



MSL1

* Pb Free Part

| | | | |
|---------------|--------------------------------|---|----------------|
| Customer Name | Standard specification | TAIYO YUDEN Mobile Technology Co., Ltd. | |
| System | GSM1800/GSM900 Rx (50/150ohms) | Date | March 31, 2010 |
| Part Number | FAR-G6KZ-1G8425-Y4WY | Version 2.0ba | |

Table 1. Electrical specifications(Filter 1)

| Pass Band (1805-1880MHz) | | | | | | |
|---|-----------------|---------------|-----------|------|--------|---------|
| Item | Condition (MHz) | Specification | | | Unit | Remarks |
| | | Min. | Typ. | Max. | | |
| Insertion Loss | 1805-1880 | - | 1.6 | 2.5 | dB(*1) | |
| Ripple | 1805-1880 | - | 0.5 | 1.3 | dB | |
| Input VSWR | 1805-1880 | - | 1.9 | 2.3 | - | |
| Output VSWR | 1805-1880 | - | 1.8 | 2.3 | - | |
| Absolute attenuation | DC-1300 | 35 | 47 | - | dB | |
| | 1300-1705 | 28 | 40 | - | dB | |
| | 1705-1785 | 10 | 16 | - | dB | |
| | 1920-1980 | 18 | 21 | - | dB | |
| | 1980-3000 | 20 | 23 | - | dB | |
| | 3000-5000 | 35 | 48 | - | dB | |
| | 5000-6000 | 30 | 38 | - | dB | |
| Amplitude balance (S21/S31) | 1805-1880 | -1.4 | -0.3/+0.7 | +1.4 | dB | |
| Phase balance ((ϕ S21- ϕ S31)+180) | 1805-1880 | -11 | -2/+3 | +11 | 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.



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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 | - | 0.7 | 1.4 | | |
| Input VSWR | 925-960 | - | 1.6 | 2.1 | - | |
| Output VSWR | 925-960 | - | 1.5 | 2.1 | - | |
| Absolute attenuation | DC-880 | 40 | 57 | - | dB | |
| | 880-905 | 30 | 36 | - | dB | |
| | 905-915 | 20 | 31 | - | dB | |
| | 980-1025 | 25 | 33 | - | dB | |
| | 1025-2880 | 36 | 53 | - | dB | |
| | 2880-6000 | 30 | 40 | - | dB | |
| Amplitude balance (S ₂₁ /S ₃₁) | 925-960 | -1.0 | -0.3/+0.4 | +1.0 | dB | |
| Phase balance (∠S ₂₁ -∠S ₃₁)+180) | 925-960 | -10 | -3/+2 | +10 | deg | |
| Input impedance (Unbalanced) | | 50 | | | Ohm | |
| Output impedance (Balanced) | | 150//82nH | | | Ohm | |
| Operating temperature | | -30 to +85 | | | °C | |

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



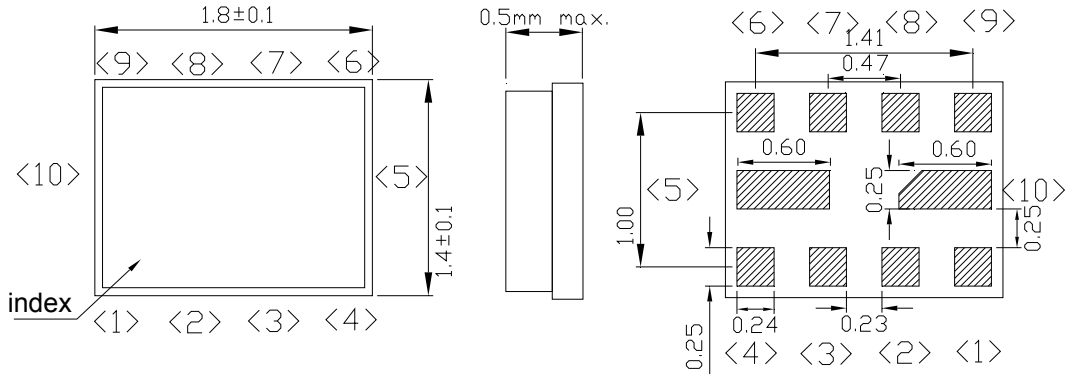
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Dimensions

