

Customer Name	<b>Standard specification</b>	FUJITSU MEDIA DEVICES LIMITED	
System	PCS/GSM850 dual balanced filter	DATE	Aug. 26, 2004
FMD Part Number	FAR-G6EE-1G9600-Y2EK	Version 1.1ch	

**Table 1-1 Electrical Specification**

<b>Filter 1 : GSM850-Rx (Passband : 869 ~ 894 MHz)</b>						
Item	Condition (MHz)	Specification			Unit	Remark
		Min.	Typ.	Max.		
Insertion Loss	869 ~ 894	-	1.6	2.5	dB	
Ripple	869 ~ 894	-	0.5	1.5	dB	
Absolute attenuation	DC ~ 824	40	51	-	dB	
	824~ 849	35	45	-	dB	
	914~ 960	20	30	-	dB	
	960 ~ 2000	35	60	-	dB	
	2000 ~ 6000	20	49	-	dB	
VSWR(Input)	869 ~ 894	-	1.5	2.0	-	
VSWR(Output)	869 ~ 894	-	1.6	2.0	-	
Amplitude balance ( S21 / S31 )	869 ~ 894	-0.7	-0.1/ +0.2	+0.7	dB	
Phase balance (( $\Phi$ S21- $\Phi$ S31)+180)	869 ~ 894	-7	-1.0/ +1.2	+7	deg.	
Input Impedance	Unbalanced	50			ohm	
Output Impedance	Balanced	150			ohm	
Operating temperature		-30 ~ +85			°C	

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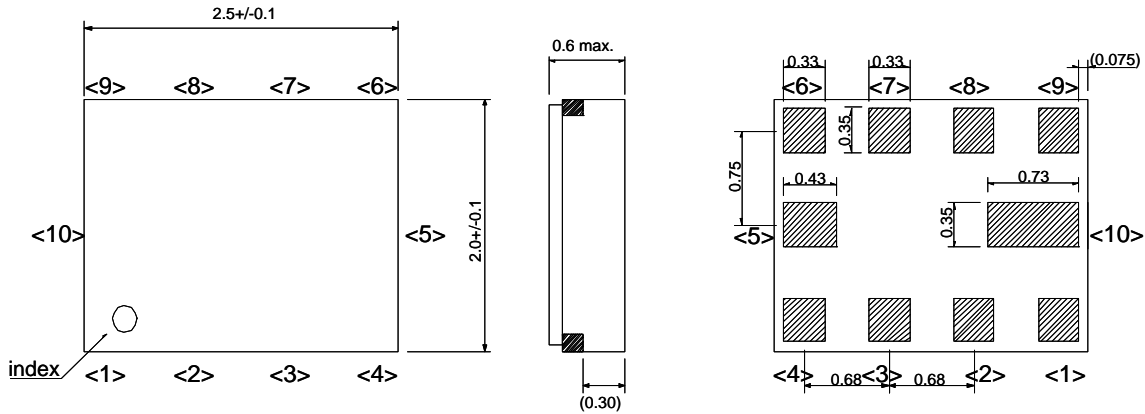
**Table 1-2 Electrical Specification**

<b>Filter 2 : PCS-Rx (Passband : 1930 ~ 1990 MHz)</b>						
Item	Condition (MHz)	Specification			Unit	Remark
		Min.	Typ.	Max.		
Insertion Loss	1930 ~ 1990	-	1.7	3.0	dB	
Ripple	1930 ~ 1990	-	0.6	1.8	dB	
Absolute attenuation	DC ~ 1830	25	42	-	dB	
	1830~ 1910	10	21	-	dB	
	2010~ 2070	10	27	-	dB	
	2070 ~ 2150	23	25	-	dB	
	2150 ~ 6000	20	52	-	dB	
VSWR(Input)	1930 ~ 1990	-	1.6	2.3	-	
VSWR(Output)	1930 ~ 1990	-	1.5	2.3	-	
Amplitude balance ( S <sub>21</sub>  / S <sub>31</sub>  )	1930 ~ 1990	-1.5	-0.6/ +0.7	+1.5	dB	
Phase balance ((∠S <sub>21</sub> -∠S <sub>31</sub> )+180)	1930 ~ 1990	-11	-5.0/ +5.0	+11	deg.	
Input Impedance	Unbalanced	50			ohm	
Output Impedance	Balanced	150/15nH			ohm	
Operating temperature		-30 ~ +85			°C	

