



\* Pb Free Part



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Customer Name	<b>Standard Specification</b>	TAIYO YUDEN Mobile Technology Co., Ltd.	
System	GSM900/ GSM850 Rx (50/150ohms)	Date	March 31, 2010
Part Number	FAR-G5QD-942M50-N2DB	Version 1.0aa	<b>Preliminary</b>

Table 1. Electrical specifications(Filter 1)

Pass Band (925-960MHz)						
Item	Condition (MHz)	Specification			Unit	Remarks
		Min.	Typ.	Max.		
Insertion Loss	925-960	-	2.5	3.1	dB <sup>(*1)</sup>	
Ripple	925-960	-	0.9	1.6	dB	
Input VSWR	925-960	-	1.8	2.1	-	
Output VSWR	925-960	-	2.2	2.5	-	
Absolute attenuation	DC-880	40	43	-	dB	
	880-905	30	43	-	dB	
	905-915	18	25	-	dB	
	980-1025	25	30	-	dB	
	1025-2880	36	41	-	dB	
	2880-6000	25	37	-	dB	
Amplitude balance ((S21/S31))	925-960	-1.0	-0.3/+0.2	+1.0	dB	
Phase balance (( $\Phi$ S21- $\Phi$ S31)+180)	925-960	-10	+0.1/+3.0	10	deg	
Input impedance (Unbalanced)		50			ohm	
Output impedance (Balanced)		150			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 (869-894MHz)						
Item	Condition (MHz)	Specification			Unit	Remarks
		Min.	Typ.	Max.		
Insertion Loss	869-894	-	2.0	2.6	dB(*1)	
Ripple	869-894	-	0.6	1.3	dB	
Input VSWR	869-894	-	1.6	2.1	-	
Output VSWR	869-894	-	1.7	2.1	-	
Absolute attenuation	DC-824	45	57	-	dB	
	824-849	40	55	-	dB	
	914-960	25	38	-	dB	
	960-2000	32	37	-	dB	
	2000-6000	25	38	-	dB	
Amplitude balance ((S21/S31))	869-894	-1.0	0.0/+0.3	+1.0	dB	
Phase balance (( $\Phi$ S21- $\Phi$ S31)+180)	869-894	-10	-2.4/+1.4	10	deg	
Input impedance (Unbalanced)		50			ohm	
Output impedance (Balanced)		150			ohm	
Operating temperature		-30 to +85			°C	

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

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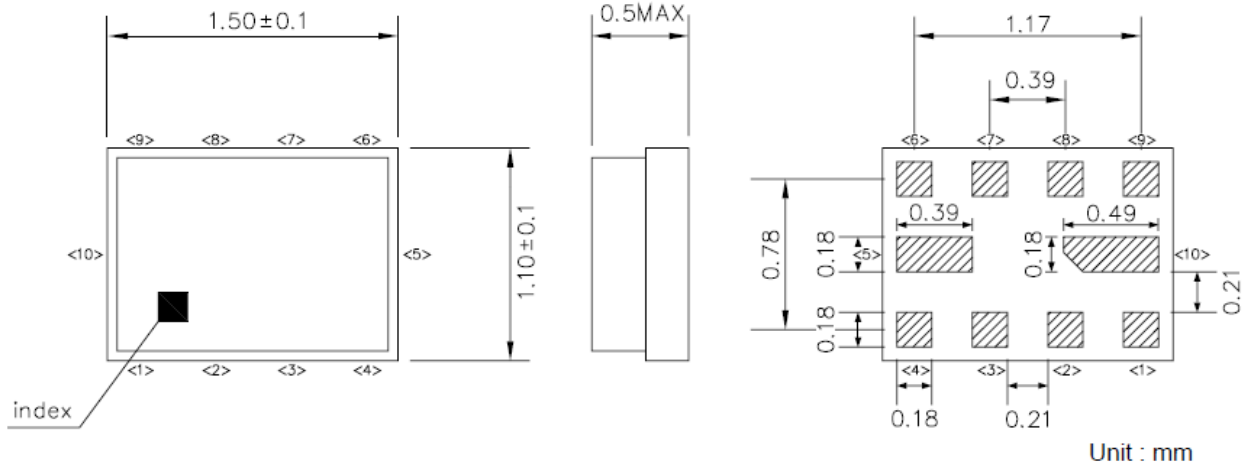
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### Dimensions

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

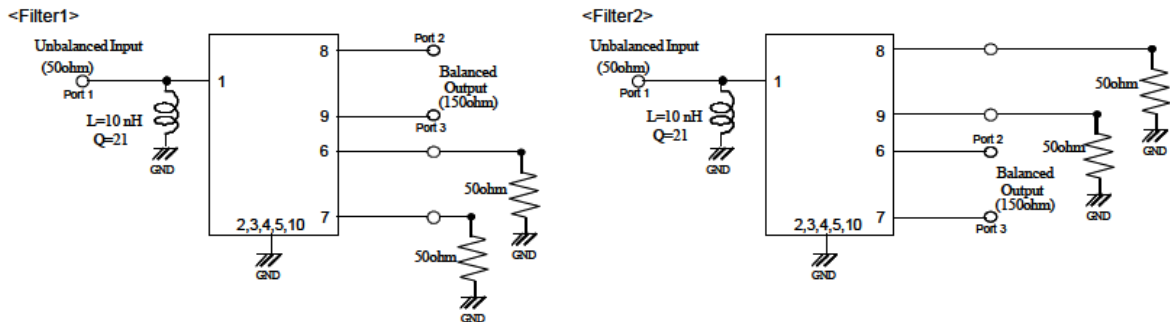


### Pin Configuration

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.	Passband(MHz)	System
1	925 ~ 960	GSM900-Rx
2	869 ~ 894	GSM850-Rx

