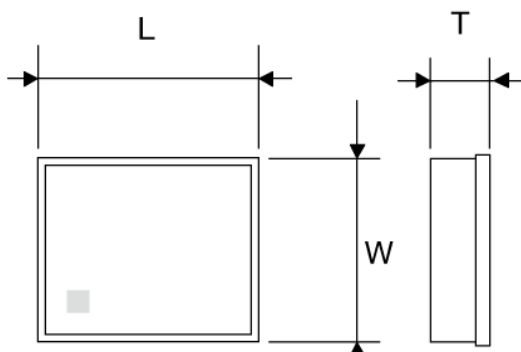


SAW Dual Filter

G6QD1G960N2DY



■ Features

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

■ Products characteristics table

Temperature Range	-30 to +85℃
GSM	1900
Use	GSM
Transmitting / Receiving	Rx Dual Filter
Insertion Loss	1.8/1.9dB
Attenuation	18/14dB
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	DCS/PCS Rx (50/150ohms)	DATE	September 03 2012
Part Number	G6QD1G960N2DY	Ver. 1.0aa	Final

Table 1. Electrical specifications (Filter1)

Passband: 1805 ~ 1880 MHz						
Item	Condition	Specification			Unit	Remarks
		Min.	Typ.	Max.		
Insertion Loss	1805~1880 MHz	-	1.8	2.4	dB(*1)	-20 ~ +85 °C
		-	-	2.5	dB(*1)	
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 S21 / S31	1805~1880 MHz	-1.4	-0.6/+0.8	+1.4	dB	
Phase Balance (ϕ S21- ϕ S31)-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	

(*1) Specification of insertion loss includes loss that comes from the test board.(0.15dB)



MSL1

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Table 2. Electrical specifications (Filter2)

Passband: 1930 ~ 1990 MHz						
Item	Condition	Specification			Unit	Remarks
		Min.	Typ.	Max.		
Insertion Loss	1930~1990 MHz	-	1.9	2.7	dB ^(*1)	
Ripple	1930~1990 MHz	-	0.6	1.5	dB	
Absolute attenuation	DC ~1830 MHz	25	32	-	dB	
	1830~1910 MHz	10	14	-	dB	
	2010~2070 MHz	6	15	-	dB	-20~+85 °C
		5	-	-	dB	
	2070~2150 MHz	14	19	-	dB	
	2150~3000 MHz	27	32	-	dB	
	3000~6000 MHz	25	37	-	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/+0.5	+1.0	dB	
Phase Balance ($\Phi S21 - \Phi S31$)-180	1930~1990 MHz	-15	-10/+2	+15	deg.	
Input Impedance	Unbalanced	50//3.3nH			ohm	
Output Impedance	Balance	150//18nH			ohm	
Operating Temperature		-30 ~ +85			°C	

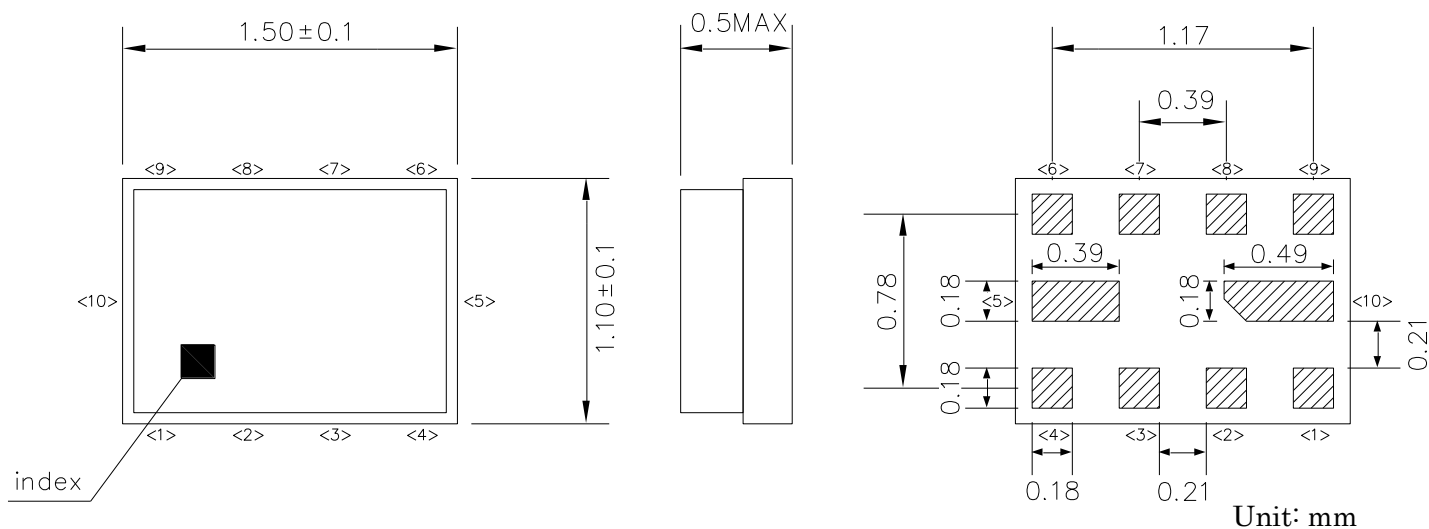
(*1) Specification of insertion loss includes loss that comes from the test board.(0.15dB)

*Pb Free part

Customer Name	Standard Specification	TAIYO YUDEN Mobile Technology Co.,Ltd.	
System	DCS/PCS Rx (50/150ohms)	DATE	September 03 2012
Part Number	G6QD1G960N2DY	Ver. 1.0aa	Final

Dimensions

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

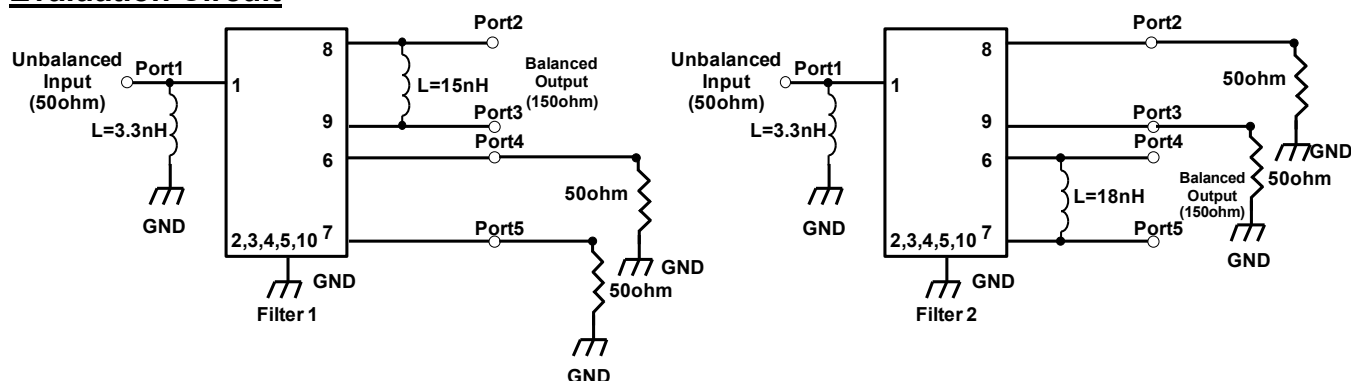


Pin Configuration

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	1805 ~ 1880	DCS-Rx
2	1930 ~ 1990	PCS-Rx

