



MSL1

\* Pb Free Part

Customer Name	Standard specification	TAIYO YUDEN Mobile Technology Co., Ltd.	
System	GSM900/GSM850 Rx (50/150ohms)	Date	March 31, 2010
Part Number	FAR-G5QC-942M50-N2FB	Version 1.0 cb	

Table 1. Electrical specifications(Filter 1)

Pass Band (869-894MHz)						
Item	Condition (MHz)	Specification			Unit	Remark
		Min.	Typ.	Max.		
Insertion Loss	869-894	-	1.5	2.1	dB (*1)	
Ripple	869-894	-	0.4	1.1	dB	
Input VSWR	869-894	-	1.5	2.0	-	
Output VSWR	869-894	-	1.5	2.0	-	
Absolute attenuation	DC-824	45	55	-	dB	
	824-849	40	50	-	dB	
	914-960	25	35	-	dB	
	960-2000	33	44	-	dB	
	2000-6000	25	37	-	dB	
Amplitude balance ( S <sub>21</sub> /S <sub>31</sub>  )	869-894	-1.0	-0.2/+0.0	+1.0	dB	
Phase balance (∠S <sub>21</sub> -∠S <sub>31</sub> )+180)	869-894	-10	-2/+0	+10	deg	
Input impedance (Unbalanced)		50			Ohm	
Output impedance (Balanced)		150			Ohm	
Operating temperature		-30to +85			°C	

(\*1) These data include loss that comes from the test board.



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Table 2. Electrical specifications(Filter 2)

Pass Band (925-960MHz)						
Item	Condition (MHz)	Specification			Unit	Remark
		Min.	Typ.	Max.		
Insertion Loss	925-960	-	1.8	2.4	dB (*1)	
Ripple	925-960	-	0.6	1.4	dB	
Input VSWR	925-960	-	2.0	2.2	-	
Output VSWR	925-960	-	1.9	2.2	-	
Absolute attenuation	DC-880	40	53	-	dB	
	880-905	30	43	-	dB	
	905-915	20	29	-	dB	
	980-1025	25	32	-	dB	
	1025-2880	33	41	-	dB	
	2880-6000	25	33	-	dB	
Amplitude balance ( S21/S31 )	925-960	-1.0	-0.3/+0.0	+1.0	dB	
Phase balance (∠S21-∠S31)+180)	925-960	-10	-4/+0	+10	deg	
Input impedance (Unbalanced)		50			Ohm	
Output impedance (Balanced)		150//82nH			Ohm	
Operating temperature		-30to +85			°C	

(\*1) These data include loss that comes from the test board.



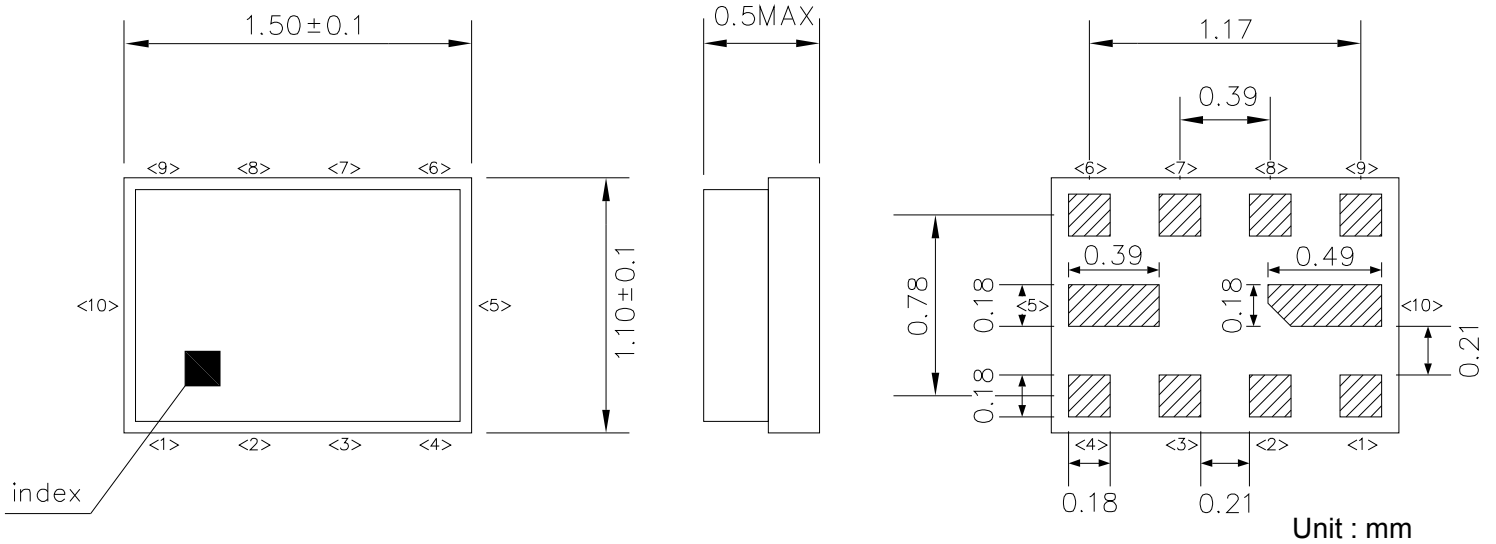
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### Dimensions