### Evaluation Circuit



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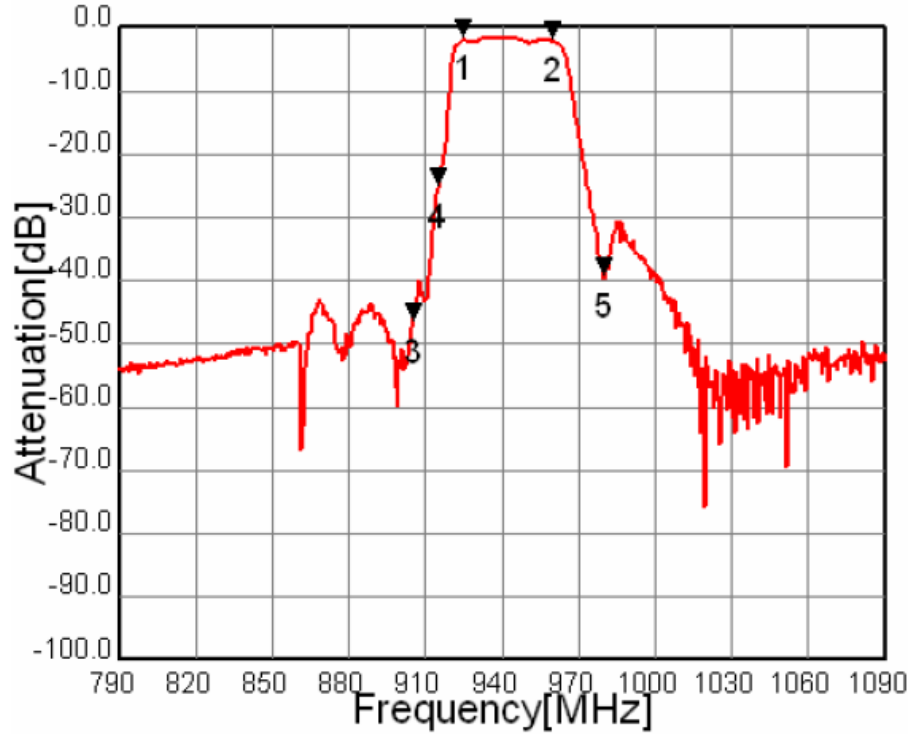


Fig.1 Pass-band Characteristic (Filter1)

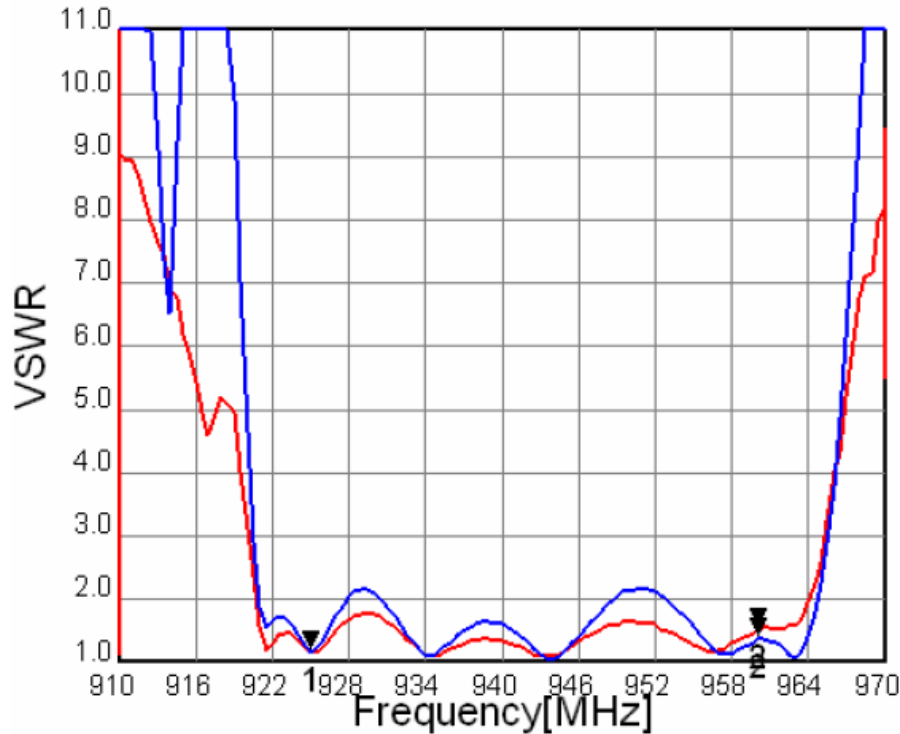


Fig.2 VSWR (Filter1)