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### Dimensions

Device size: 2.5typ. x 2.0typ. x 0.6max



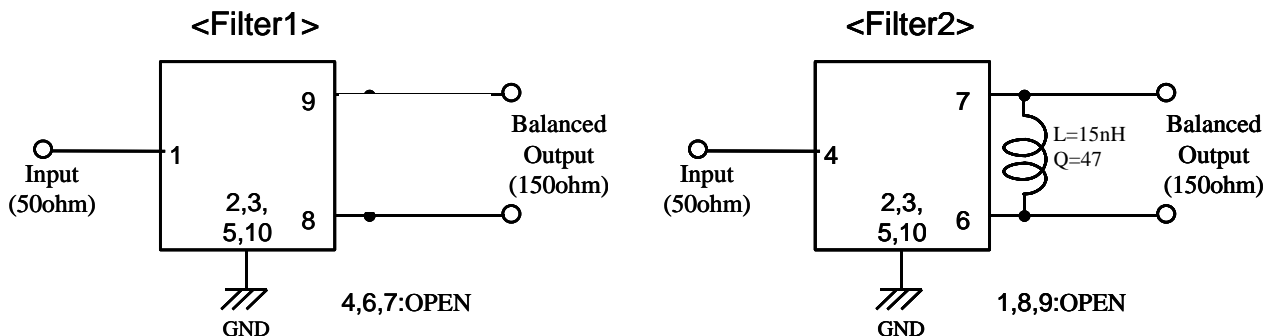
Unit : mm

### 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

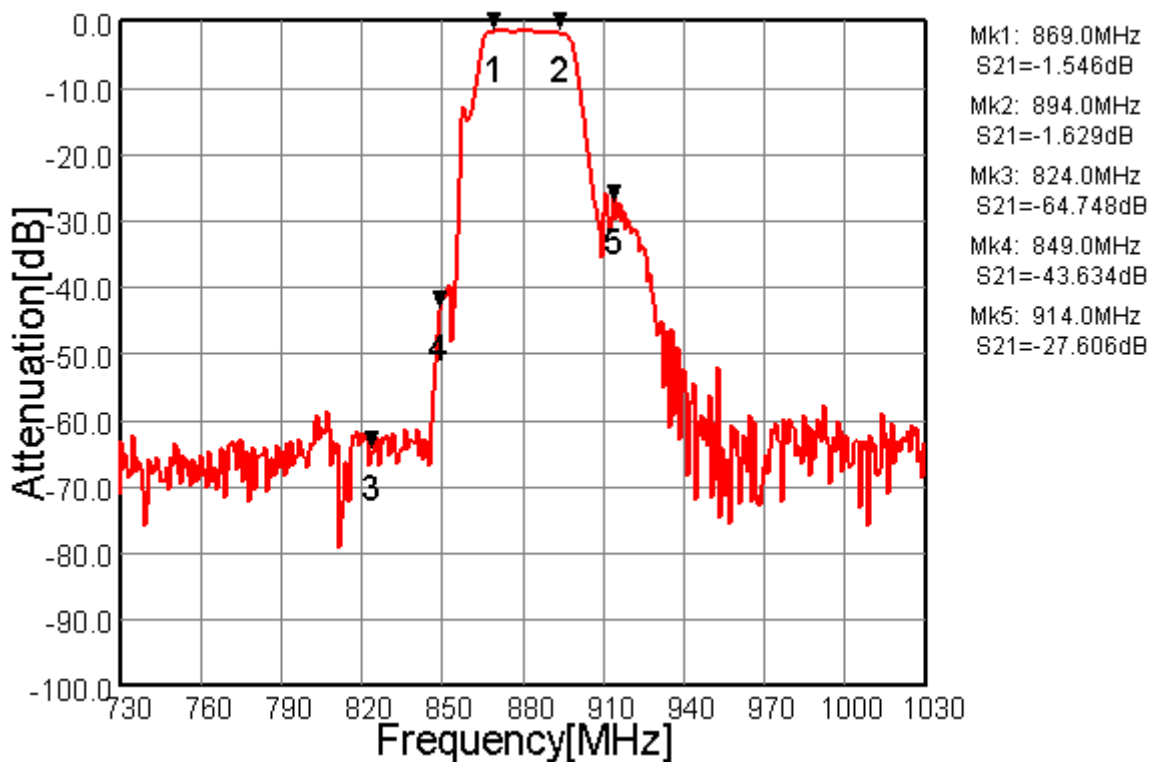
Filter No.	Passband(MHz)	System
1	869 ~ 894	GSM850-Rx
2	1930 ~ 1990	PCS-Rx

### Test Condition

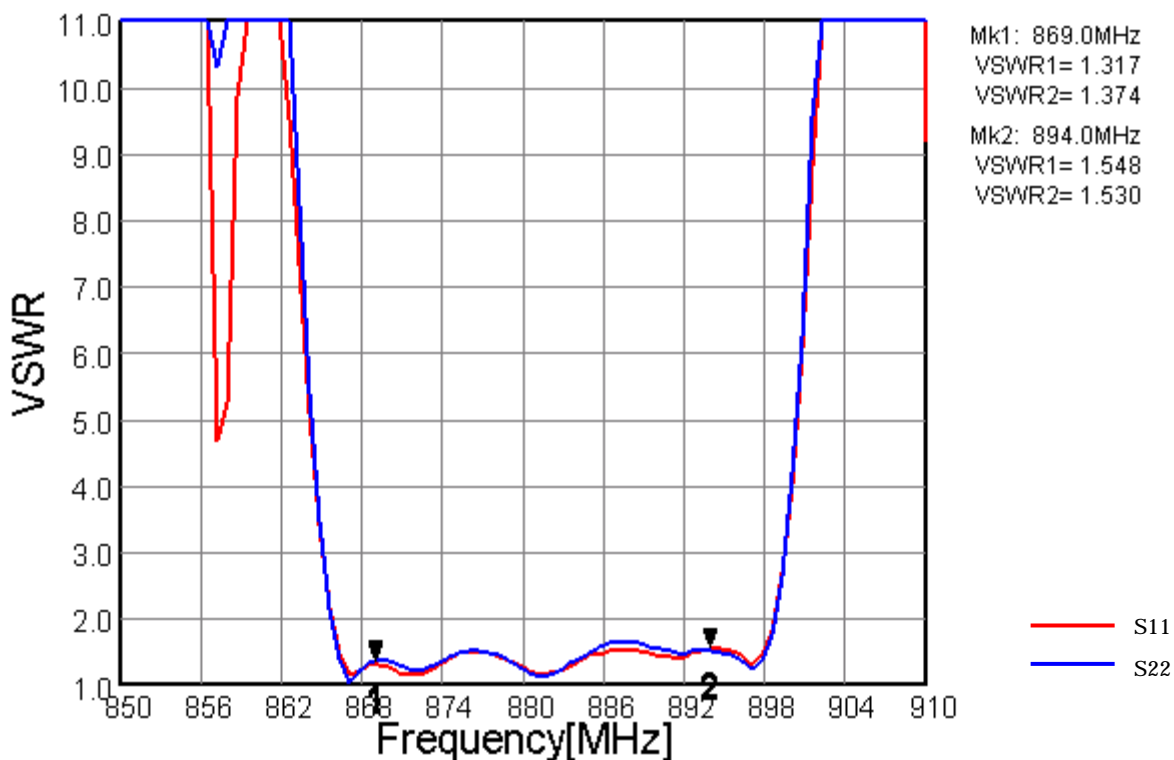


1~10 : Pin No.