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



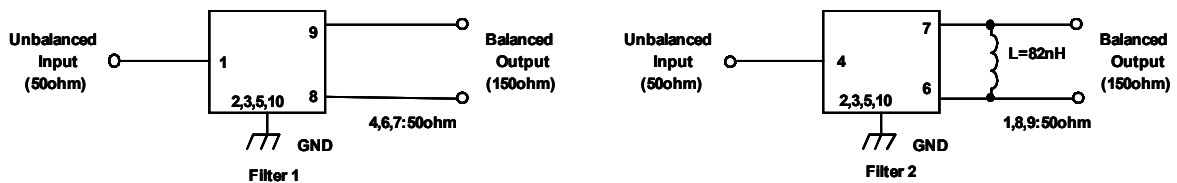
Unit : mm

### 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	869 ~ 894	GSM850-Rx
2	925 ~ 960	GSM900-Rx

### Evaluation Circuit





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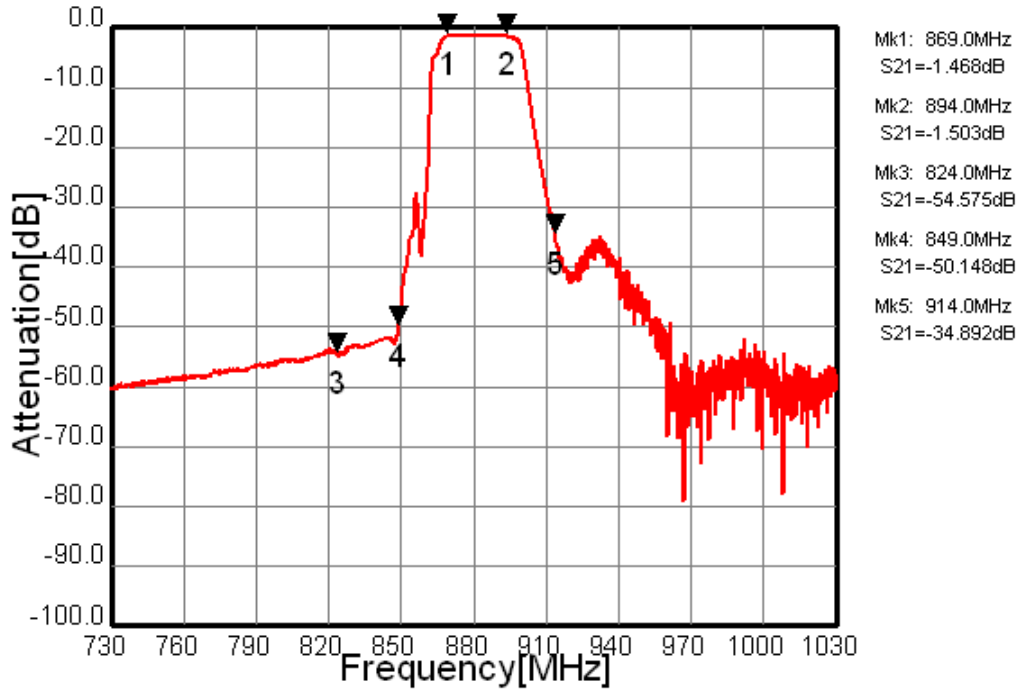


Fig.1 Pass-band Characteristic (Filter1)