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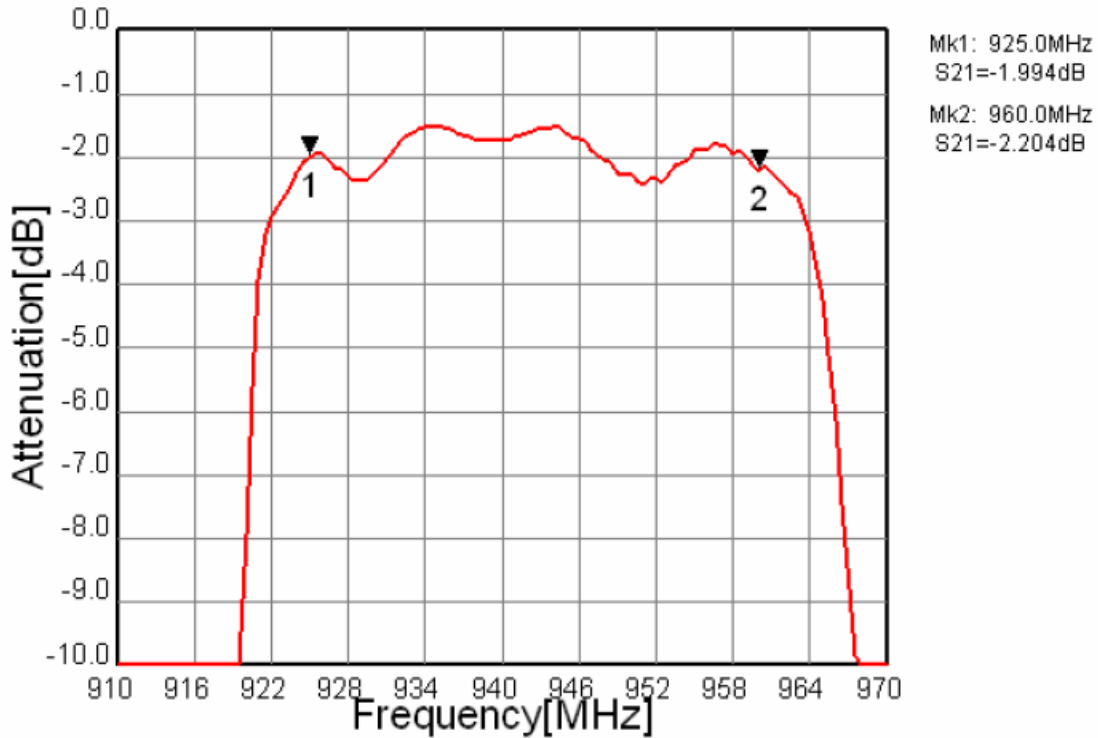


Fig.3 In-band Characteristic (Filter1)

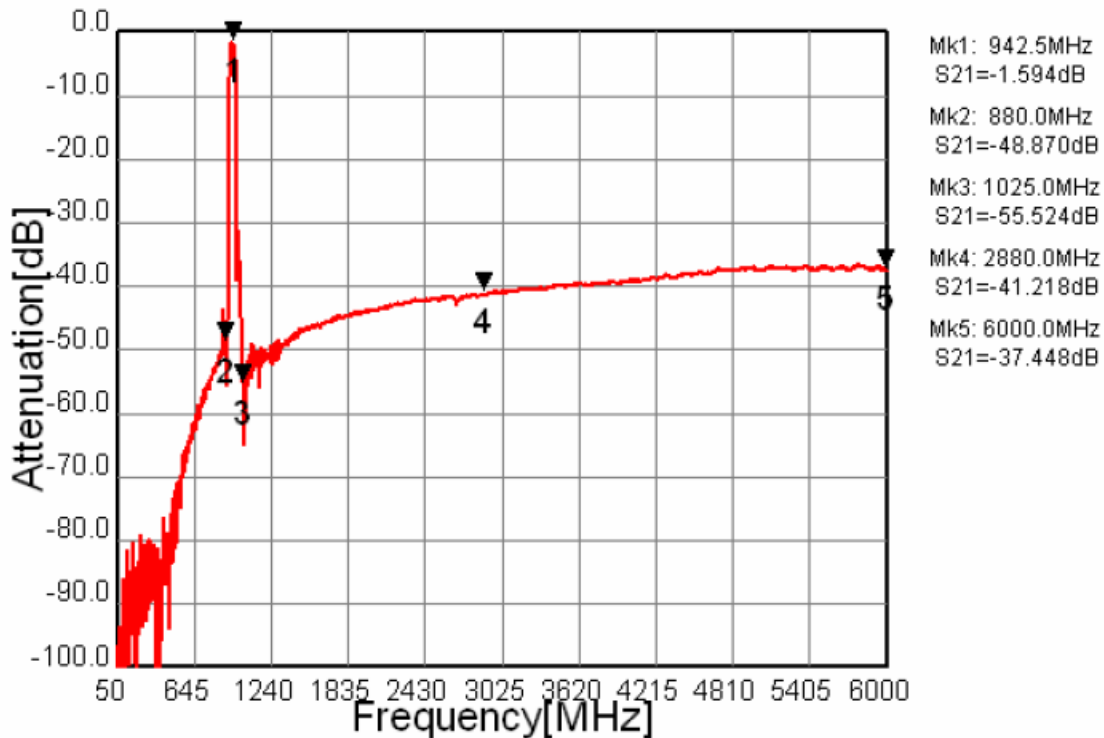


Fig.4 Wide-band Characteristic (Filter1)

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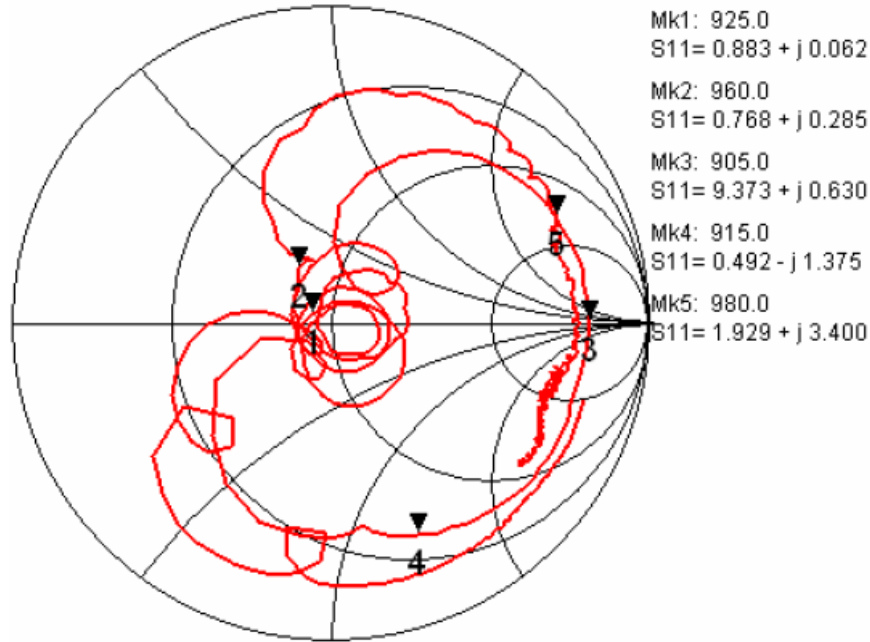