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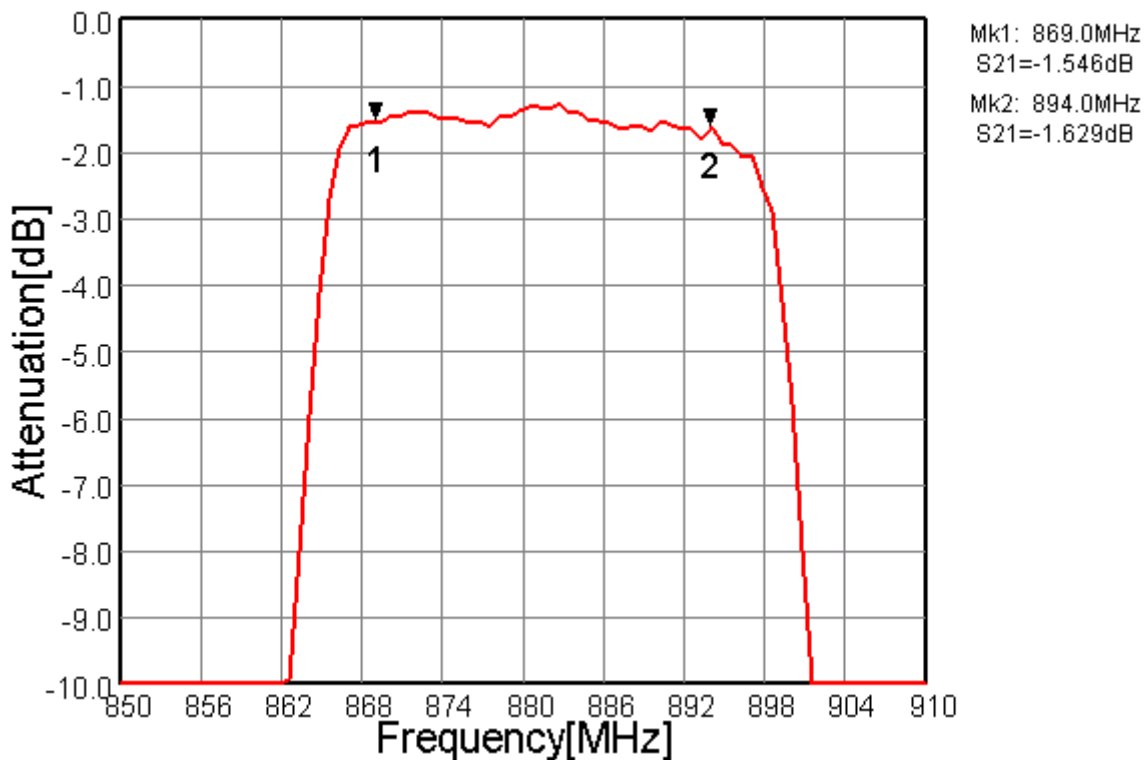


**Fig.1-1 Pass-band Characteristics (Filter 1)**

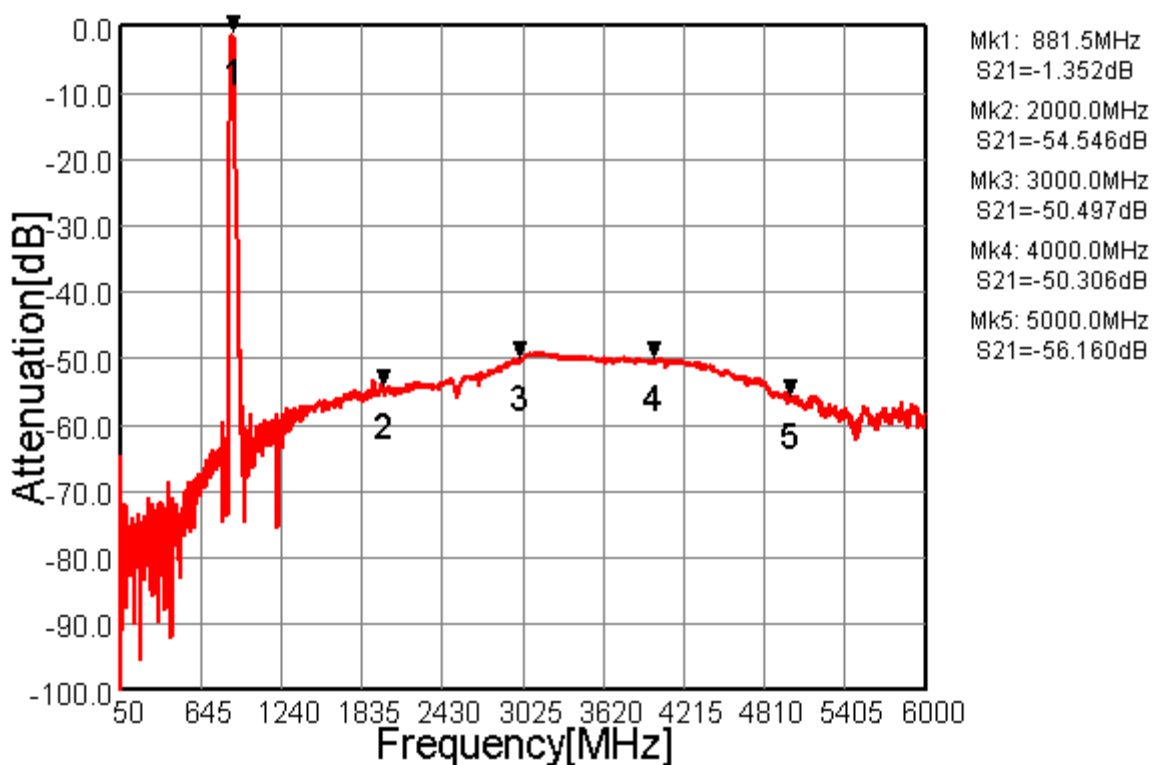


**Fig.1-2 VSWR (Filter 1)**

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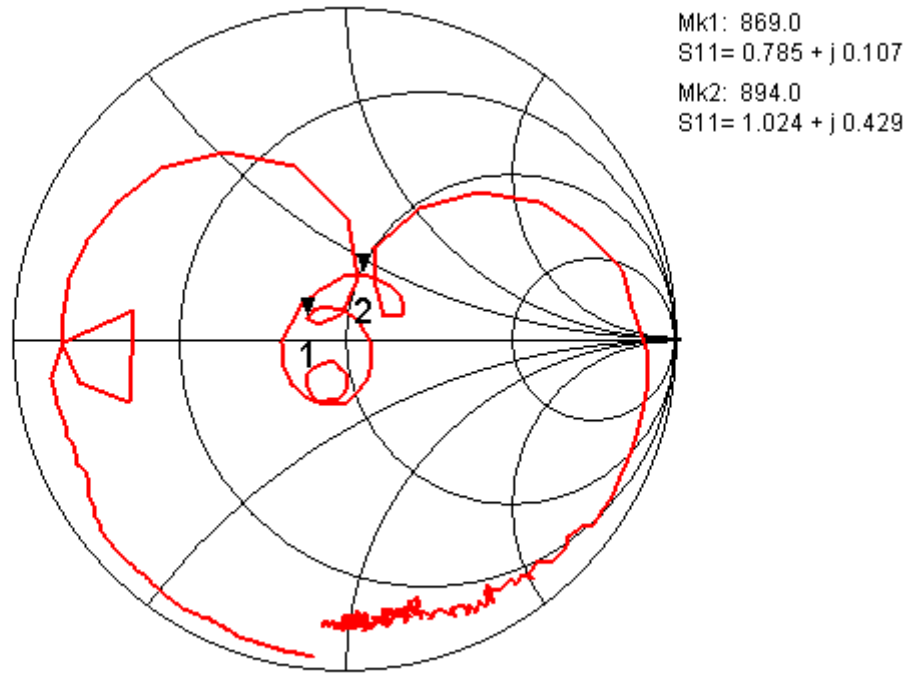