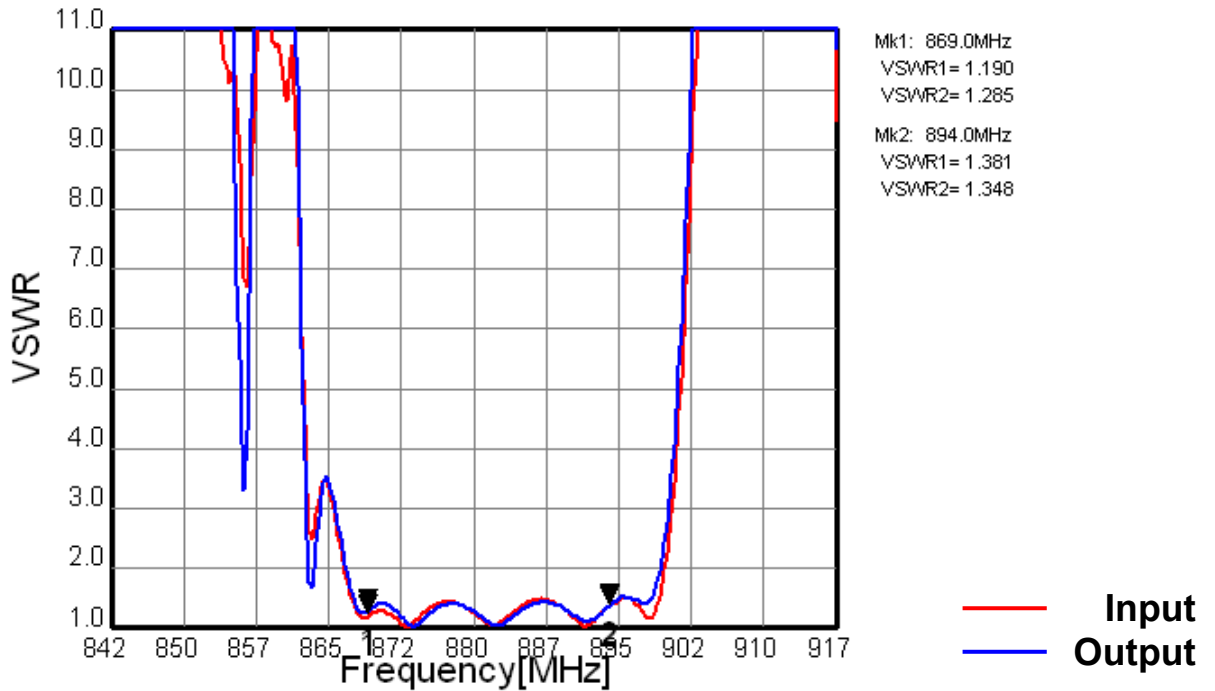


Fig.2 VSWR (Filter1)



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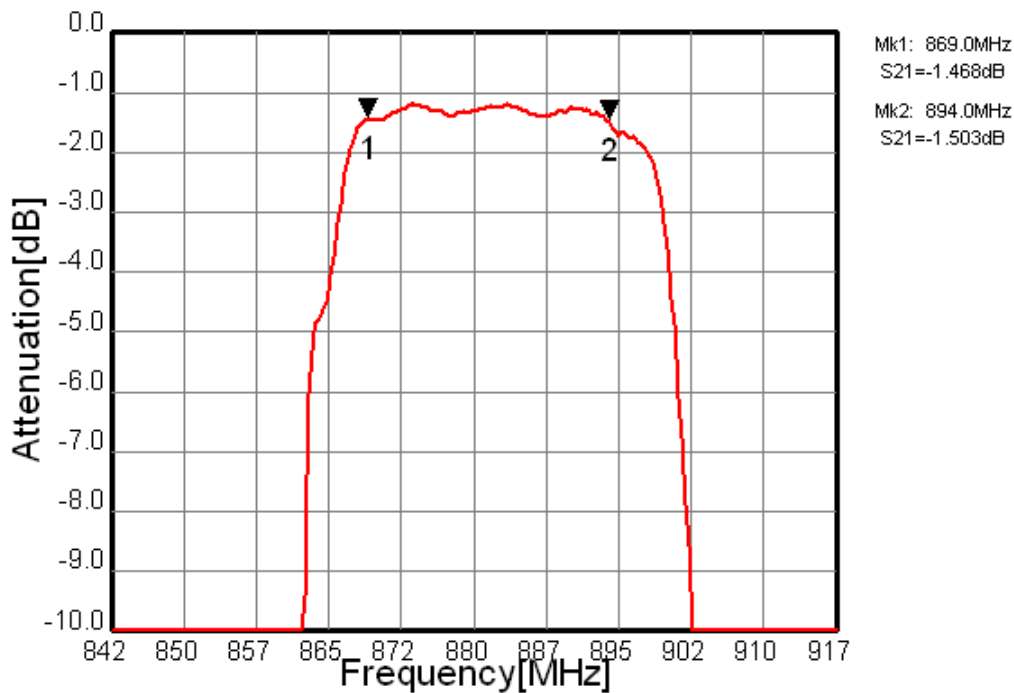


Fig.3 In-band Characteristic (Filter1)

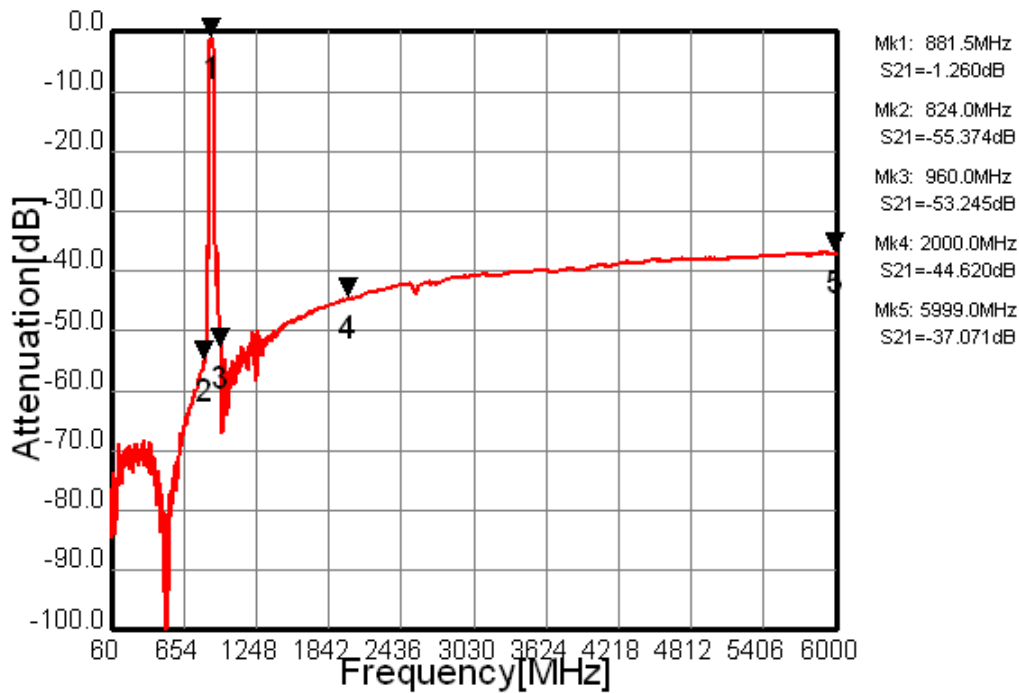


Fig.4 Wide-band Characteristic (Filter1)