Evaluation Circuit





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*Pb Free part

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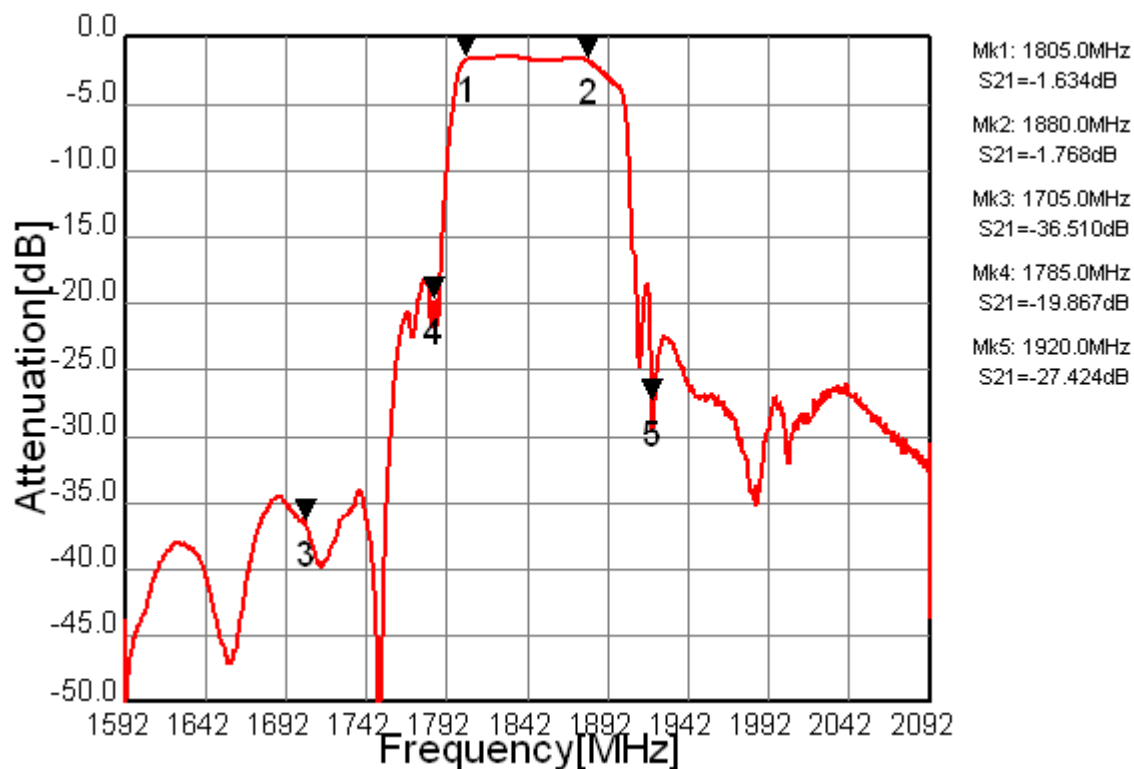


Fig.1 Pass-band Characteristics (Filter1)

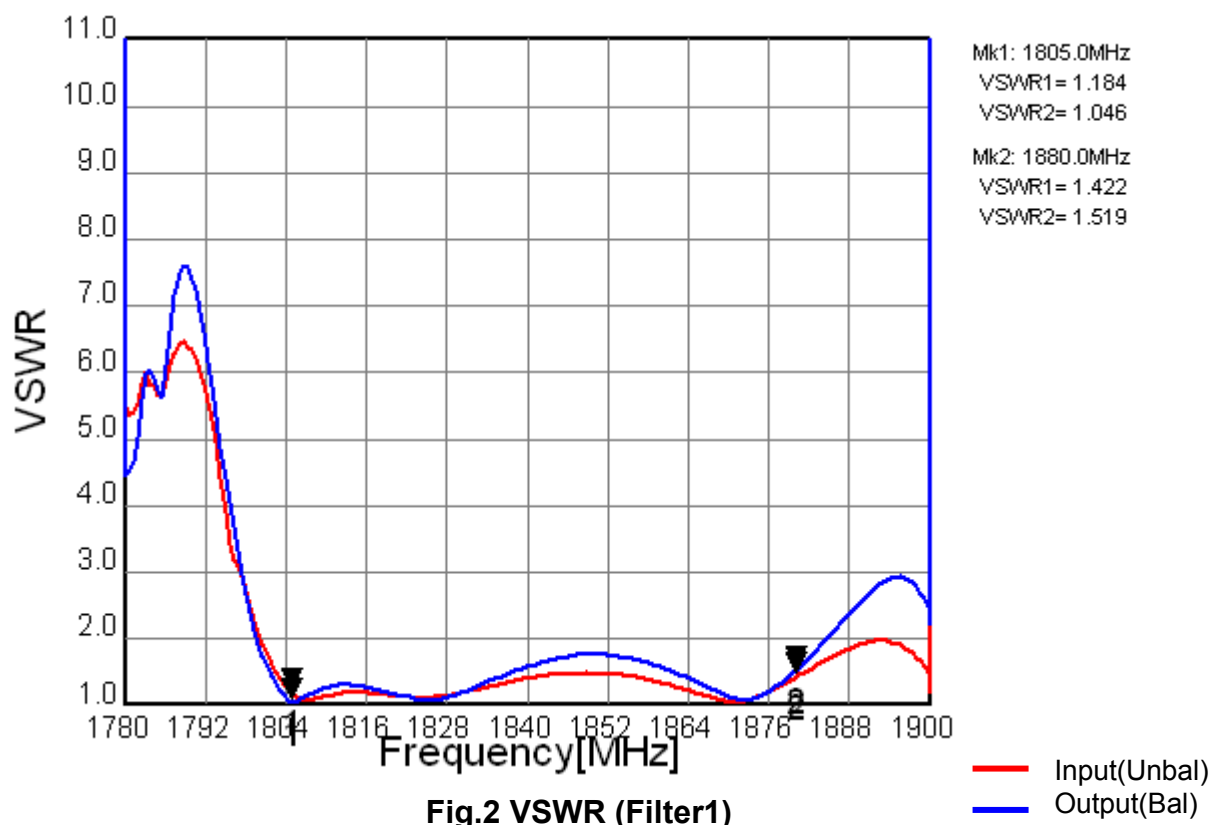


Fig.2 VSWR (Filter1)