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



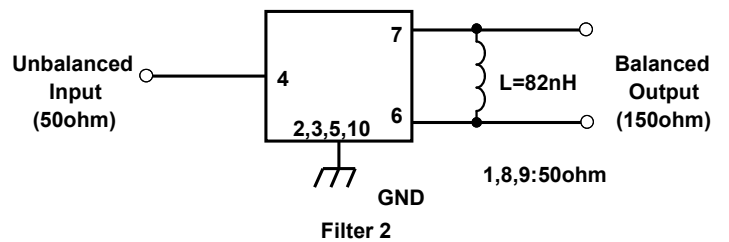
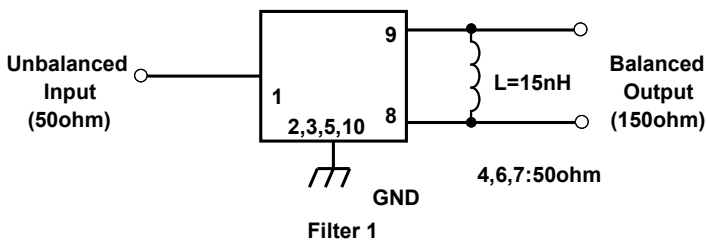
Unit: mm

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 | 1805 ~ 1880 | GSM1800-Rx |
| 2 | 925 ~ 960 | GSM900-Rx |

Evaluation Circuit





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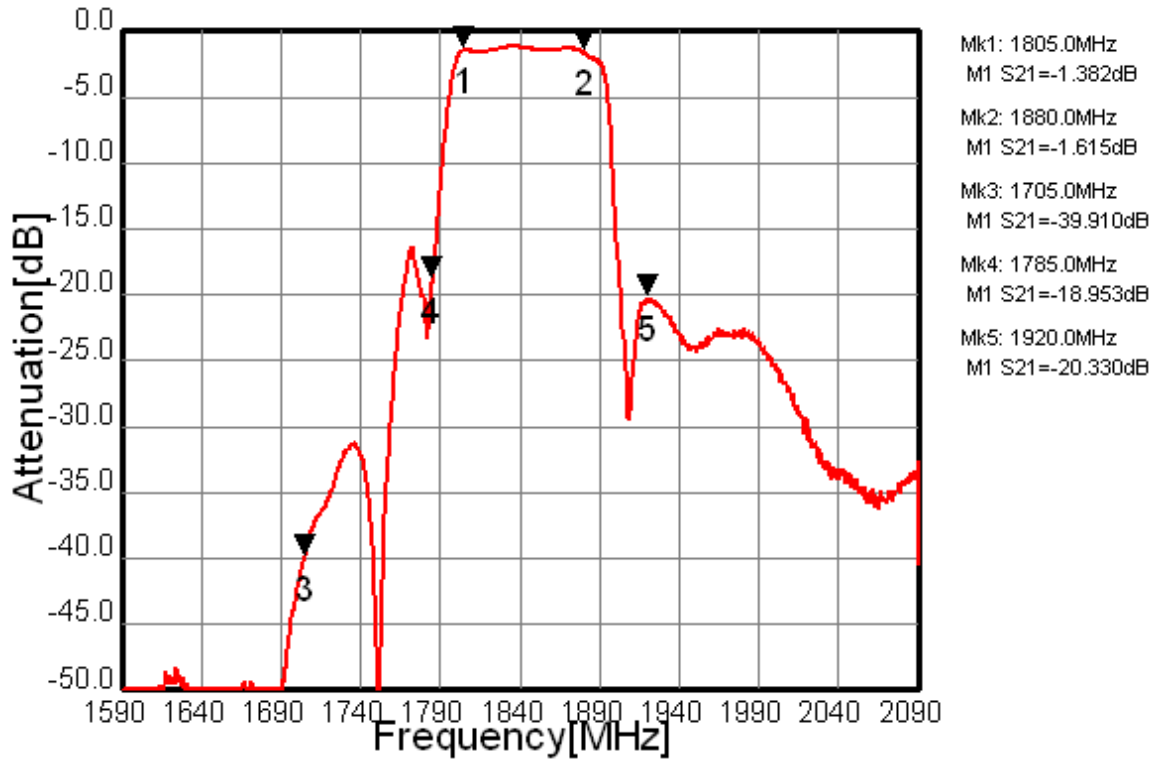