**Fig.1-3 In-band Characteristics (Filter 1)**

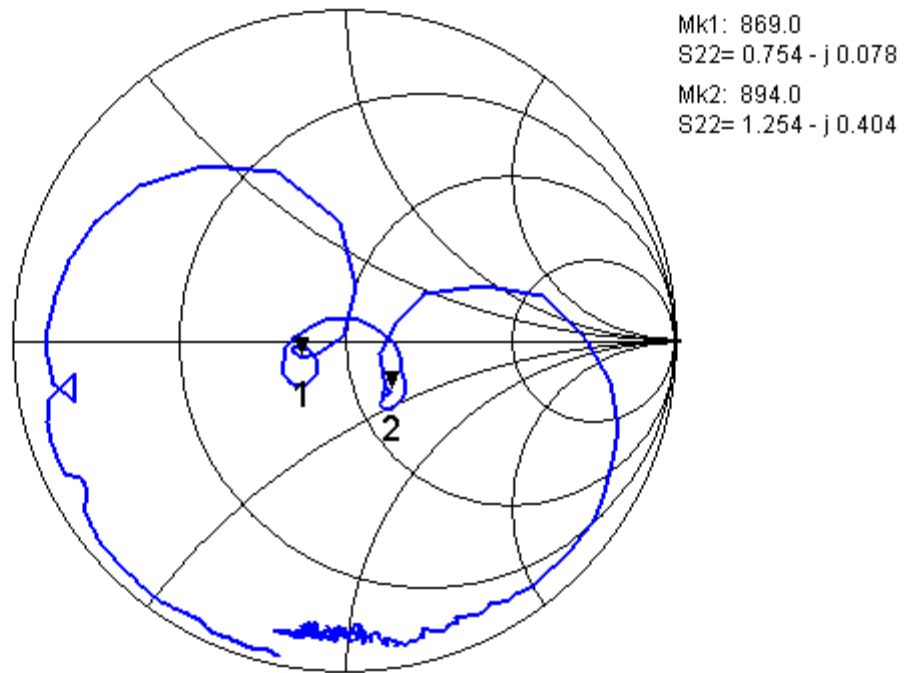


**Fig.1-4 Wide-band Characteristics (Filter 1)**

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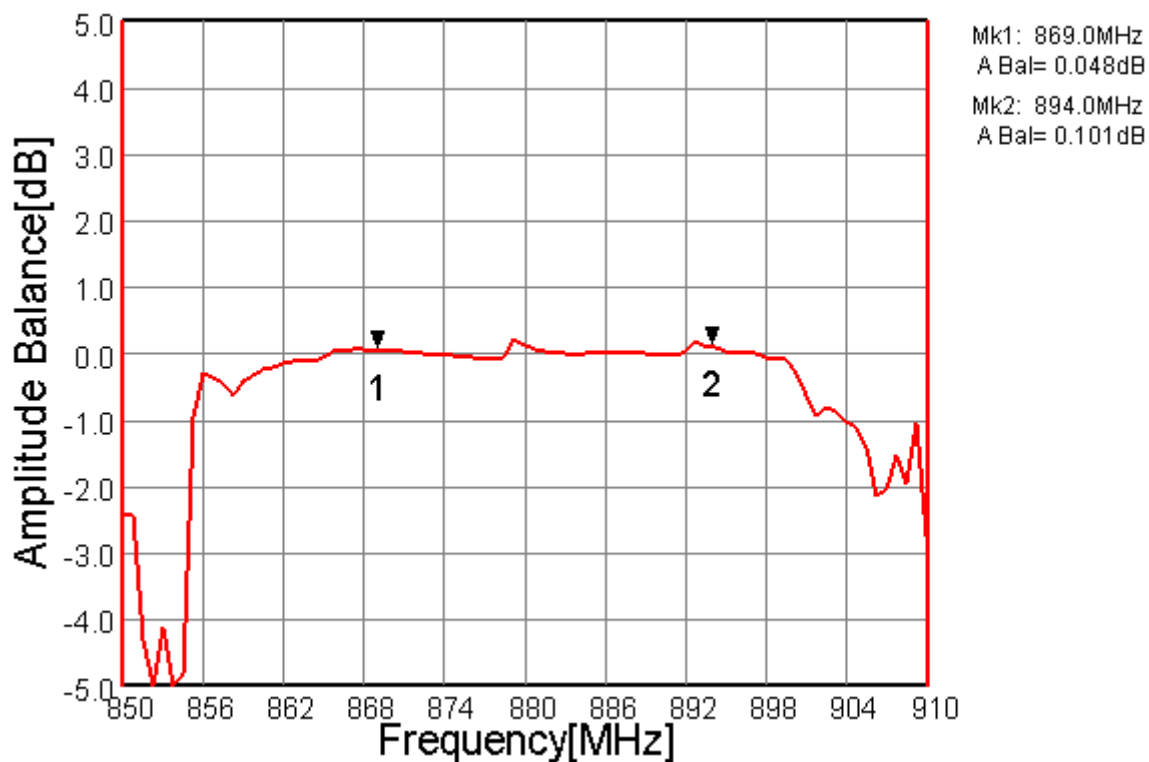