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*Pb Free part

Customer Name	Standard Specification	TAIYO YUDEN Mobile Technology Co.,Ltd.	
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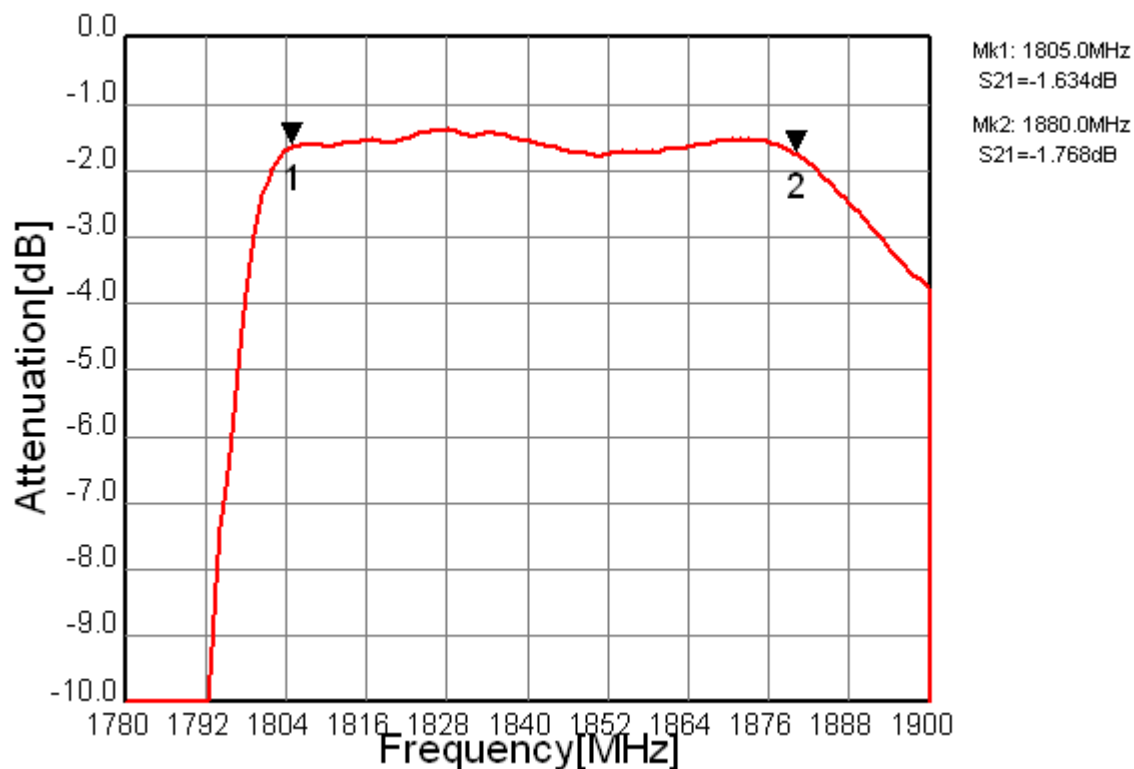


Fig.3 In-band Characteristics (Filter1)

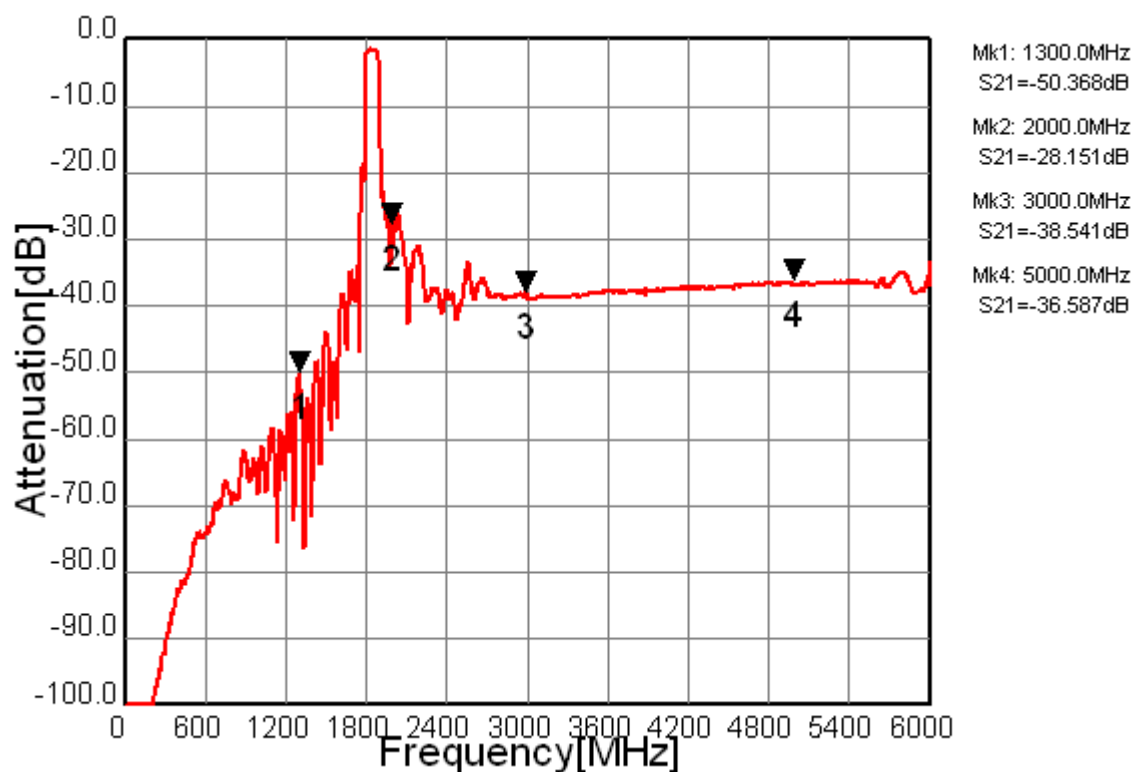


Fig. 4 Wide-band Characteristics (Filter1)

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*Pb Free part

Customer Name	Standard Specification	TAIYO YUDEN Mobile Technology Co.,Ltd.	
System	DCS/PCS Rx (50/150ohms)	DATE	September 03 2012
Part Number	G6QD1G960N2DY	Ver. 1.0aa	Final