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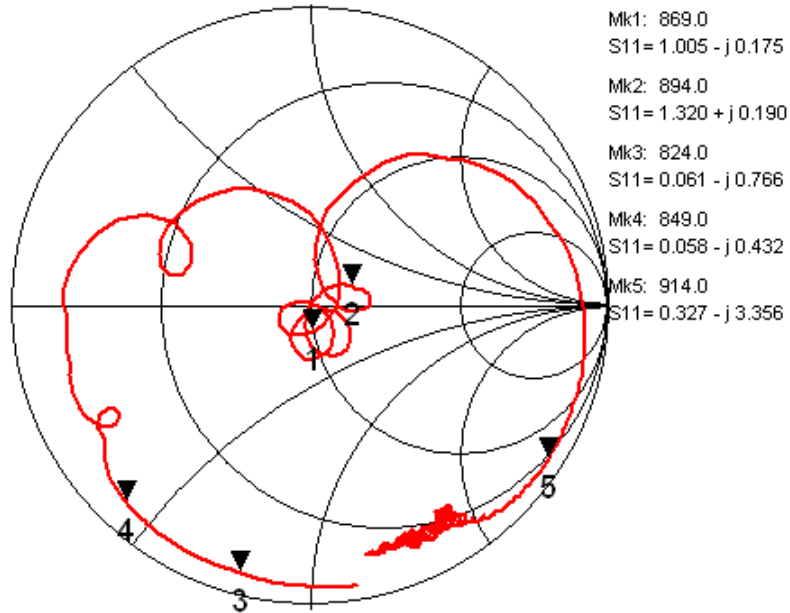


Fig.5 Impedance (S11) (Filter1)

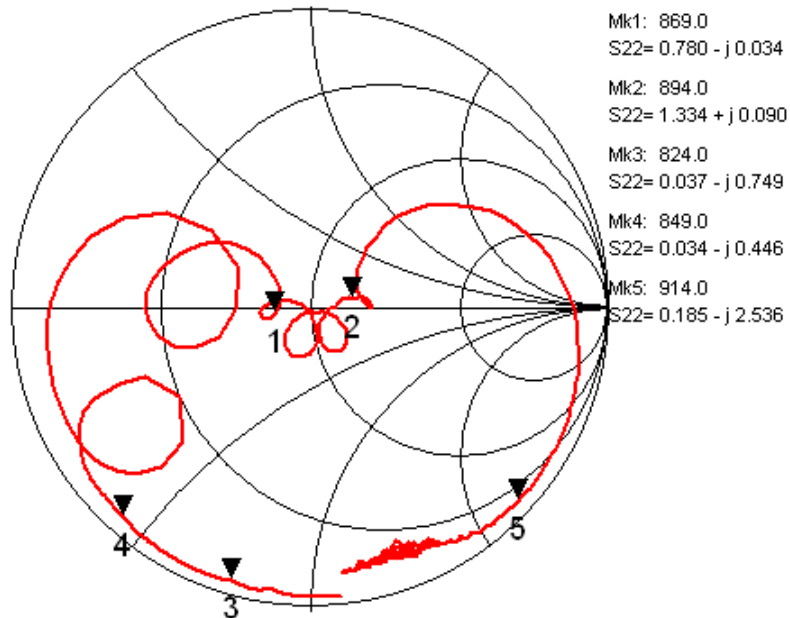


Fig.6 Impedance (S22) (Filter1)



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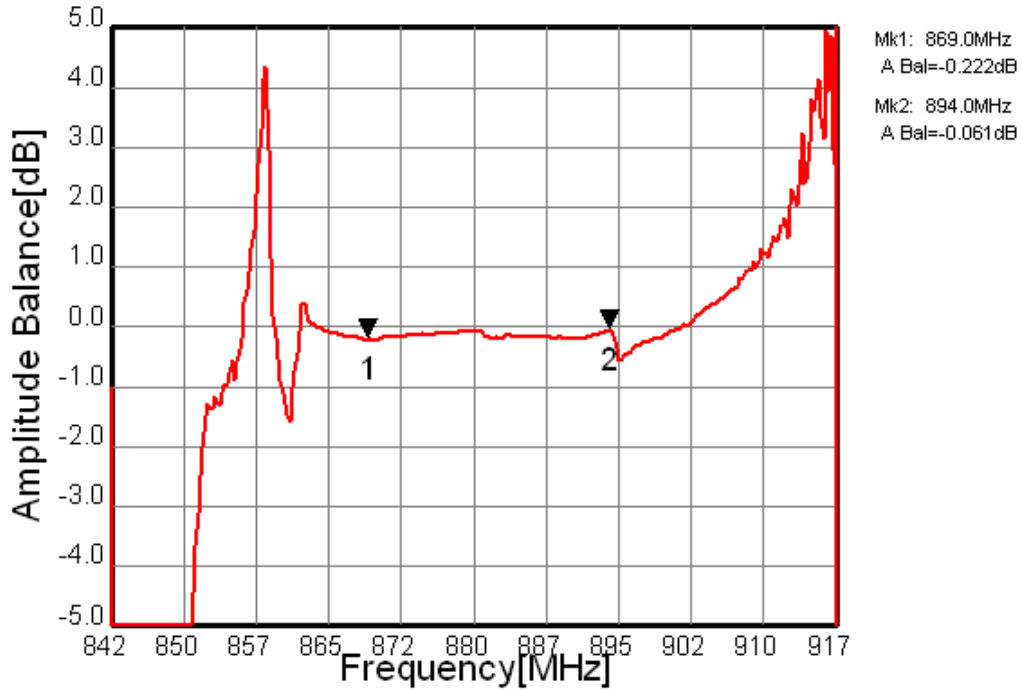