**Fig.1-5 Impedance S11 (Filter 1)**

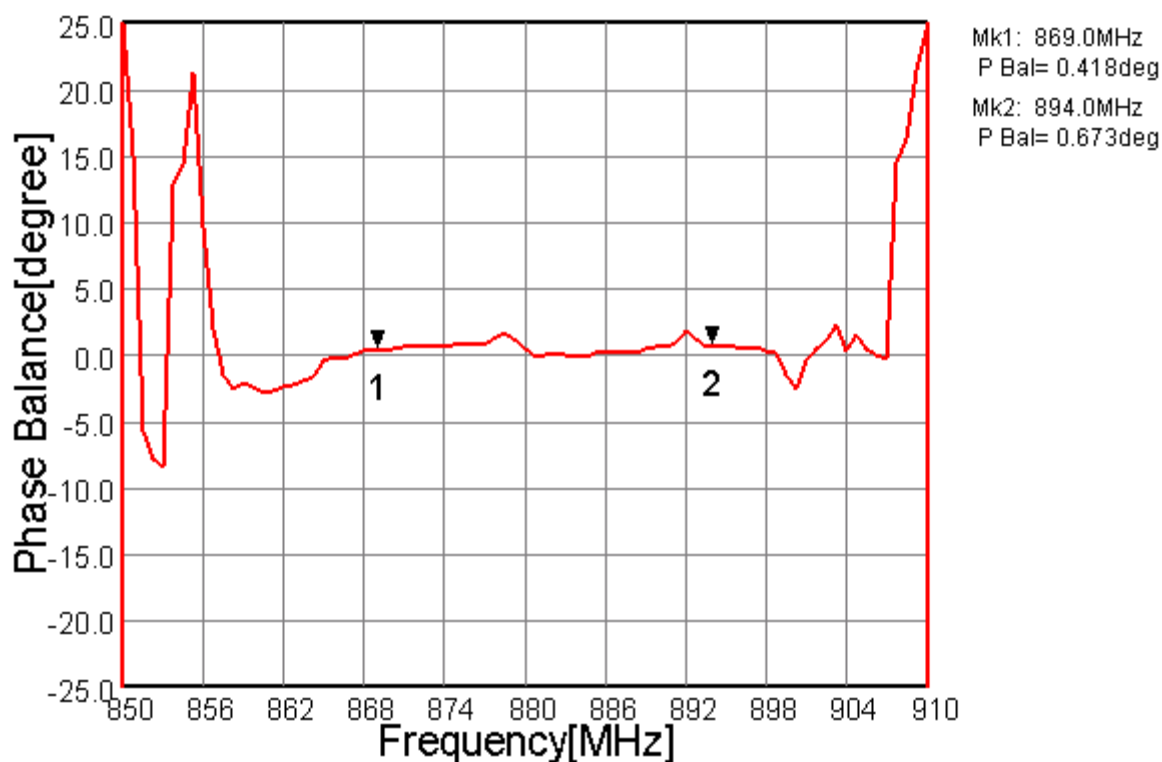


**Fig.1-6 Impedance S22 (Filter 1)**

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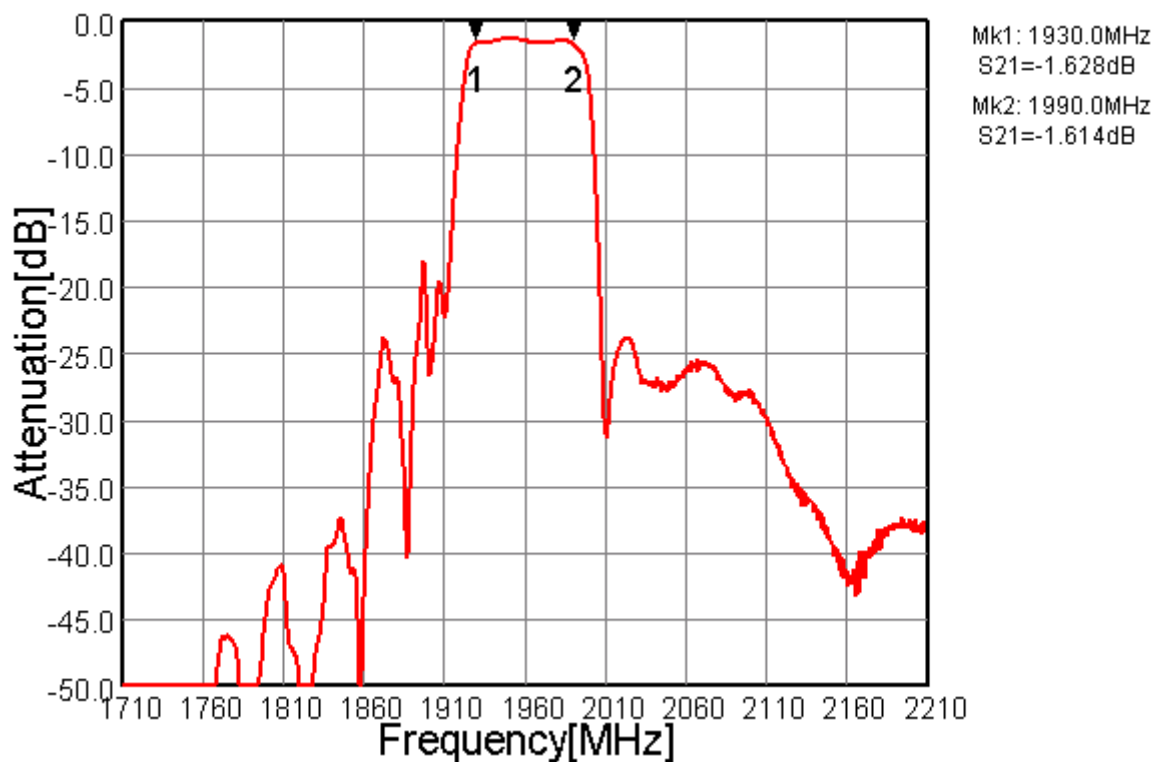