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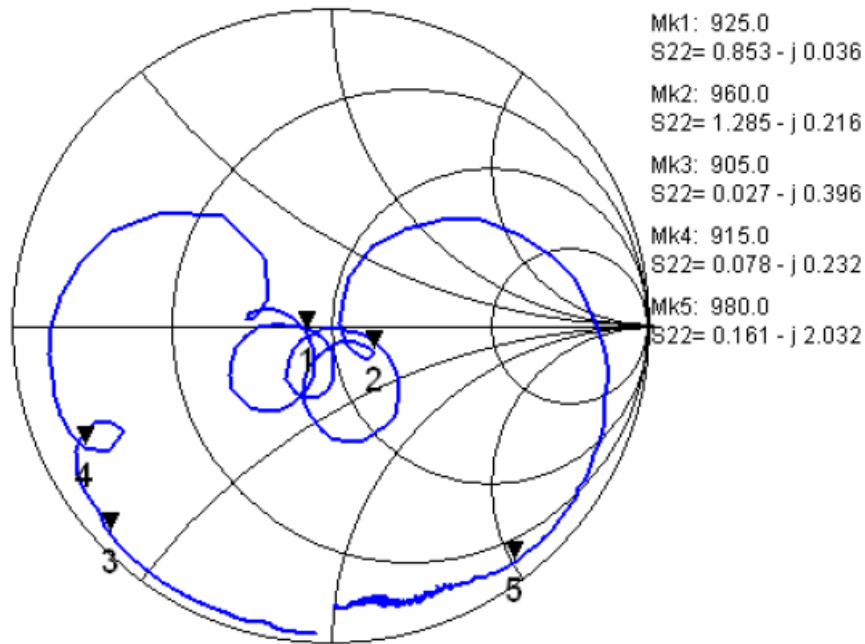
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**Fig.5 Impedance (SS11) (Filter1)**



**Fig.6 Impedance (SS22) (Filter1)**

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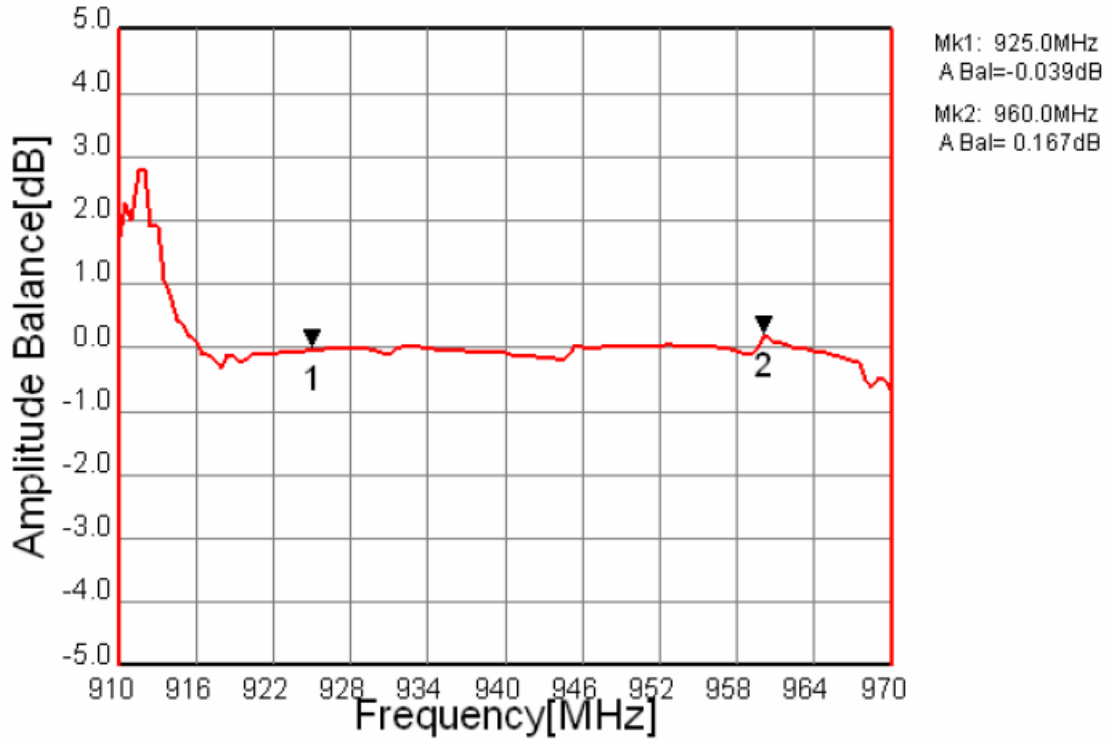


Fig.7 Amplitude Balance (Filter1)