Fig.1 Pass-band Characteristic (Filter1)

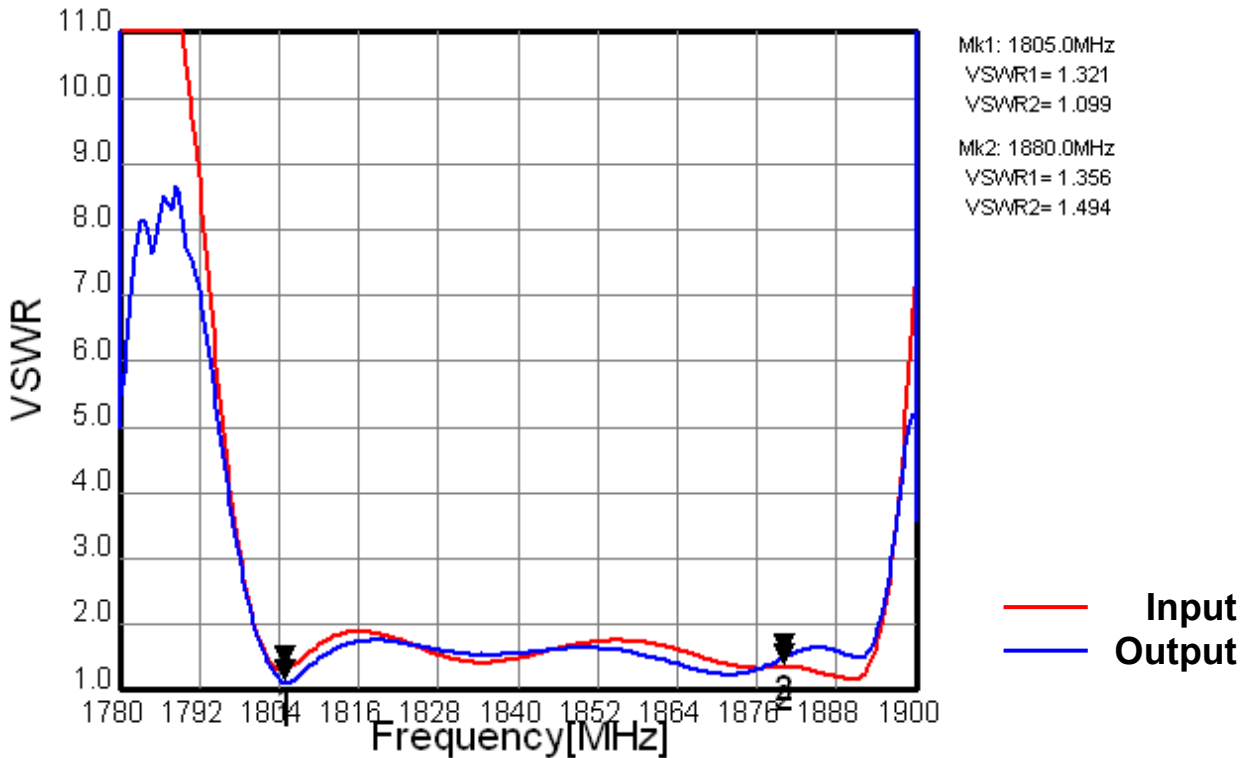


Fig.2 VSWR (Filter1)



