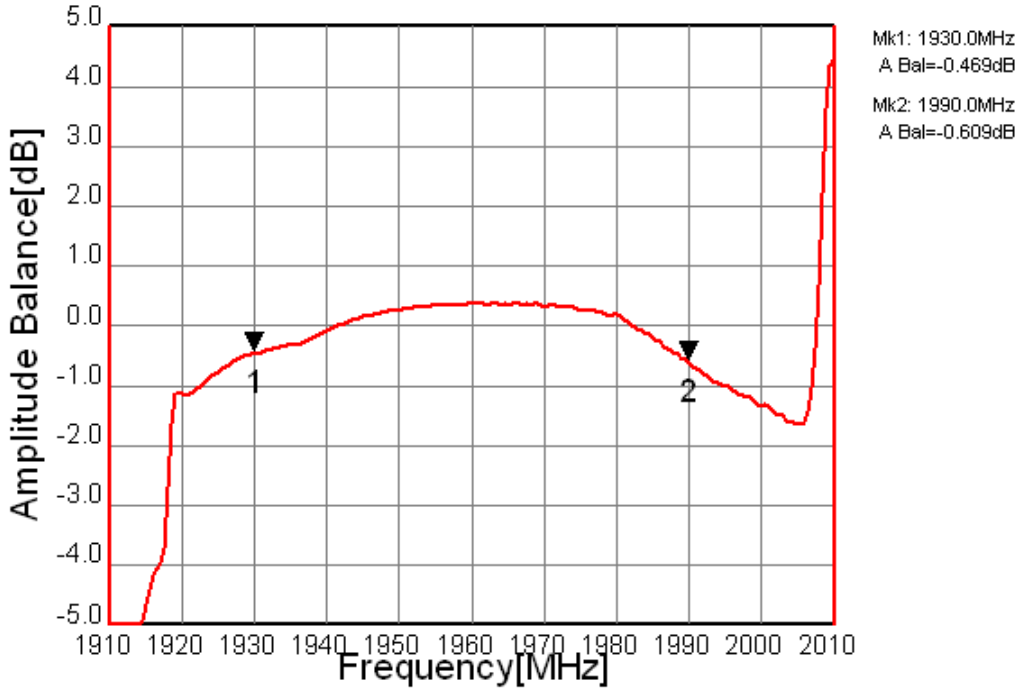

Fig.7 Amplitude Balance (Filter1)

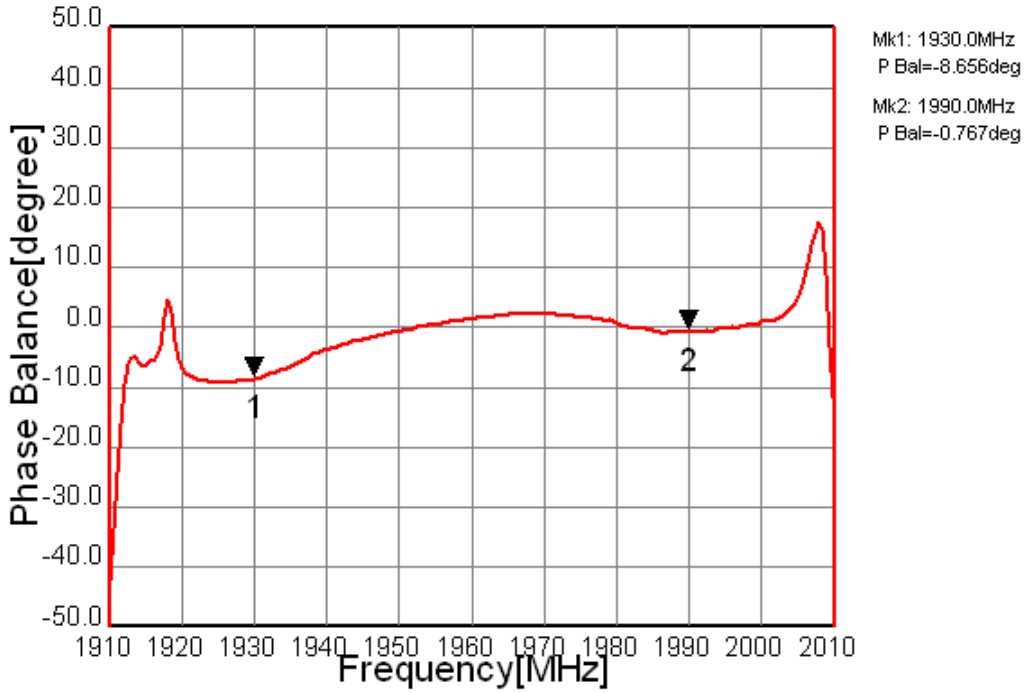

Fig.8 Phase Balance (Filter1)