**Fig.1-7 Amplitude Balance (Filter 1)**

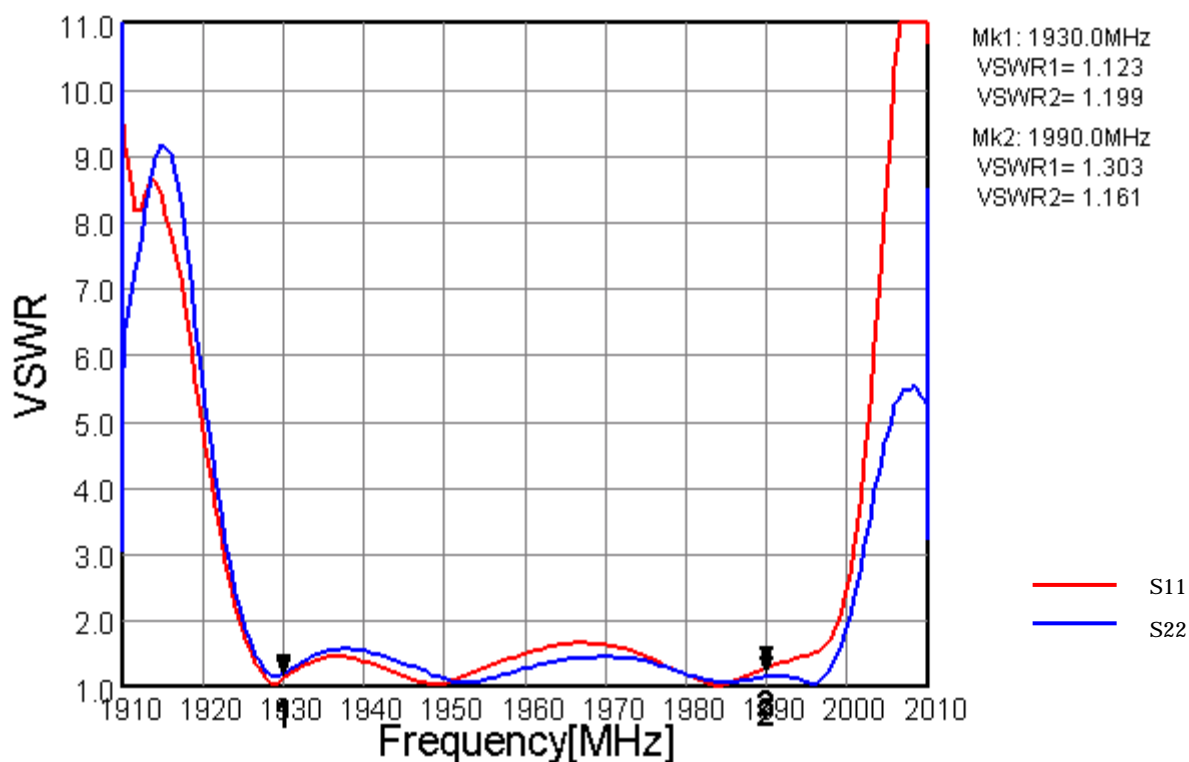


**Fig.1-8 Phase Balance (Filter 1)**

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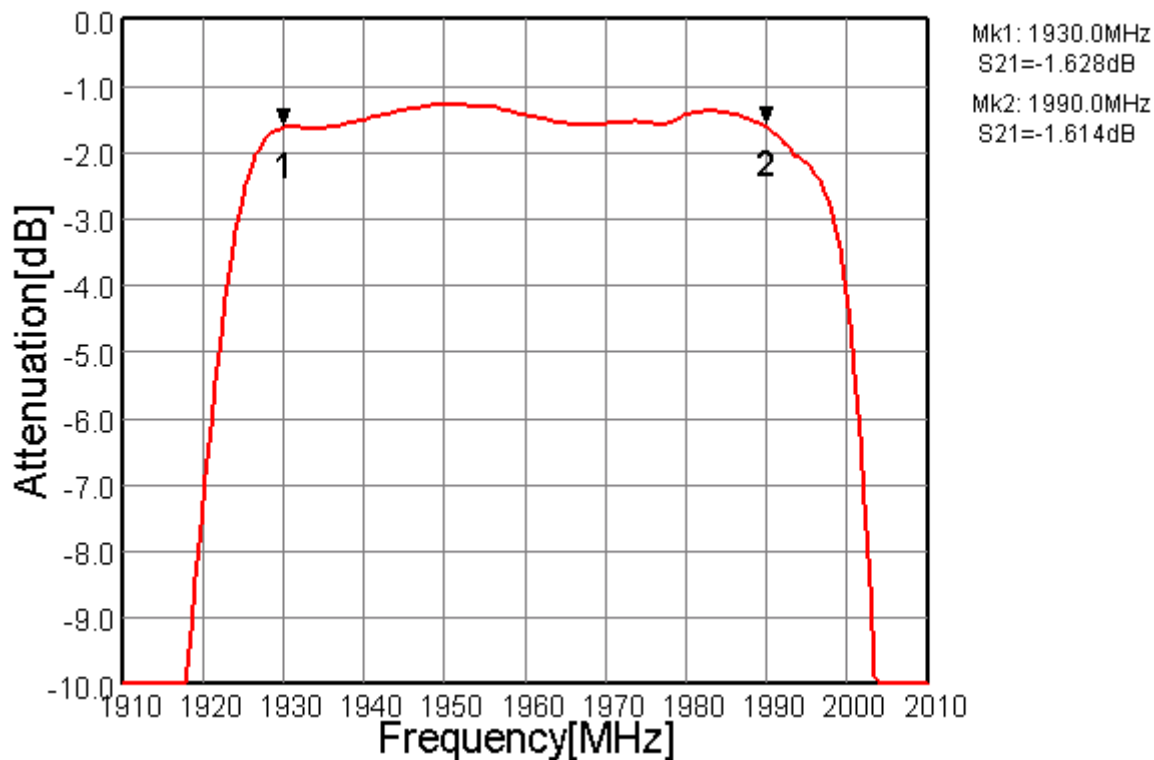