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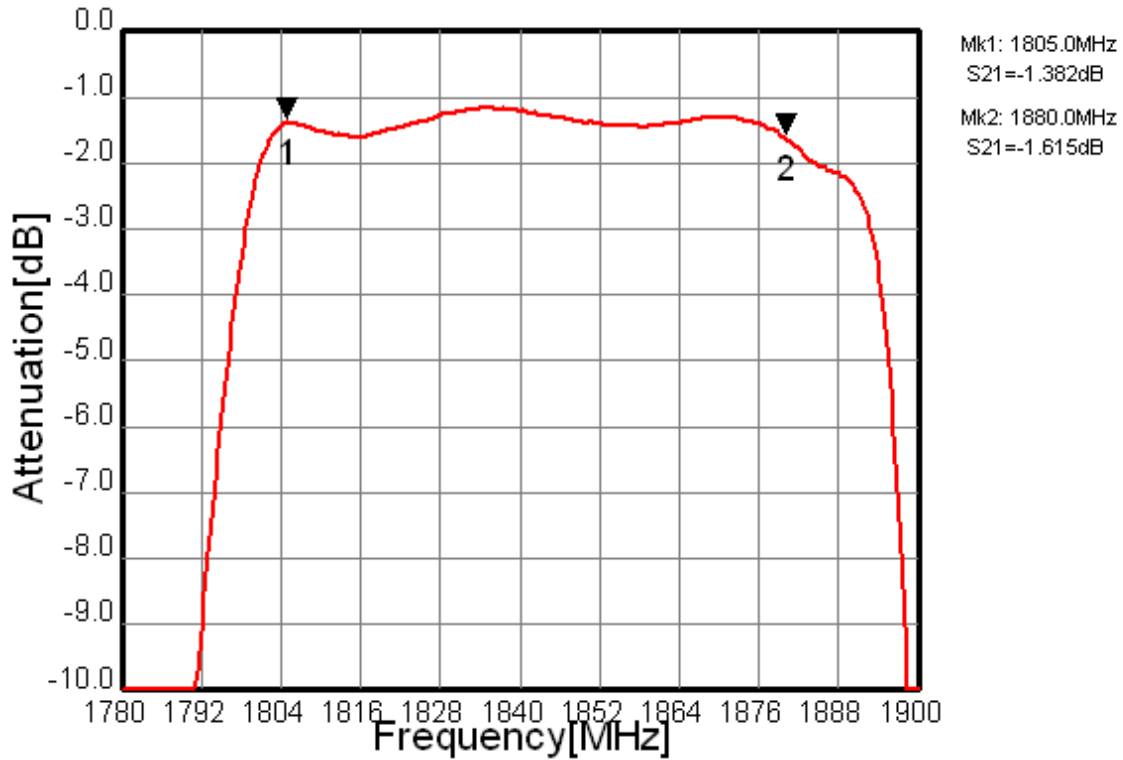


Fig.3 In-band Characteristic (Filter1)