Pb-free RoHS MSL1

*Pb Free part

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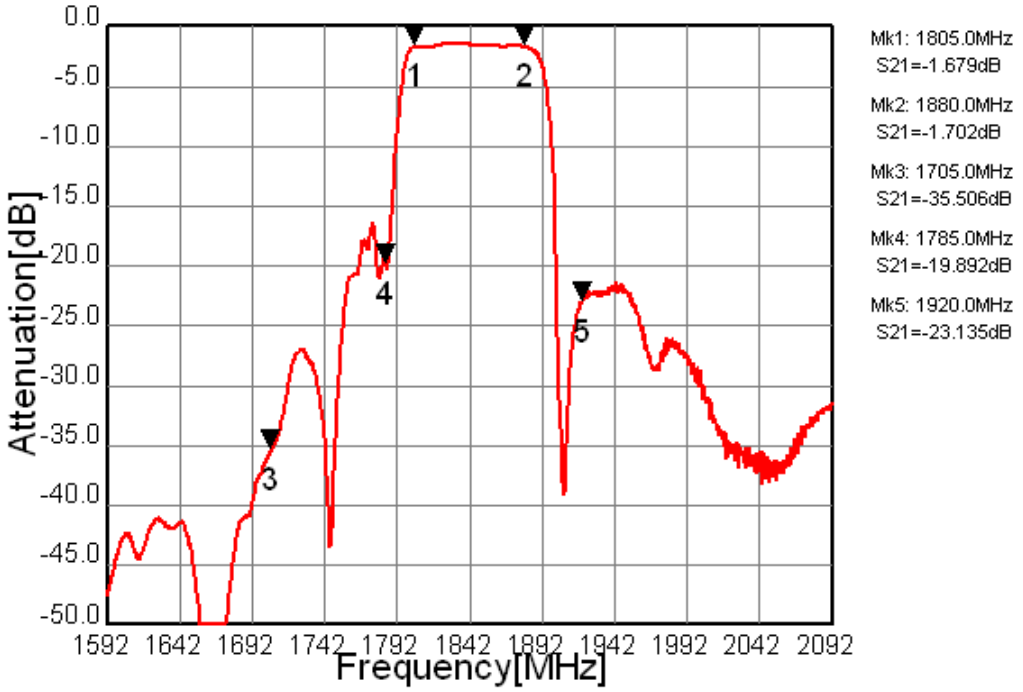

Fig.9 Pass-band Characteristic (Filter2)

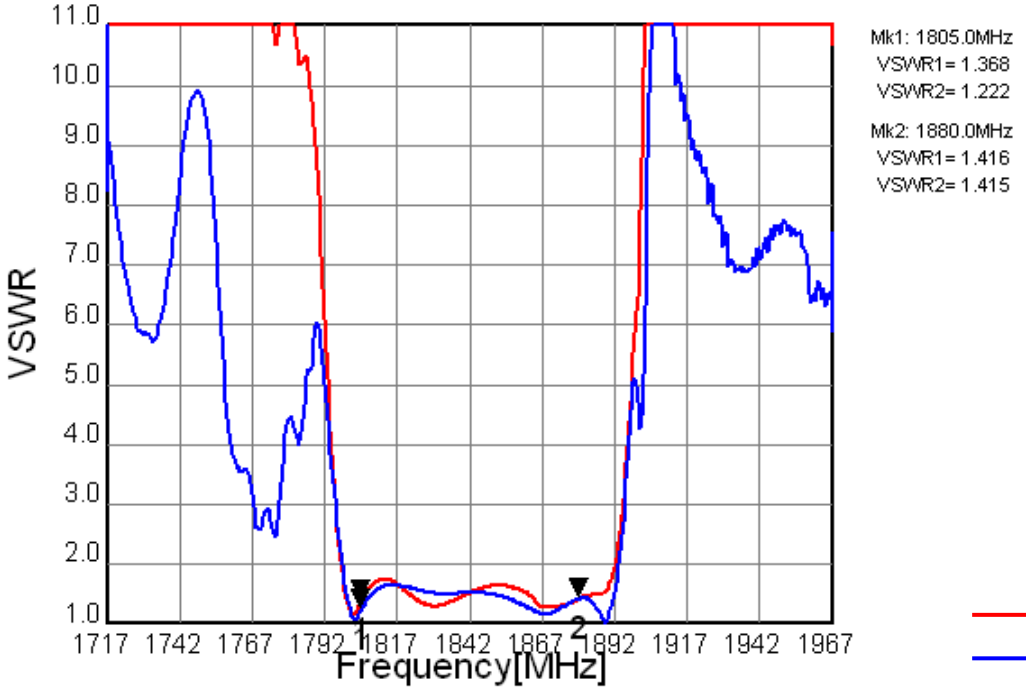

Fig.10 VSWR (Filter2)