**Fig.2-1 Pass-band Characteristics (Filter 2)**

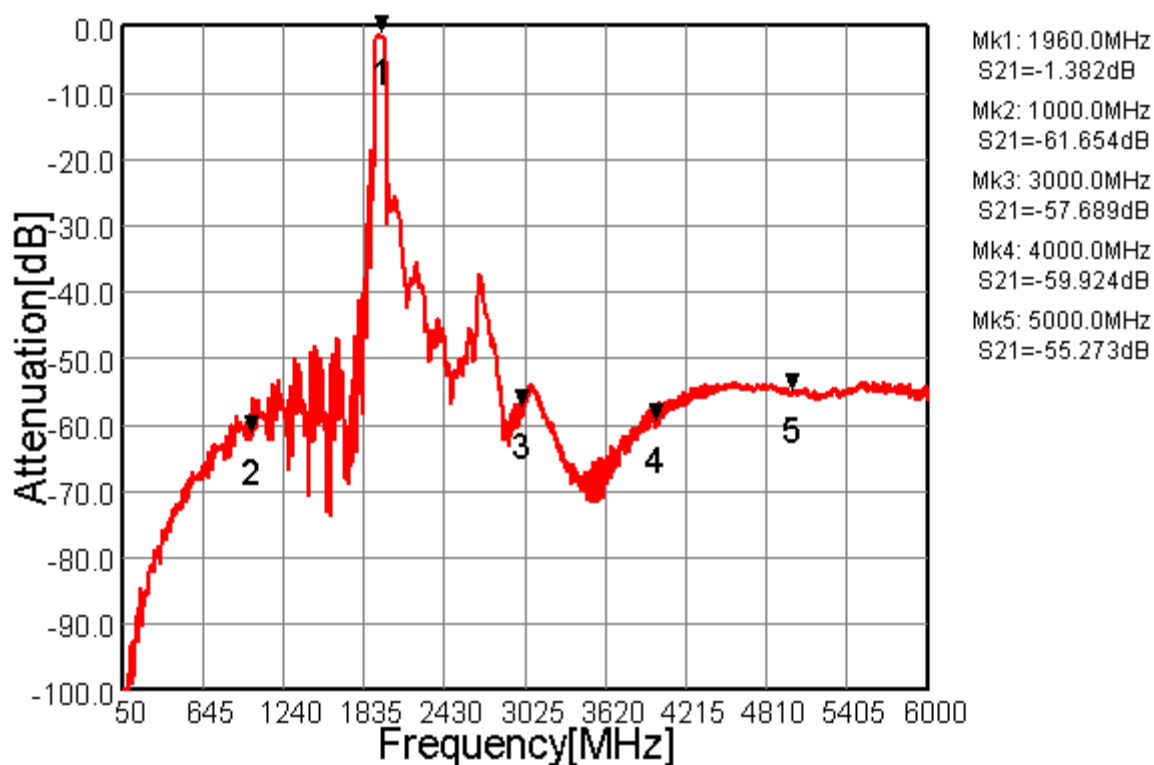


**Fig.2-2 VSWR (Filter 2)**

Customer Name	<b>Standard specification</b>	FUJITSU MEDIA DEVICES LIMITED	
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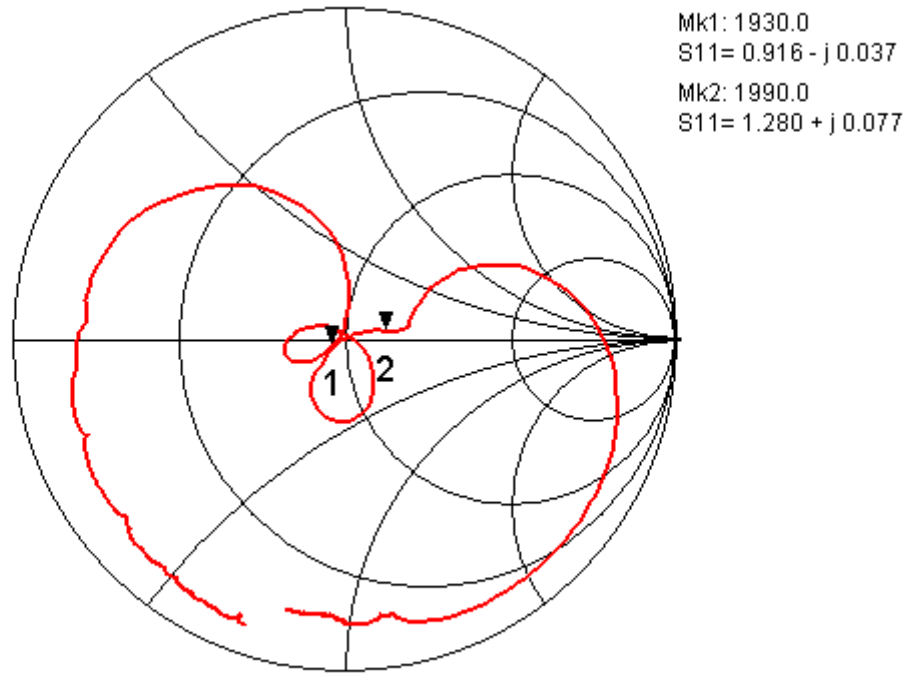