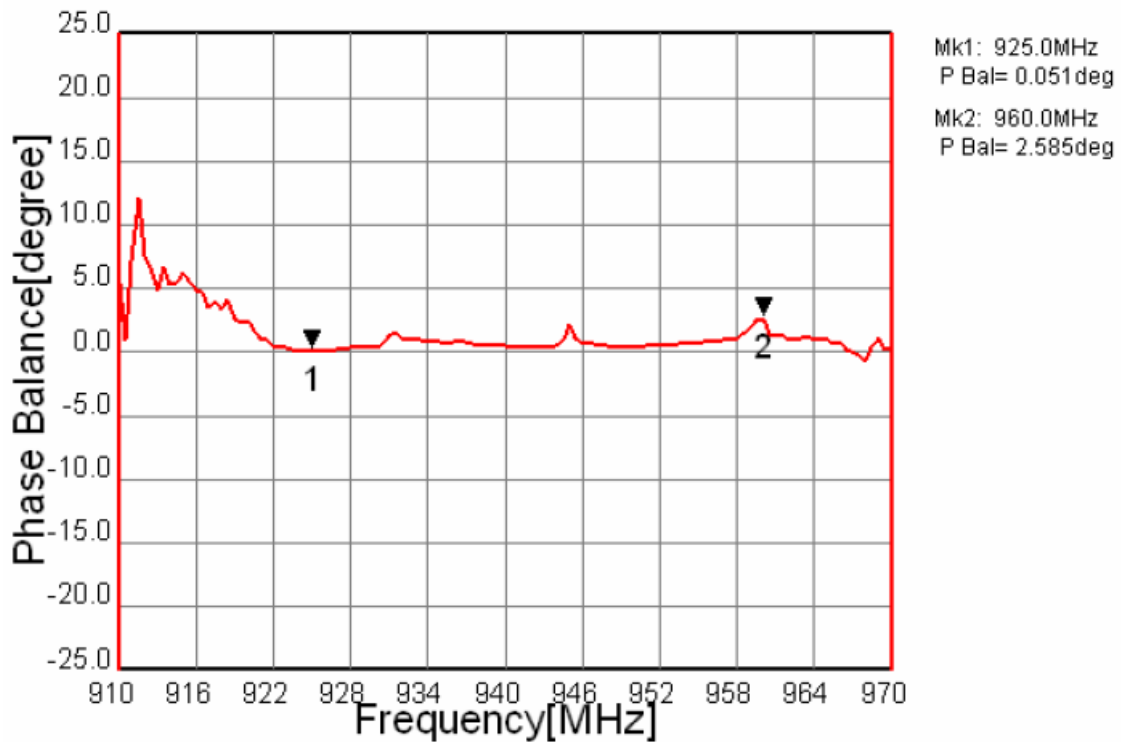


Fig.8 Phase Balance (Filter1)

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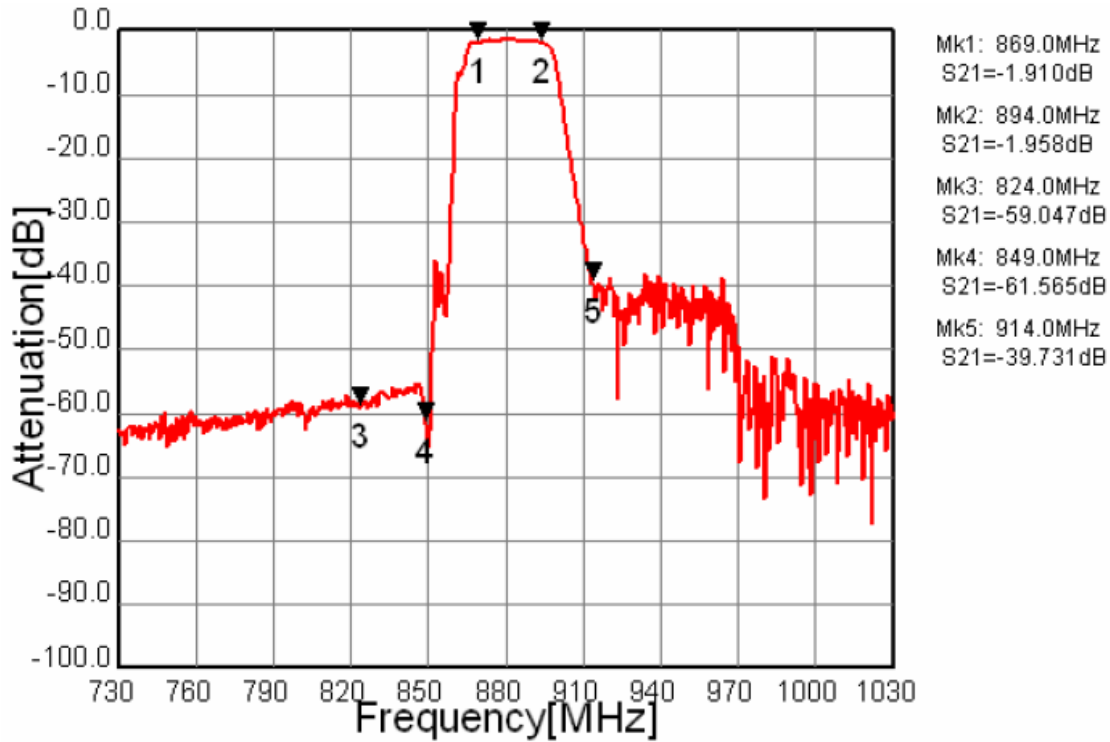


Fig.9 Pass-band Characteristic (Filter2)