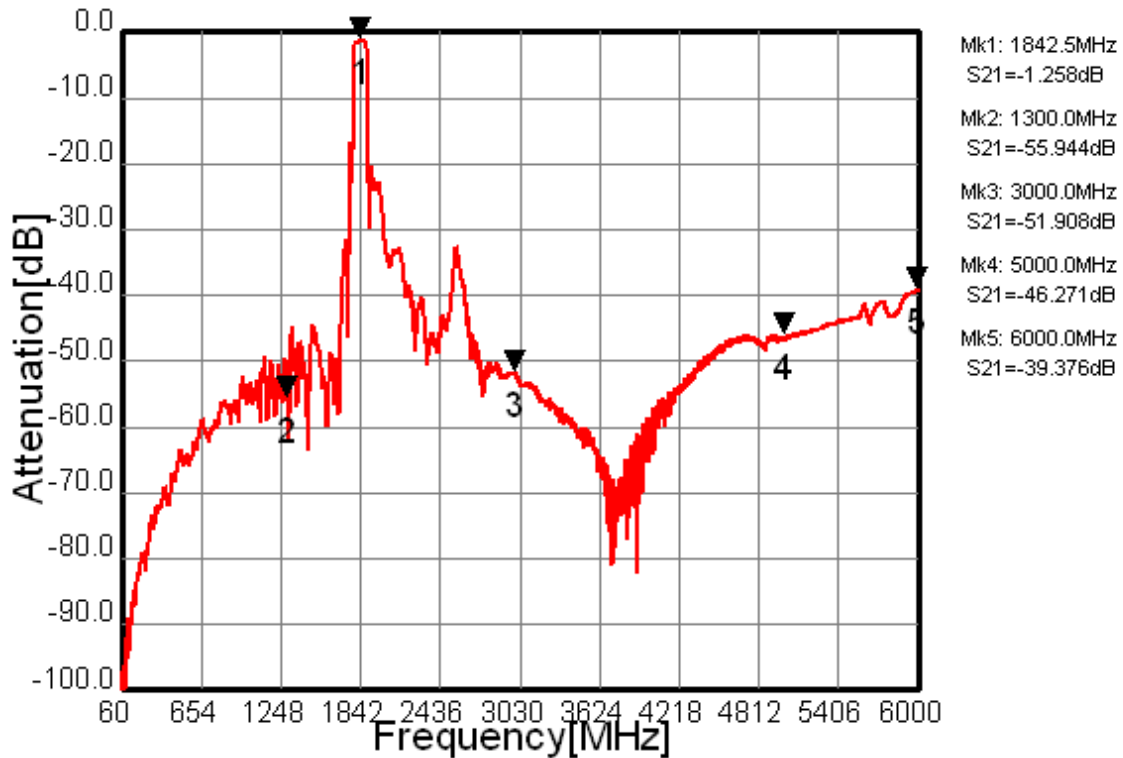


Fig.4 Wide-band Characteristic (Filter1)



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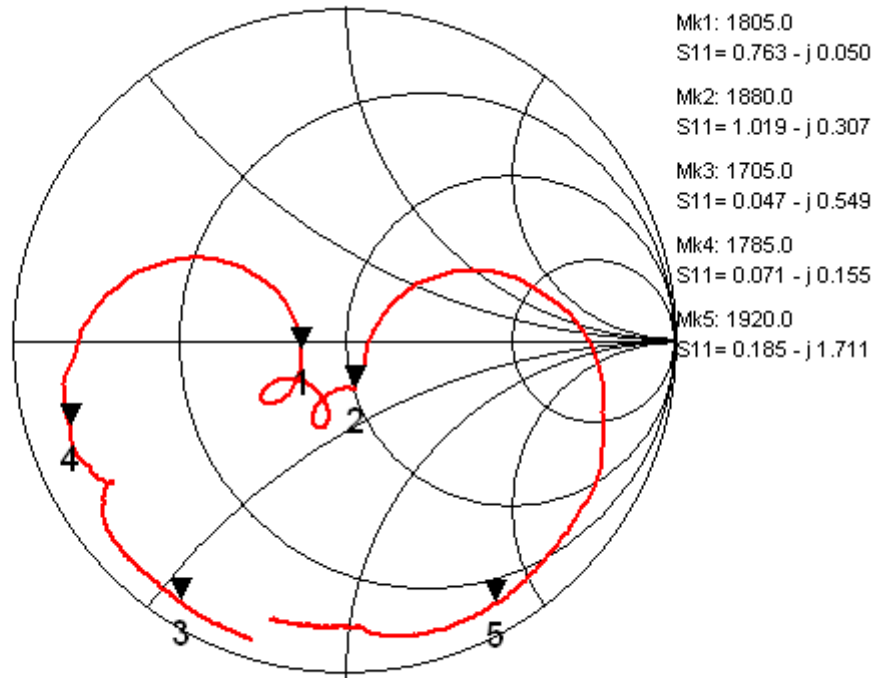


Fig.5 Impedance (S11) (Filter1)