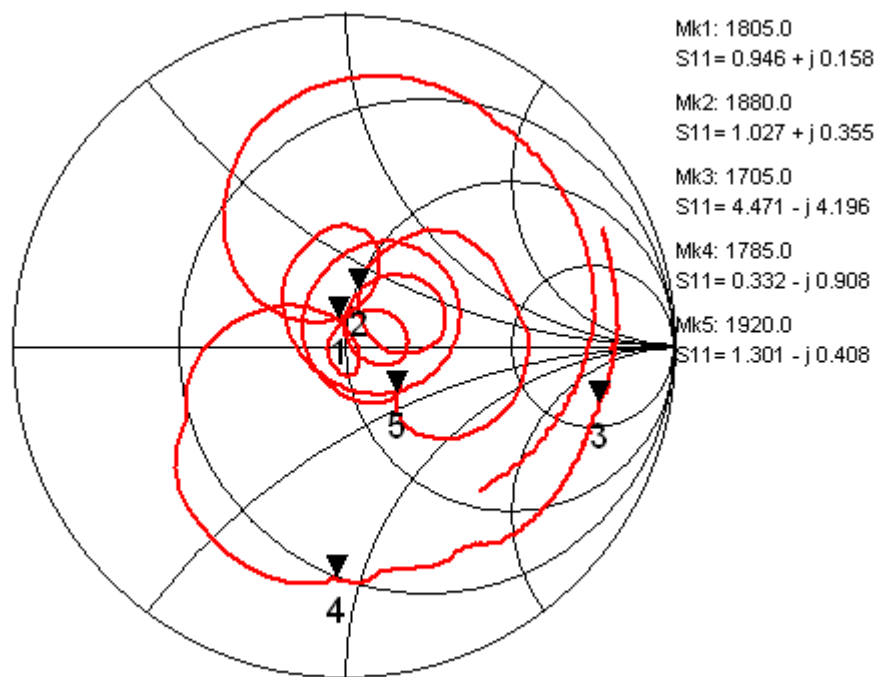


Fig. 5 Input Impedance (Unbalance) (Filter1)

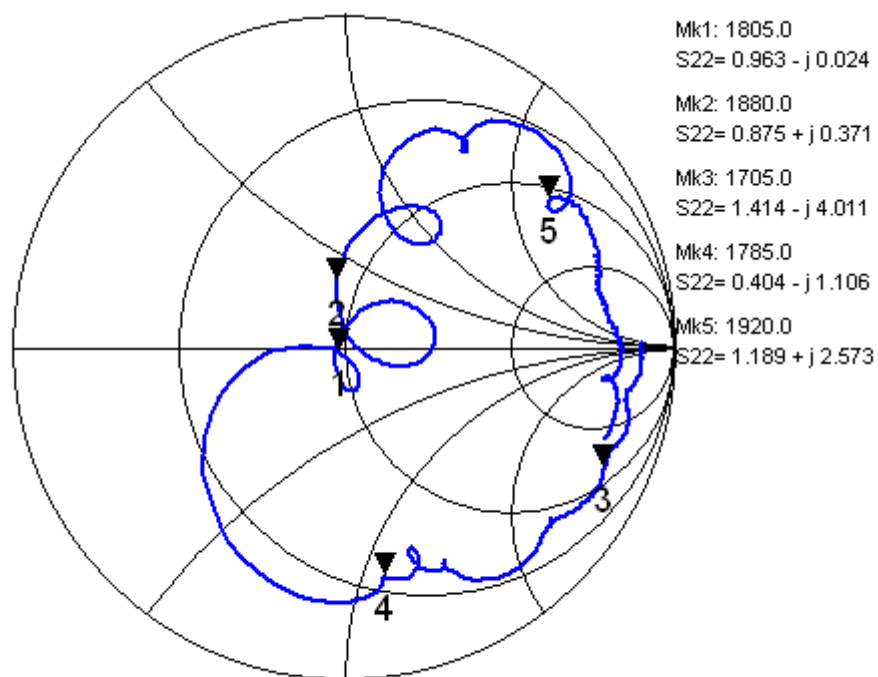


Fig. 6 Output Impedance (Balance) (Filter1)

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*Pb Free part

Customer Name	Standard Specification	TAIYO YUDEN Mobile Technology Co.,Ltd.	
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Part Number	G6QD1G960N2DY	Ver. 1.0aa	Final

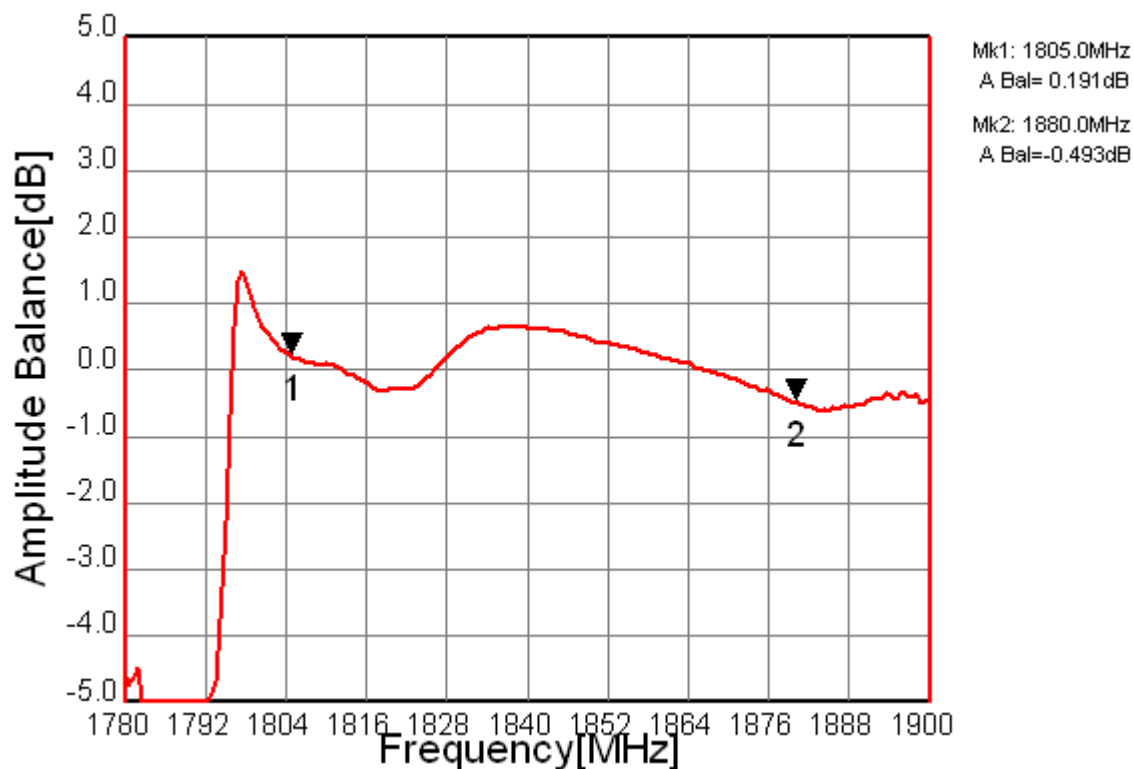


Fig. 7 Amplitude Balance (Filter1)