Fig.7 Amplitude Balance (Filter1)

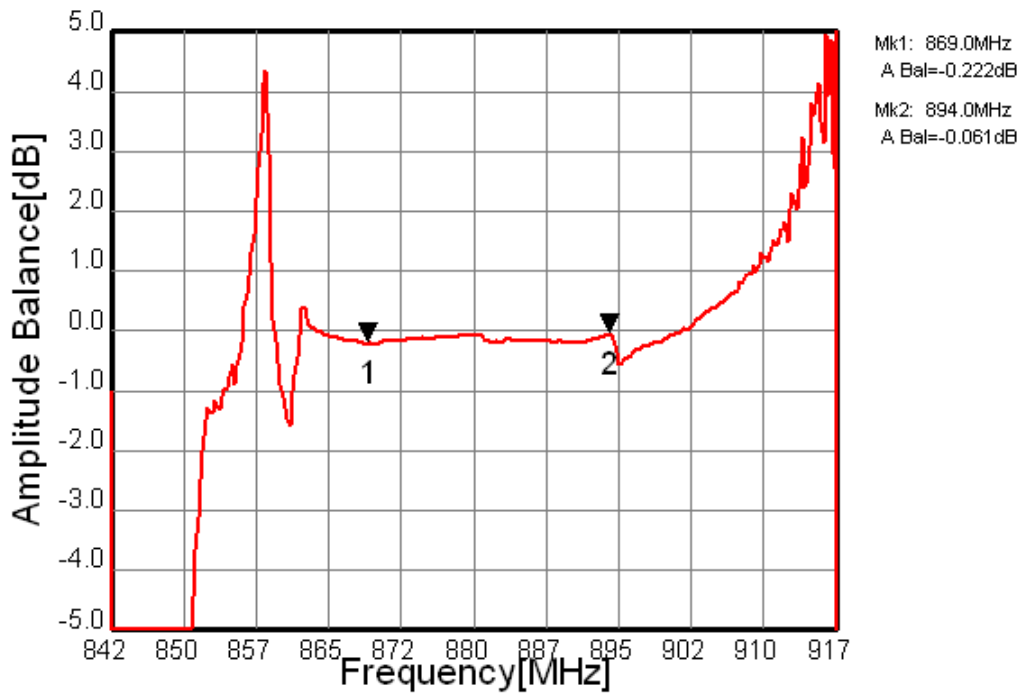


Fig.8 Phase Balance (Filter1)



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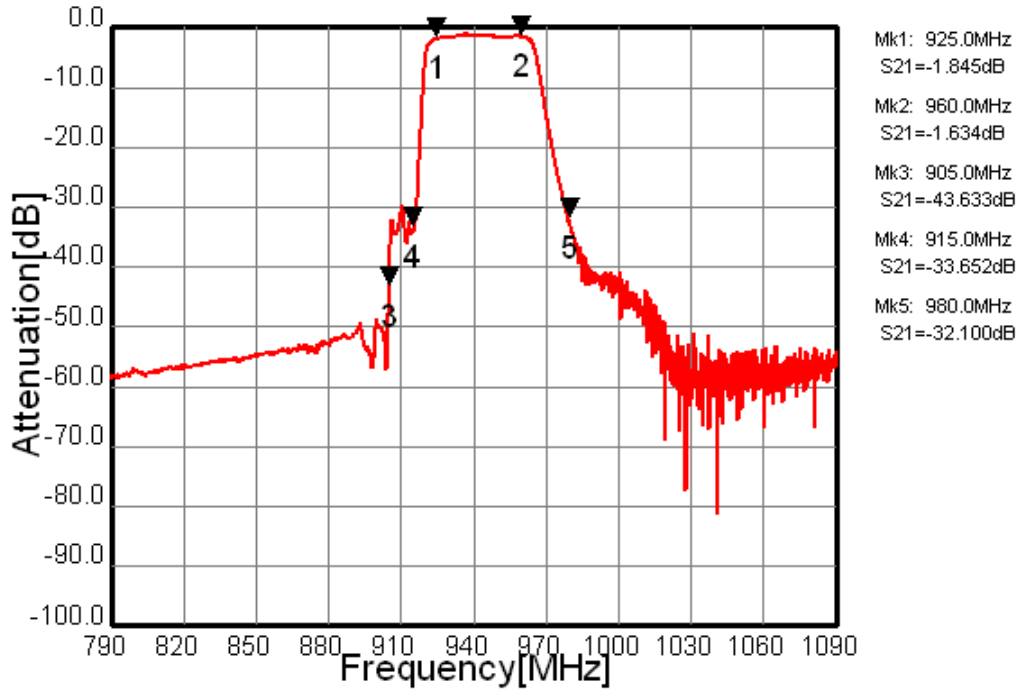