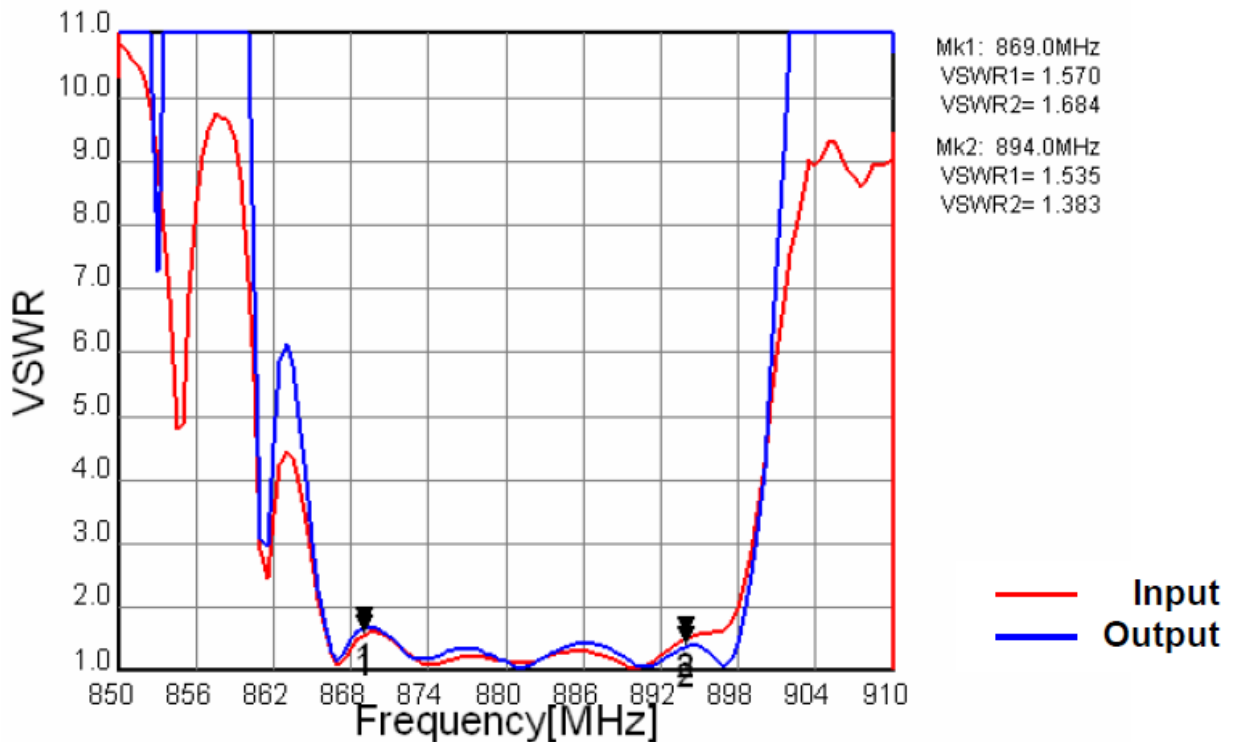


Fig.10 VSWR (Filter2)

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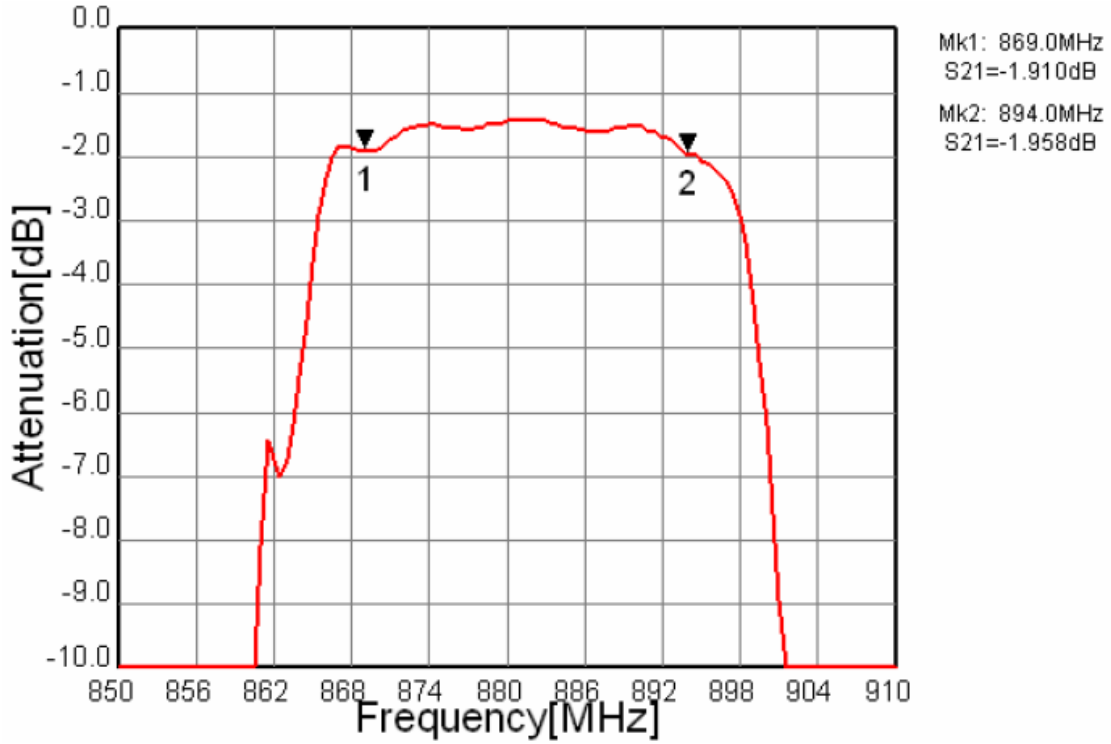


Fig.11 In-band Characteristic (Filter2)