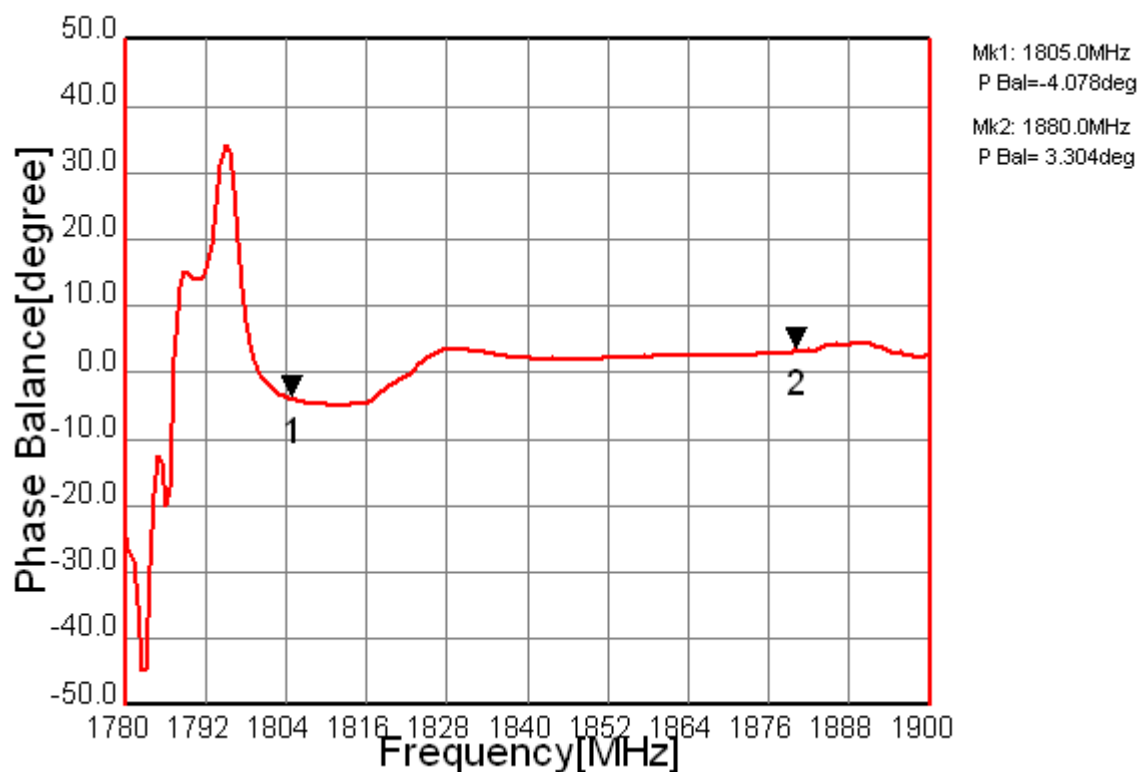


Fig. 8 Phase Balance (Filter1)

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*Pb Free part

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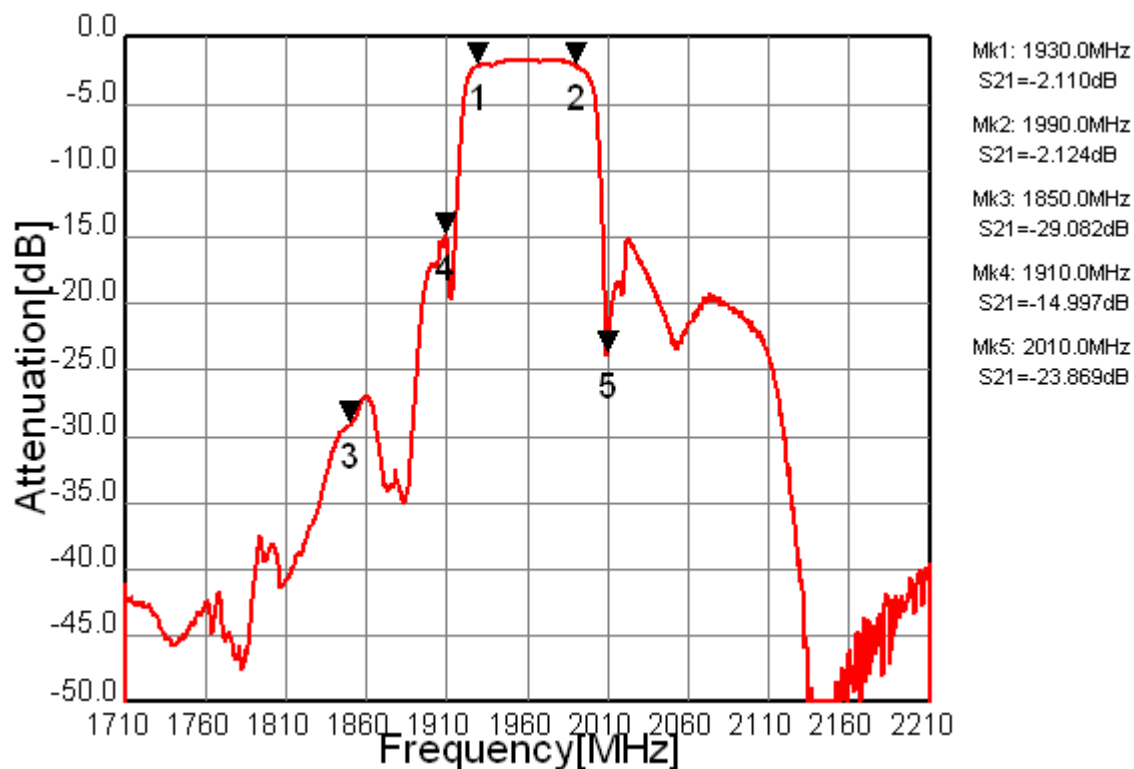


Fig.9 Pass-band Characteristics (Filter2)