Fig.9 Pass-band Characteristic (Filter2)

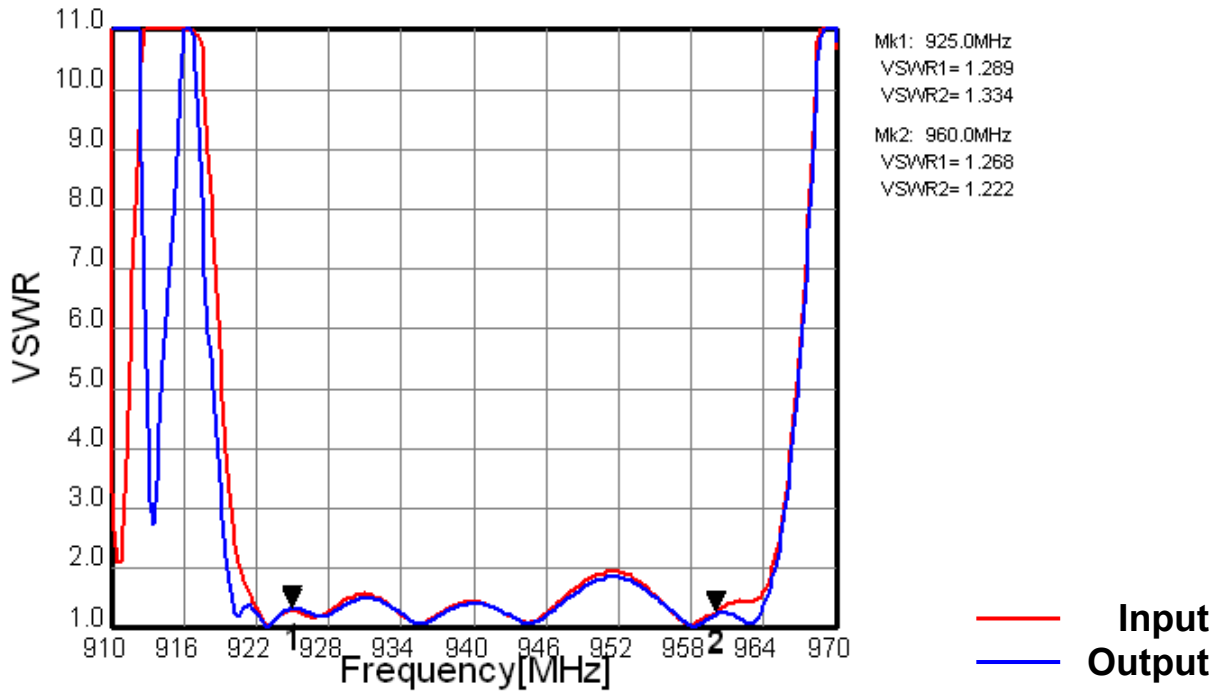


Fig.10 VSWR (Filter2)





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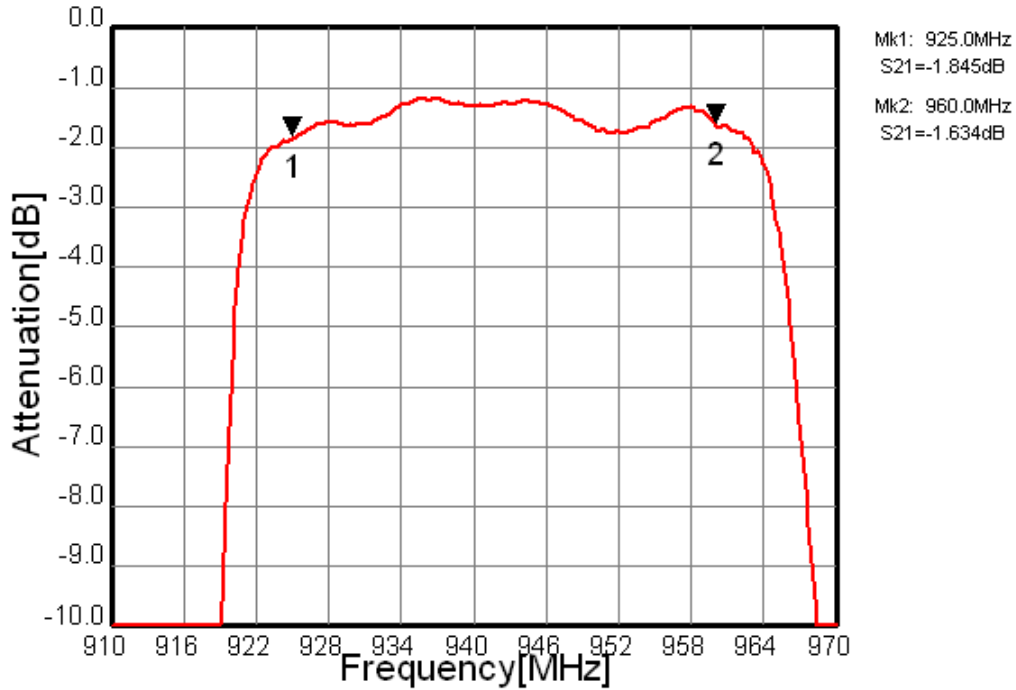