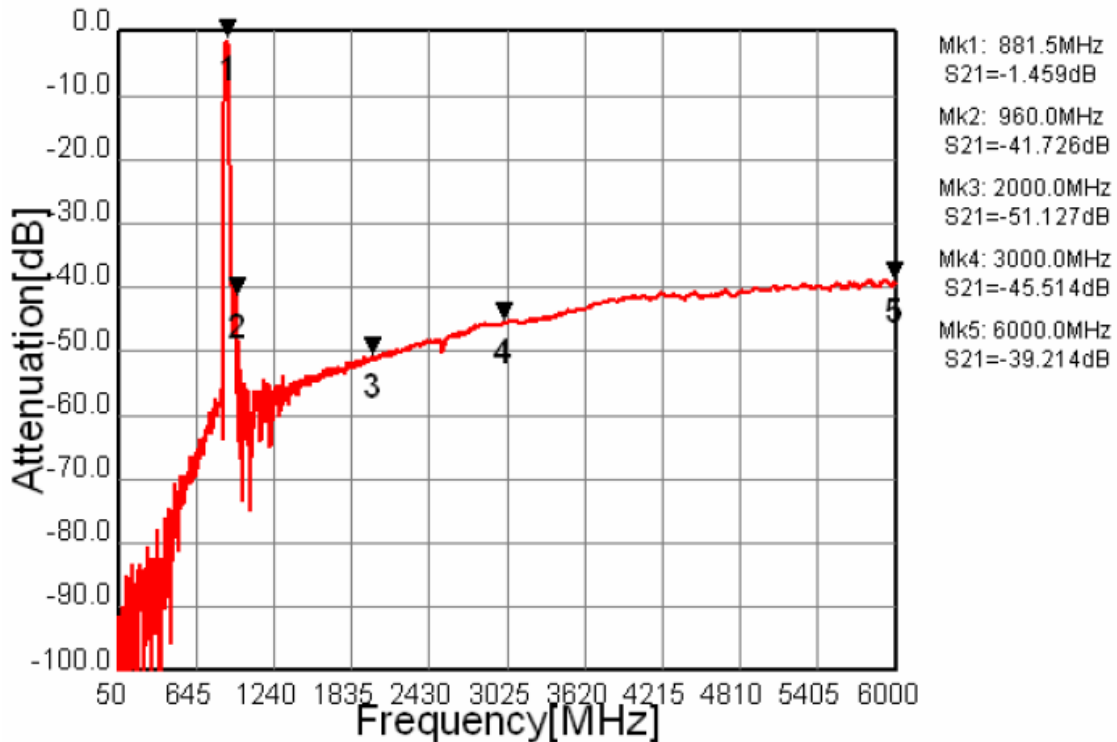


Fig.12 Wide-band Characteristic (Filter2)

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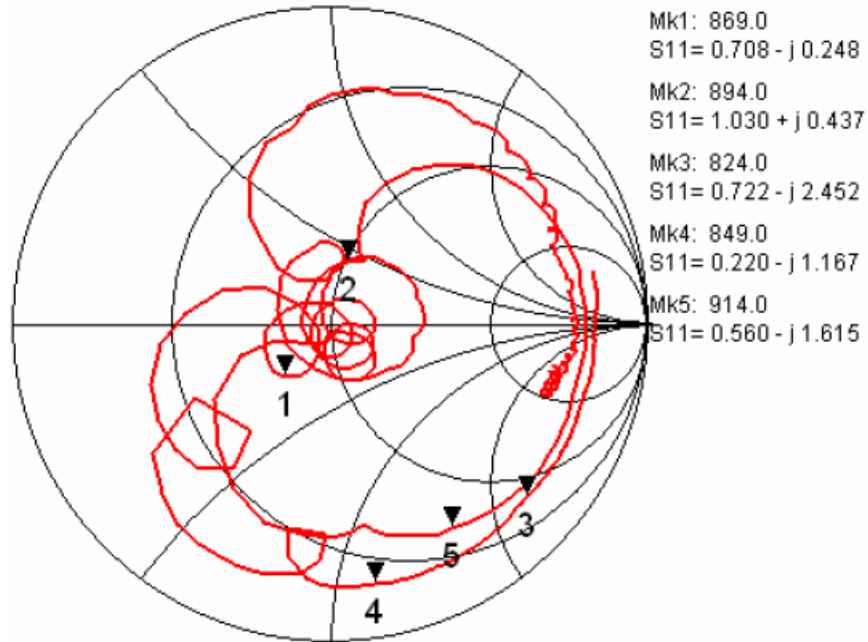


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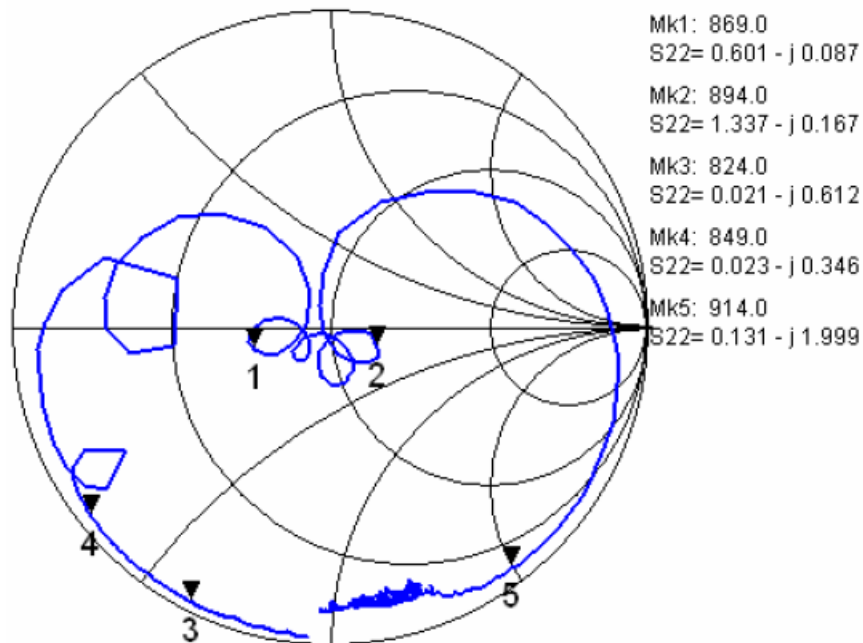
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**Fig.13 Impedance (SS11) (Filter2)**