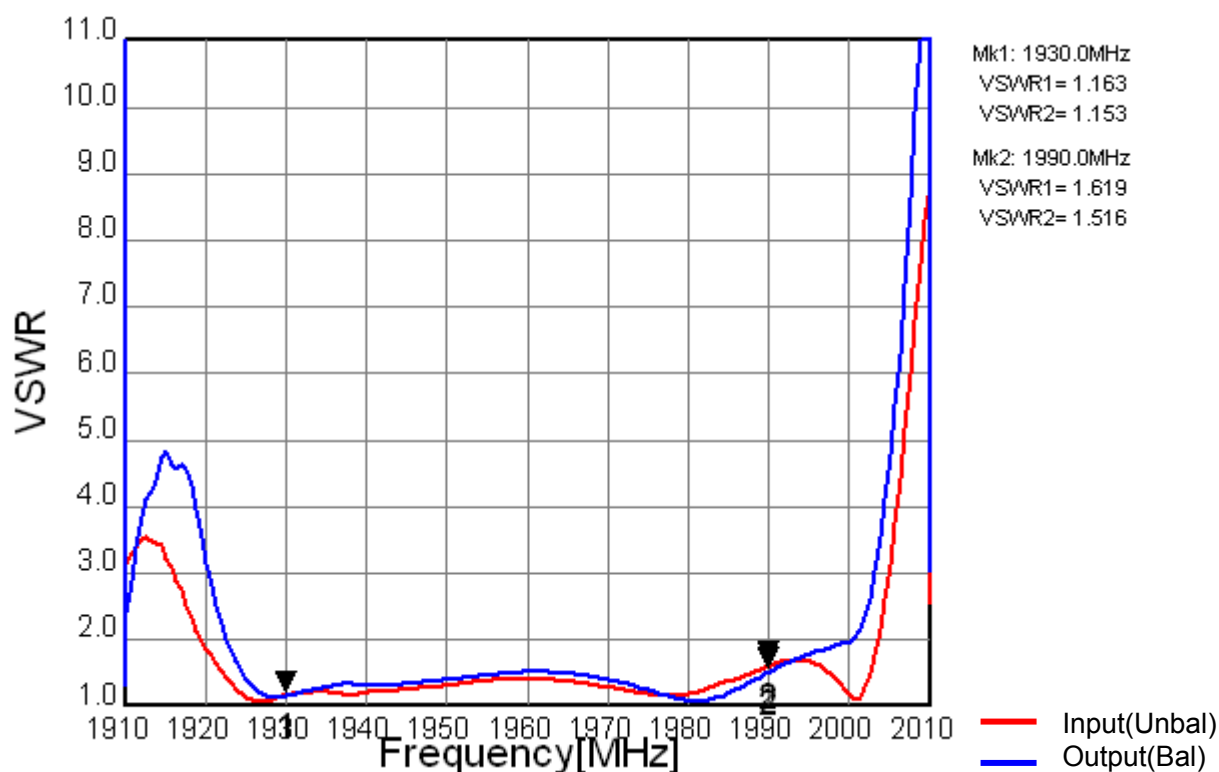


Fig.10 VSWR (Filter2)

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*Pb Free part

Customer Name	Standard Specification	TAIYO YUDEN Mobile Technology Co.,Ltd.	
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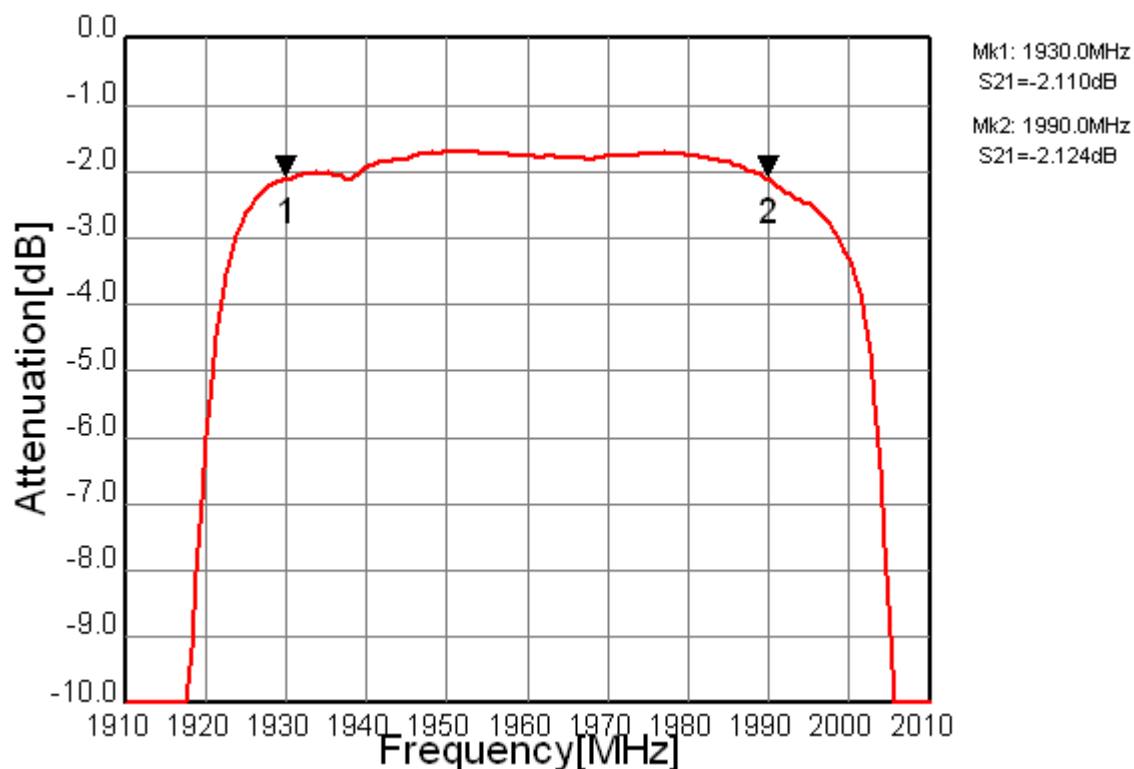


Fig.11 In-band Characteristics (Filter2)