Fig.11 In-band Characteristic (Filter2)

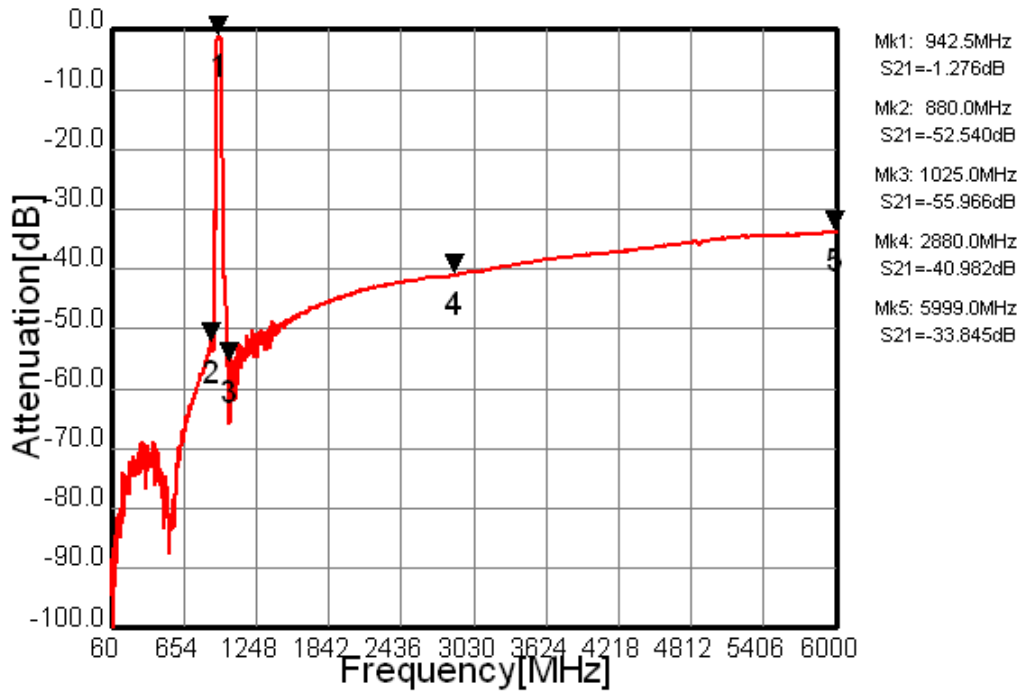


Fig.12 Wide-band Characteristic (Filter2)



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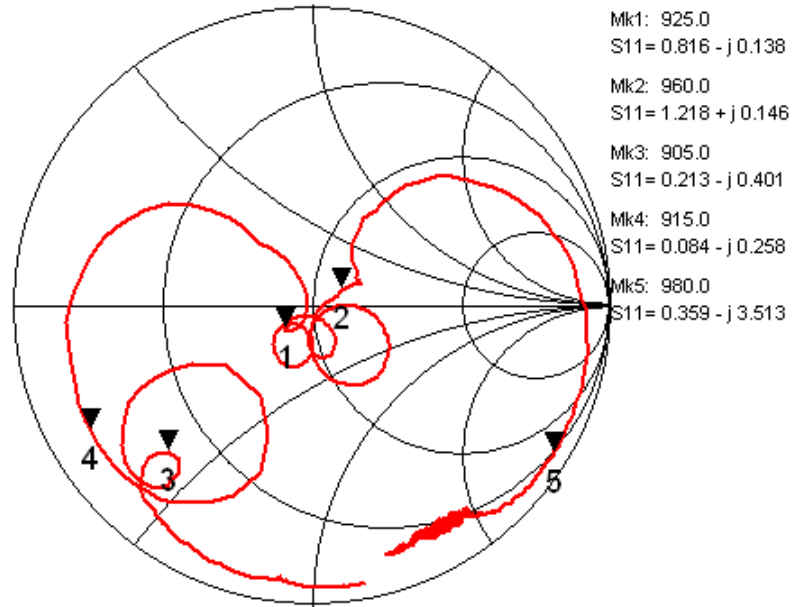


Fig.13 Impedance (S11) (Filter2)

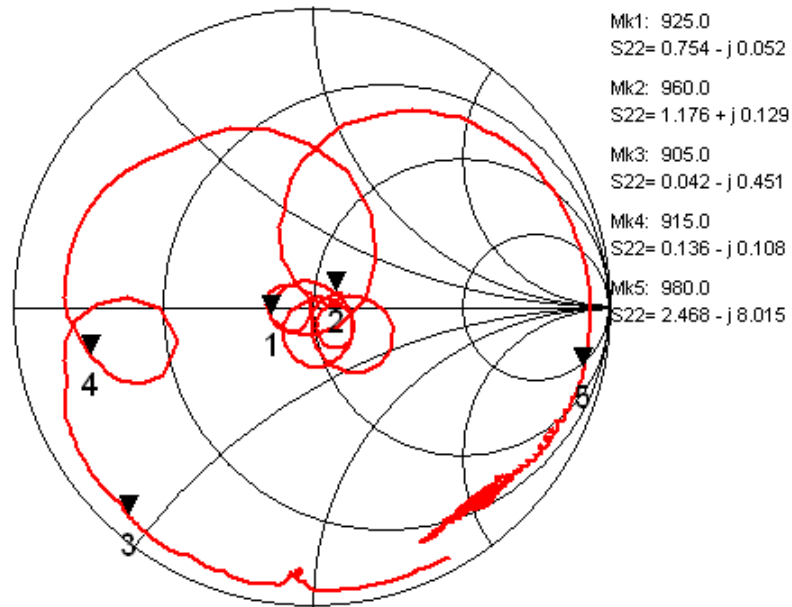


Fig.14 Impedance (S22) (Filter2)