Pb-free RoHS MSL1

*Pb Free part

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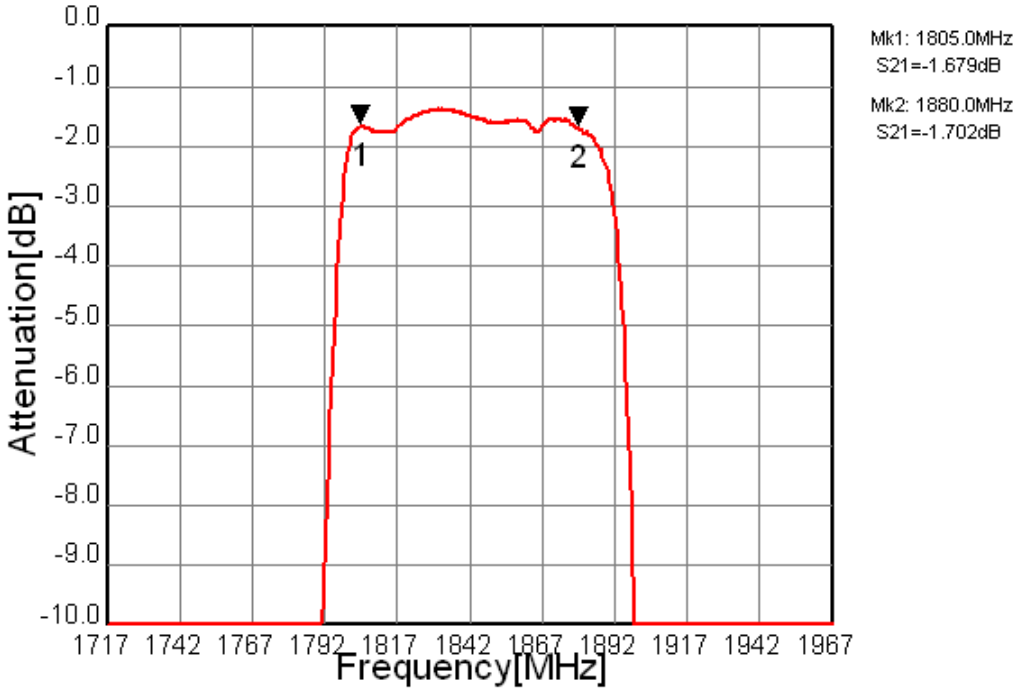

Fig.11 In-band Characteristic (Filter2)