**Fig.14 Impedance (SS22) (Filter2)**

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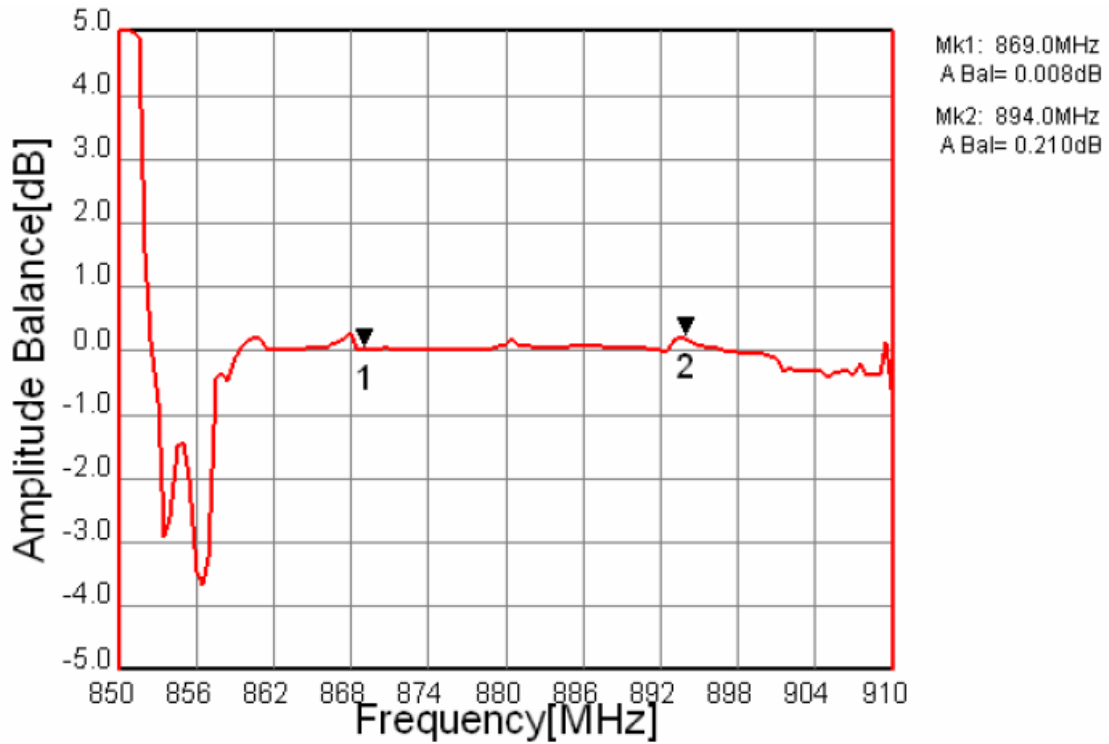


Fig.15 Amplitude Balance (Filter2)

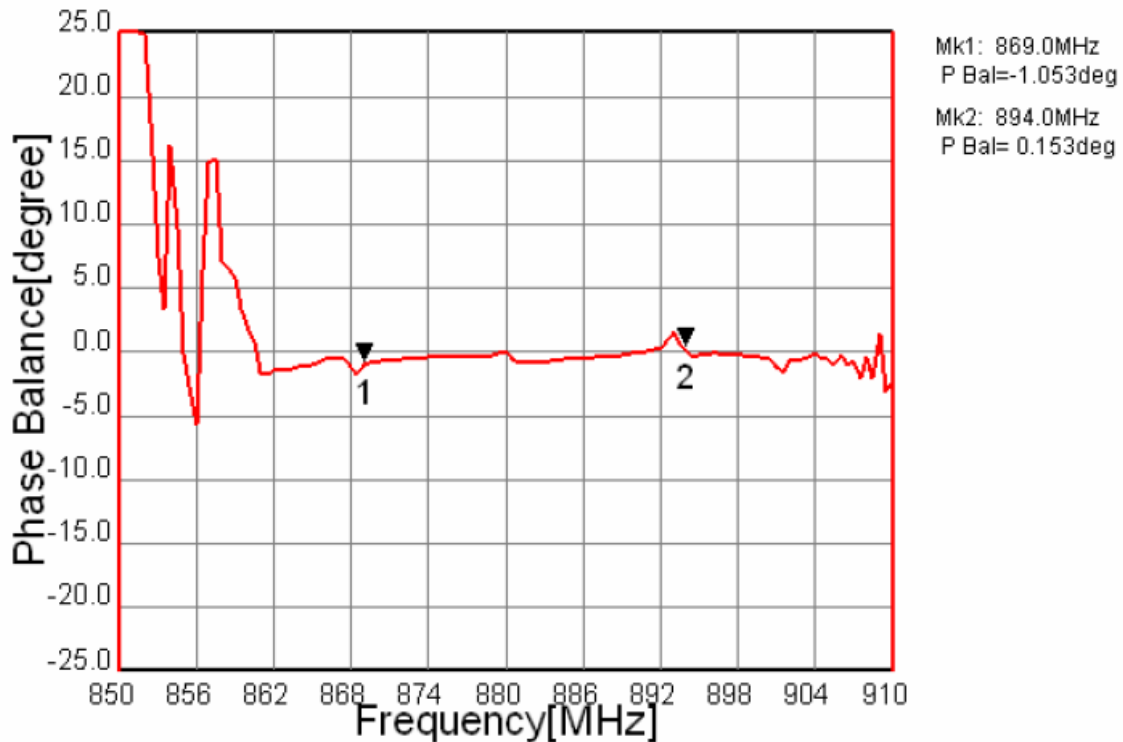


Fig.16 Phase Balance (Filter2)

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