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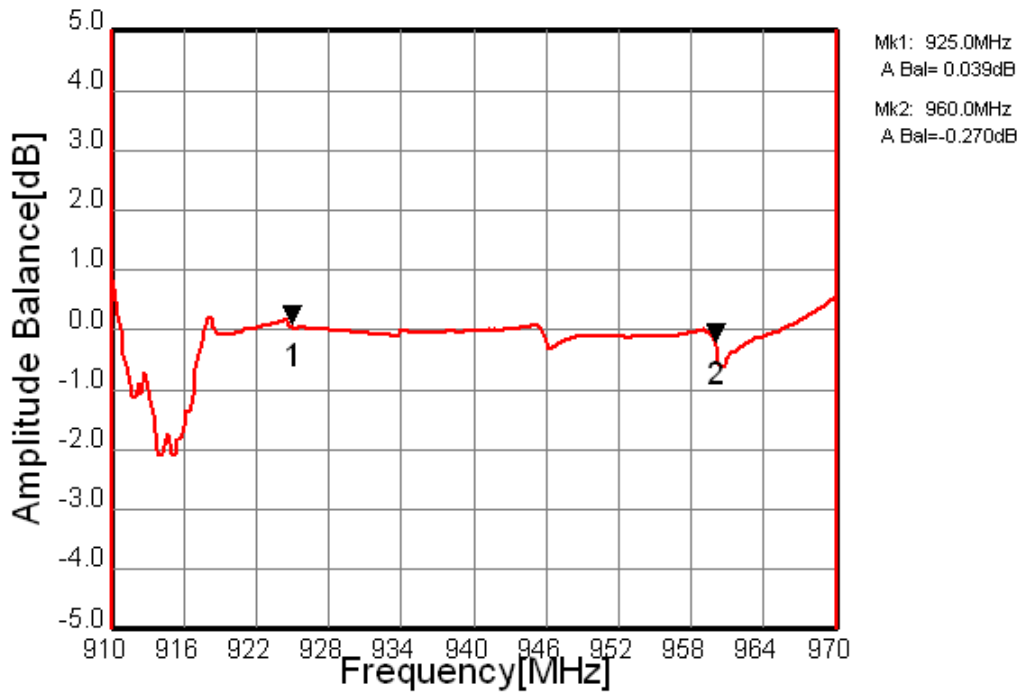


Fig.15 Amplitude Balance (Filter2)

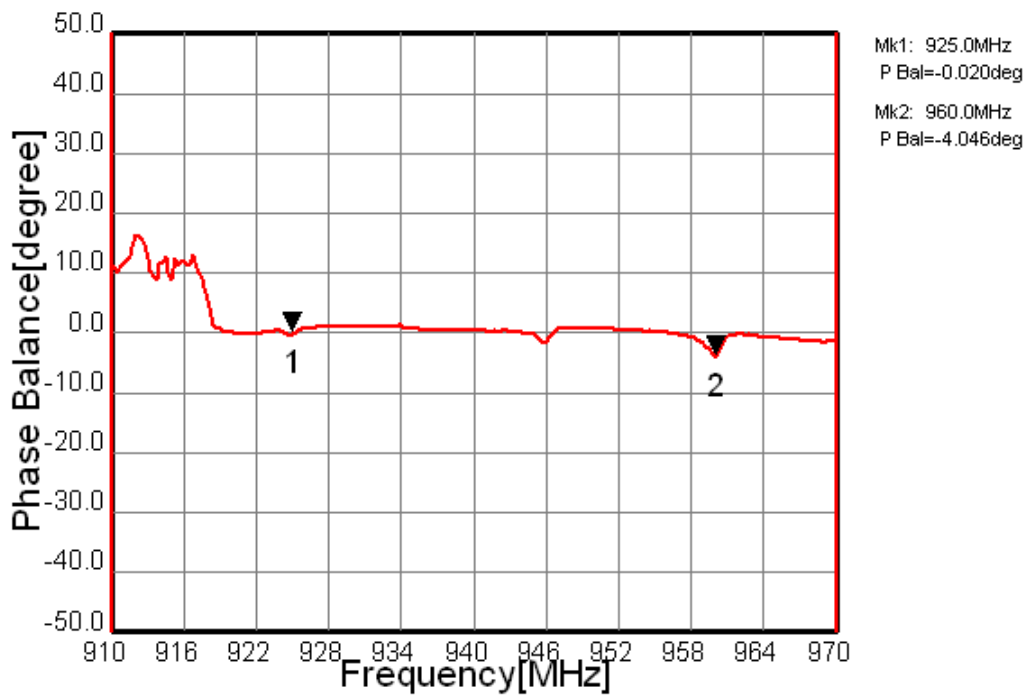


Fig.16 Phase Balance (Filter2)