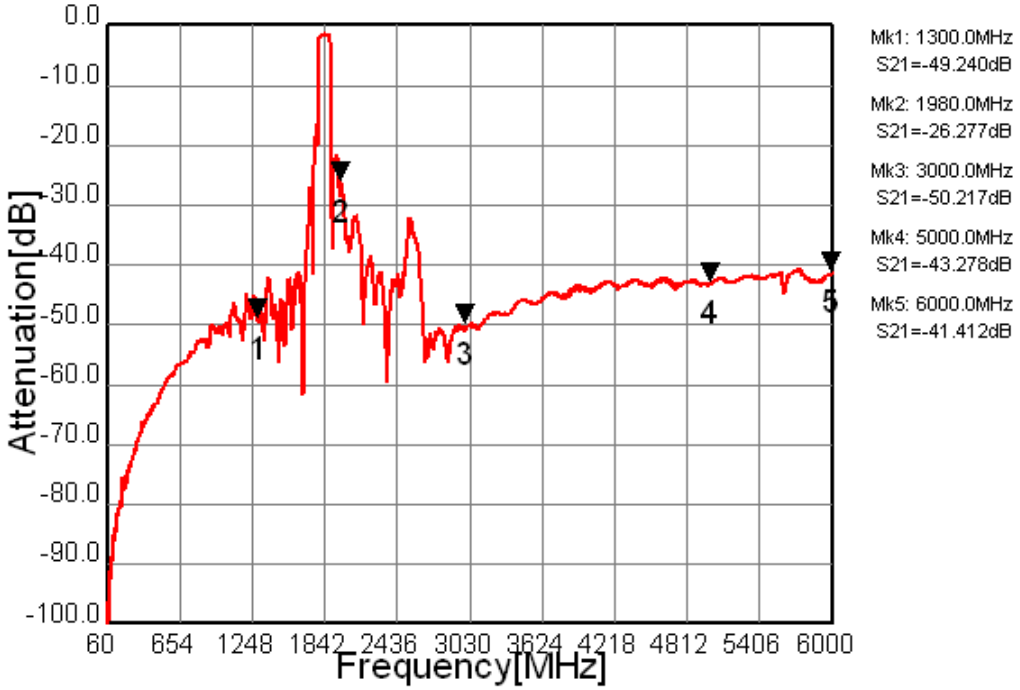

Fig.12 Wide-band Characteristic (Filter2)

Pb-free RoHS MSL1

*Pb Free part

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System	GSM1900/GSM1800 Rx (50/150ohms)	DATE	Jun., 22, 2011
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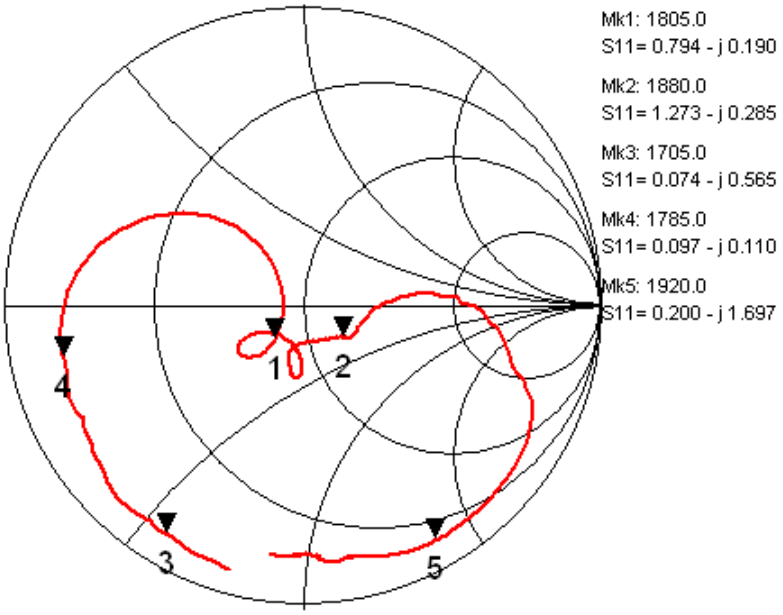

Fig.13 Impedance (S11) (Filter2)

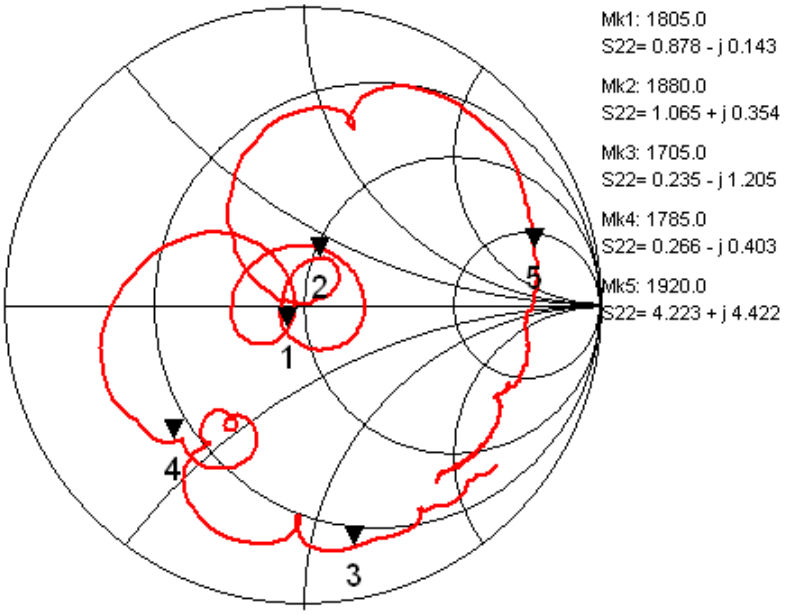

Fig.14 Impedance (S22) (Filter2)

MSL1

*Pb Free part

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Part Number	FAR-G6KC-1G9600-Y4YY	Version 1.1cc	