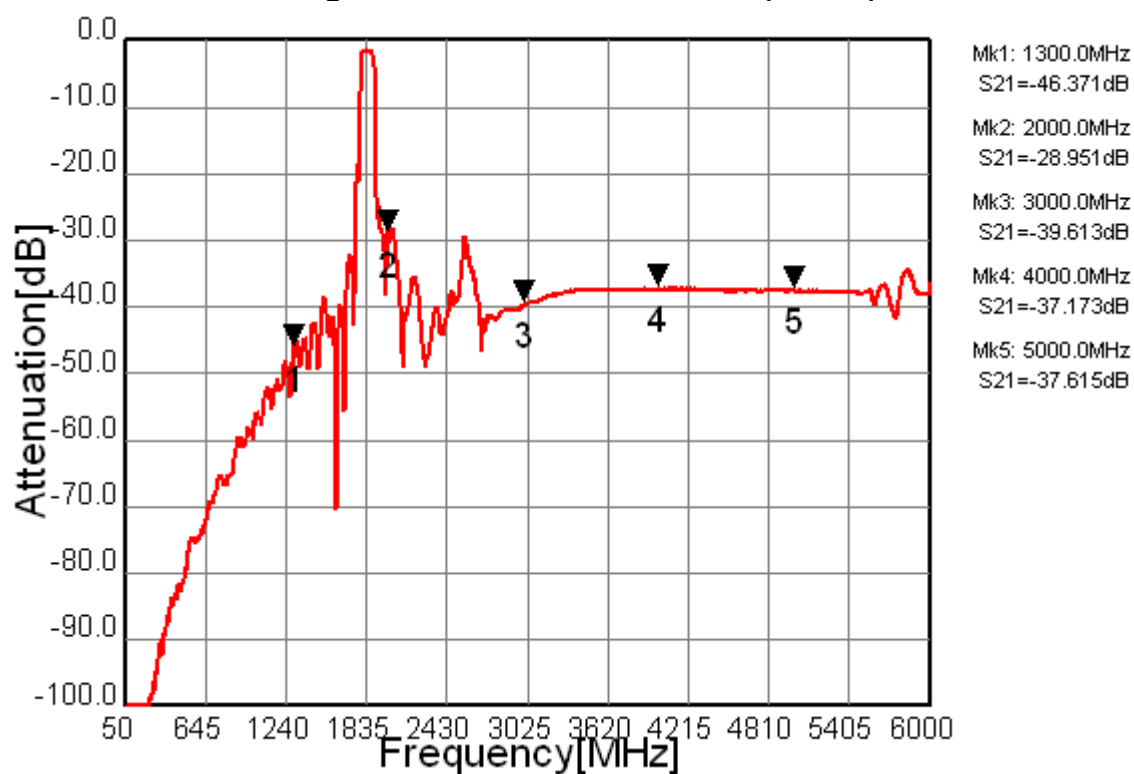


Fig.12 Wide-band Characteristics (Filter2)

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*Pb Free part

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Part Number	G6QD1G960N2DY	Ver. 1.0aa	Final

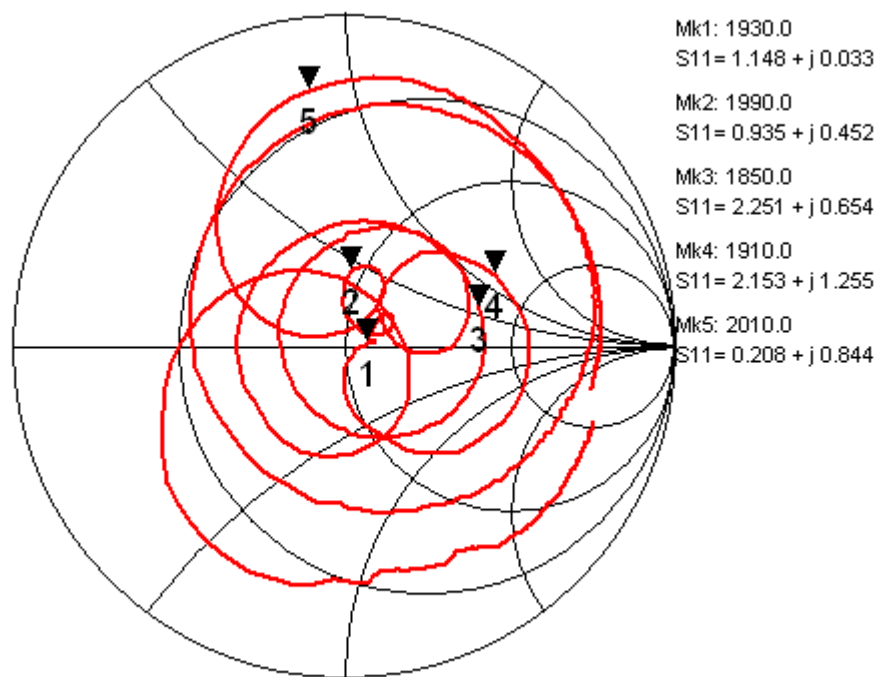


Fig.13 Input Impedance (Unbalance) (Filter2)

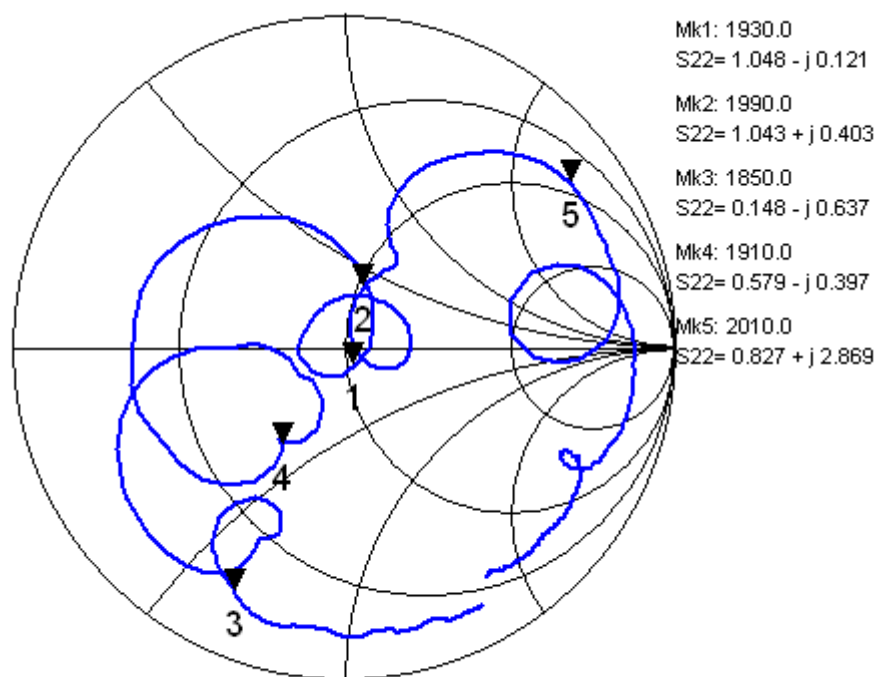


Fig.14 Output Impedance (Balance) (Filter2)



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*Pb Free part

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Part Number	G6QD1G960N2DY	Ver. 1.0aa	Final