**Fig.2-3 In-band Characteristics (Filter 2)**

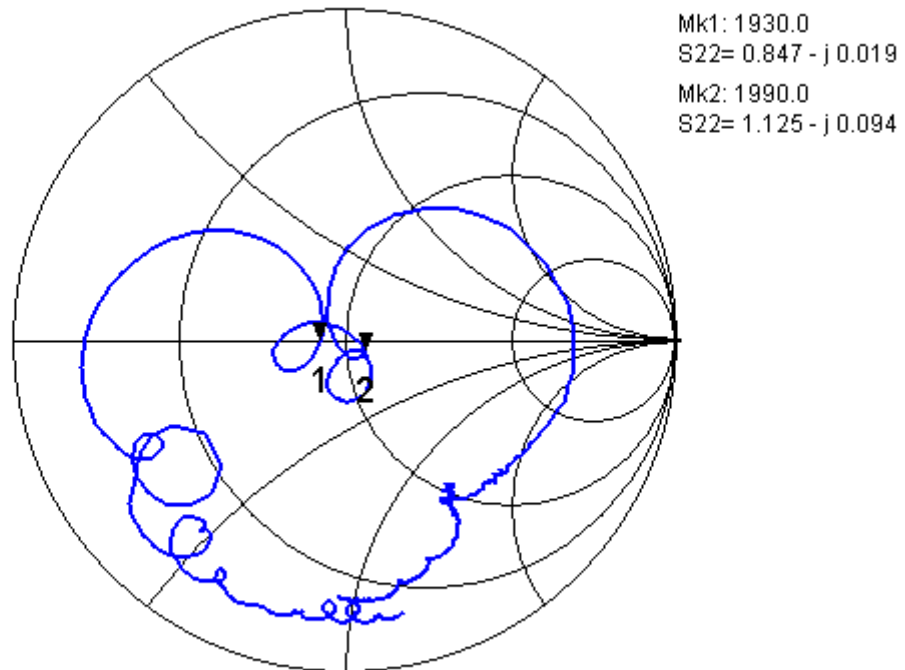


**Fig.2-4 Wide-band Characteristics (Filter 2)**

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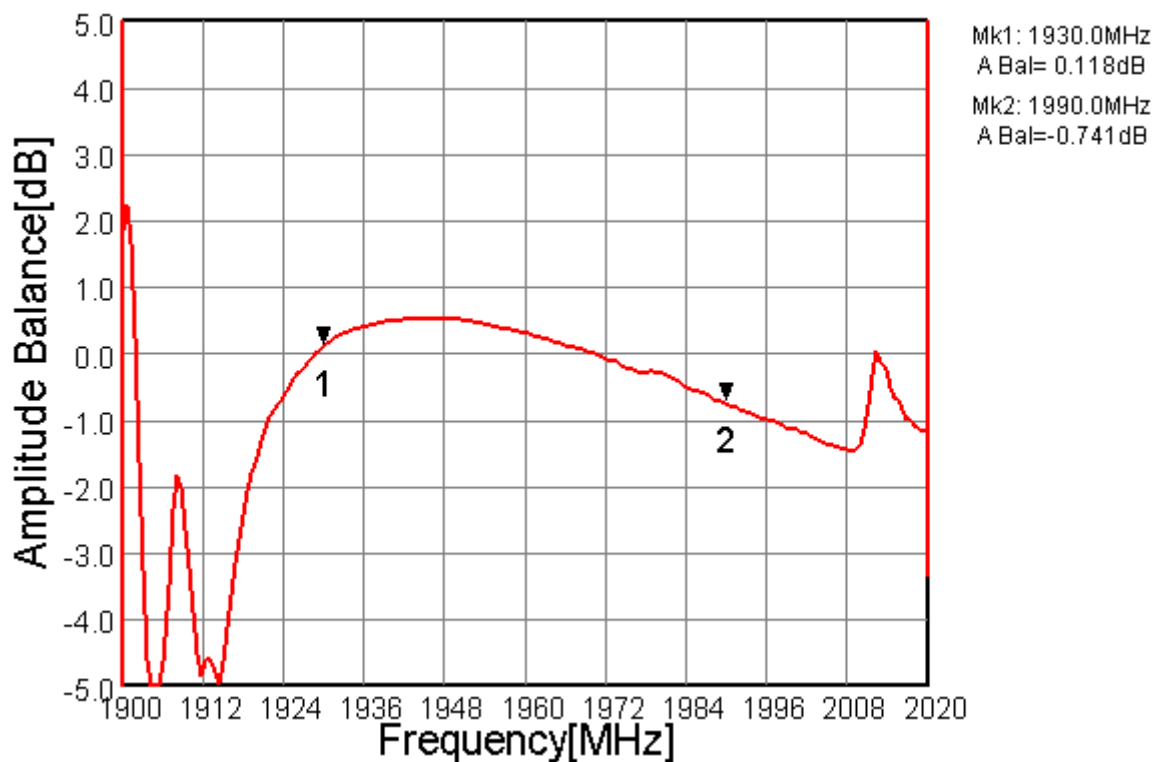


**Fig.2-5 Impedance S11 (Filter 2)**

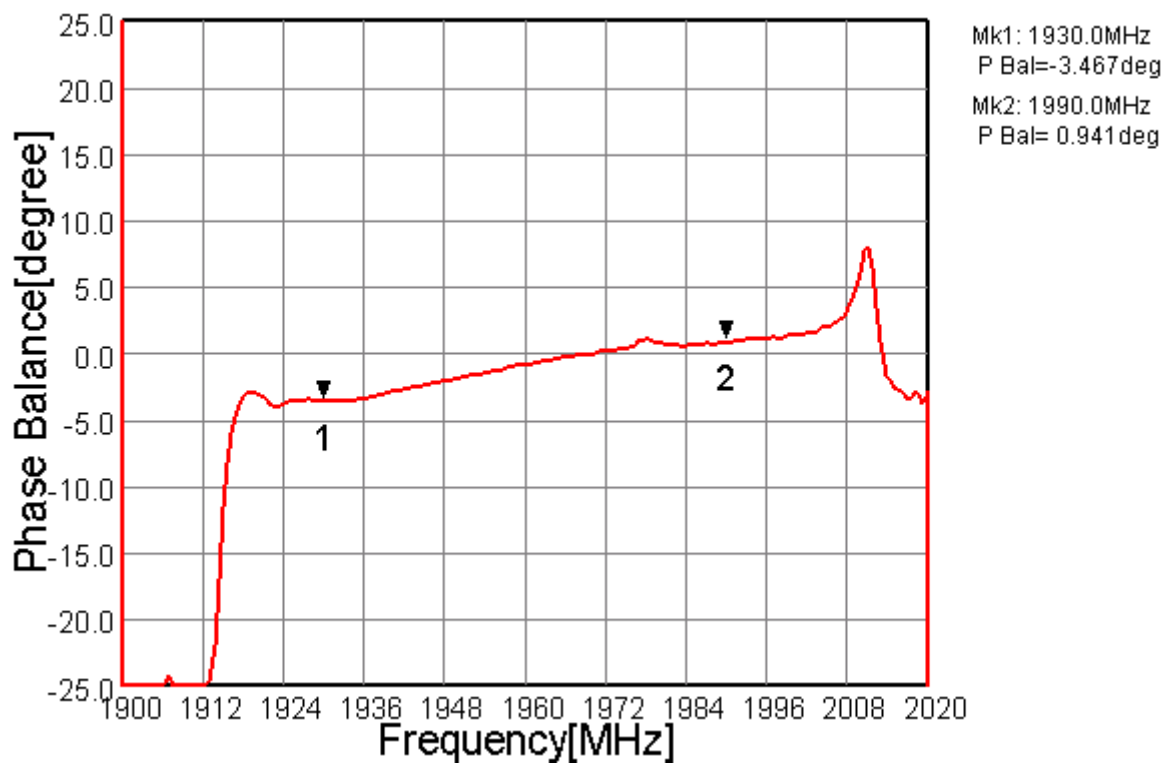


**Fig.2-6 Impedance S22 (Filter 2)**

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**Fig.2-7 Amplitude Balance (Filter 2)**



**Fig.2-8 Phase Balance (Filter 2)**