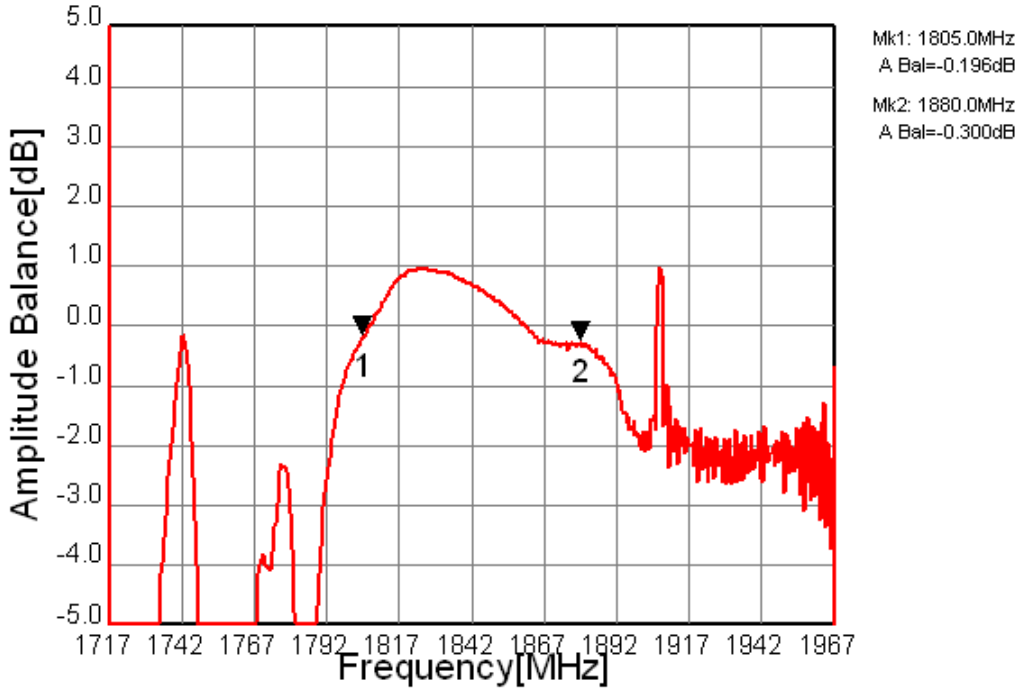

Fig.15 Amplitude Balance (Filter2)

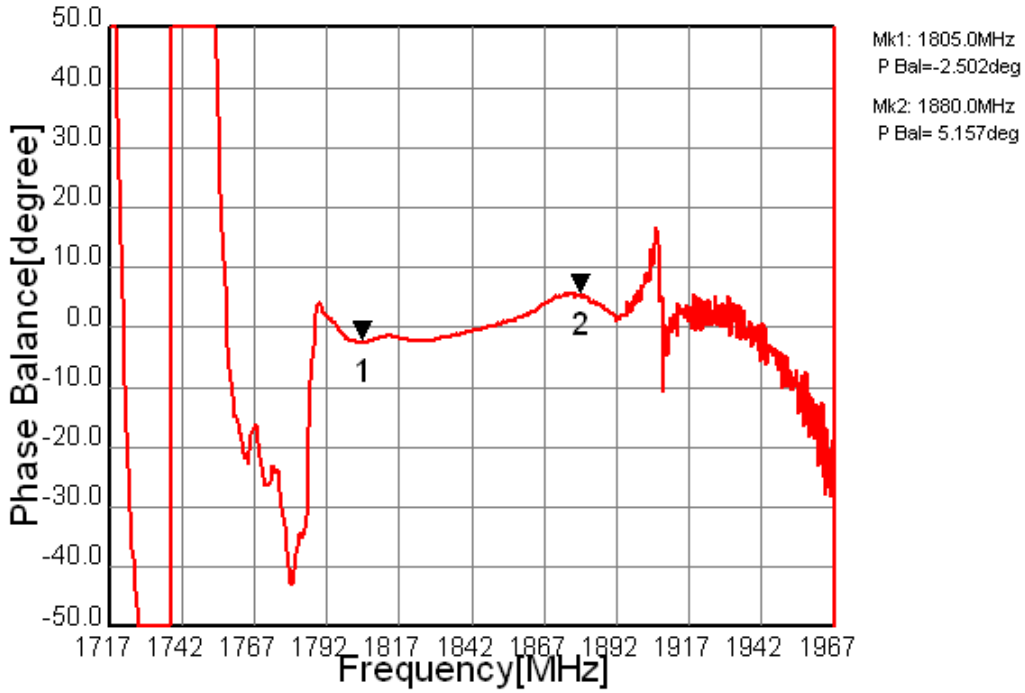

Fig.16 Phase Balance (Filter2)