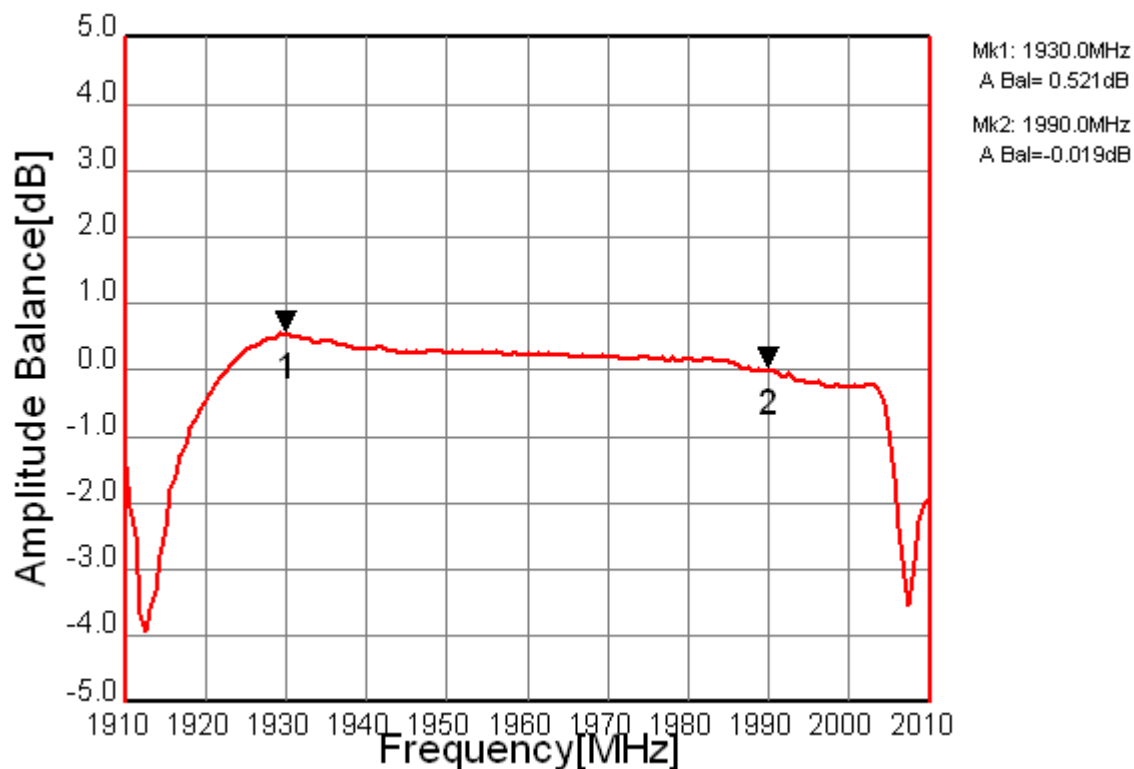


Fig.15 Amplitude Balance (Filter2)

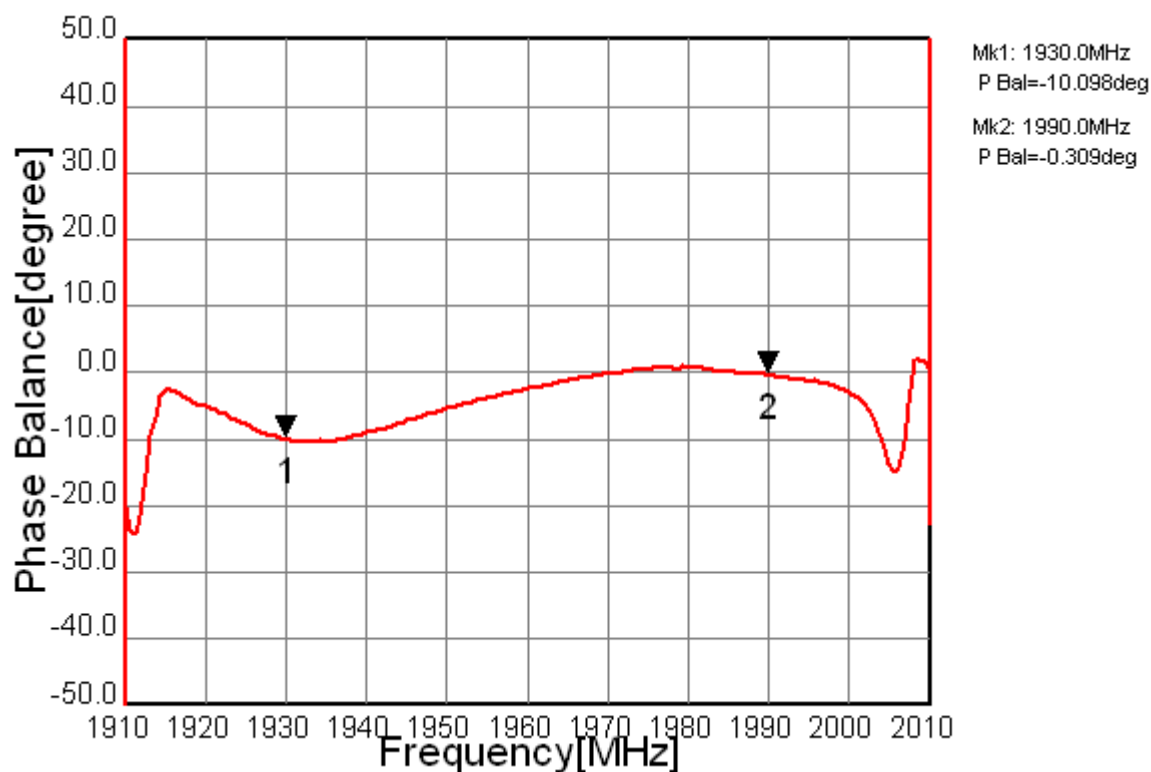


Fig.16 Phase Balance (Filter2)

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*Pb Free part

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System	DCS/PCS Rx (50/150ohms)	DATE	September 03 2012
Part Number	G6QD1G960N2DY	Ver. 1.0aa	Final

Ordering Code

Ordering Code	Packing	Reel size	Status
G6QD1G960N2DY-J	Tape & Reel	5,000 pcs.	MP
G6QD1G960N2DY-JA	Tape & Reel	less than 5,000 pcs.	MP
G6QD1G960N2DY-Y	Tape & Reel	15,000 pcs.	MP
G6QD1G960N2DY-Q	Bulk	few pcs.	MP

*Minimum order quantity (MOQ) is assigned for each inquiry, Please contact to Sales Representatives..

*MP : Mass Production

Notice

All of the contents specified herein are subject to change without notice due to technical improvements, etc.

Please contact TAIYO YUDEN Co., Ltd. for further details of product specifications.

Please conduct validation and verification of products in actual condition of mounting and operating environment before commercial shipment of the equipment.

This product is for general electronics equipment such as Audio-Visual equipment, household electronics, office supplies, information services and telecommunications; therefore, in case this product is used for any medical equipment, space equipment, nuclear equipment or disaster prevention equipment, please contact TAIYO YUDEN in advance.

In case this product is used for general electronics equipment or circuits which require high safety and high reliability, thoroughly evaluate on safety and add a protection circuit if necessary.