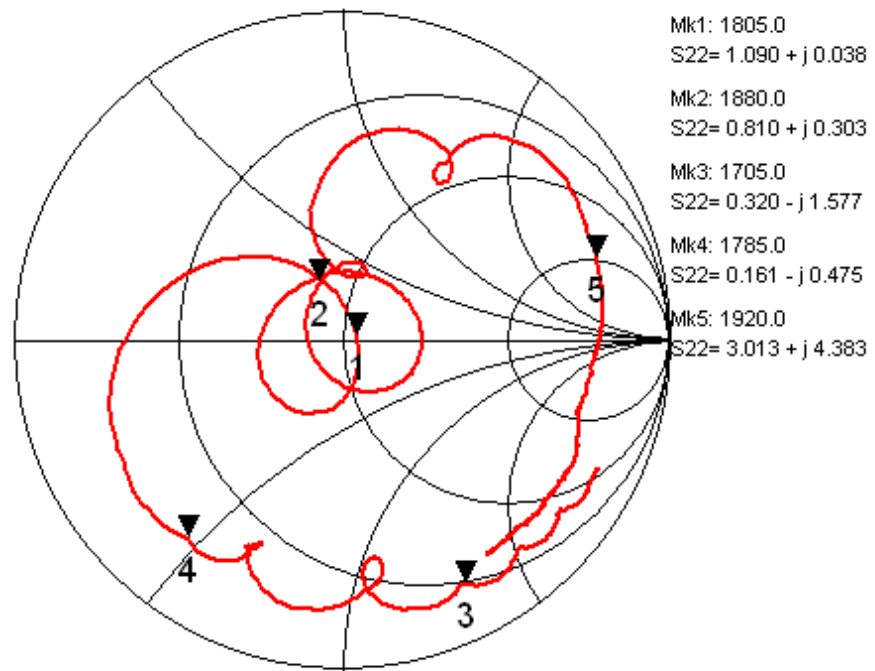


Fig.6 Impedance (S22) (Filter1)



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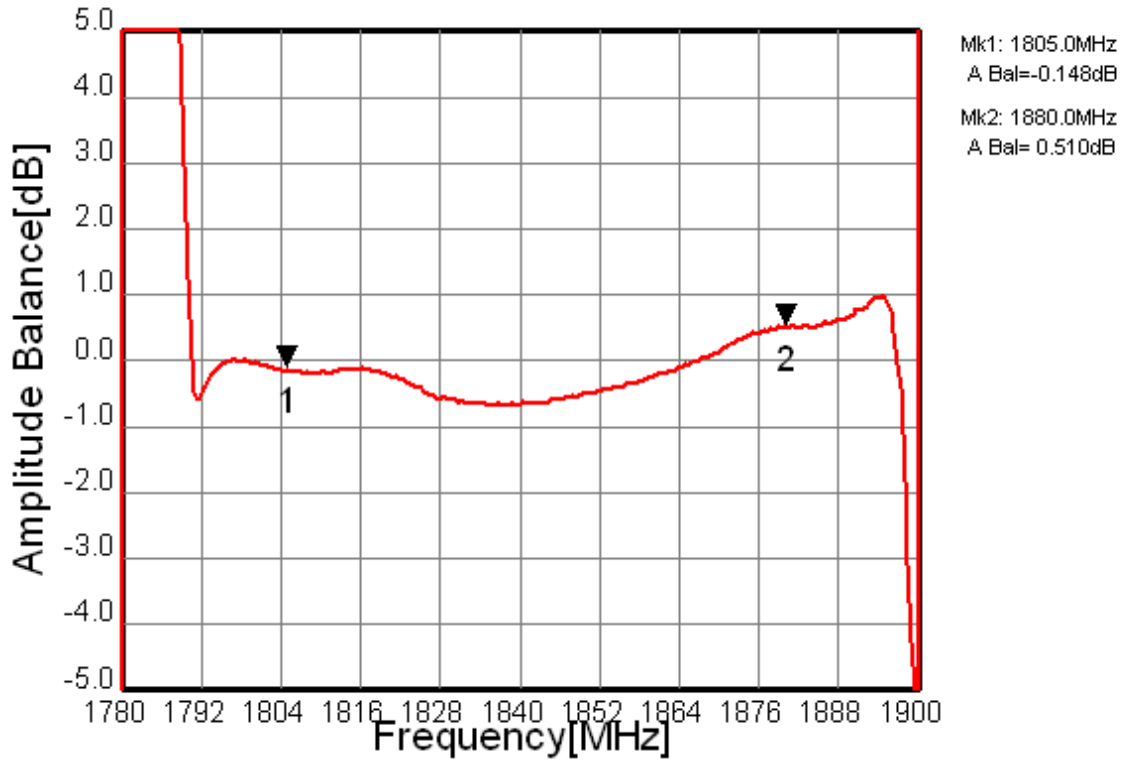


Fig.7 Amplitude Balance (Filter1)

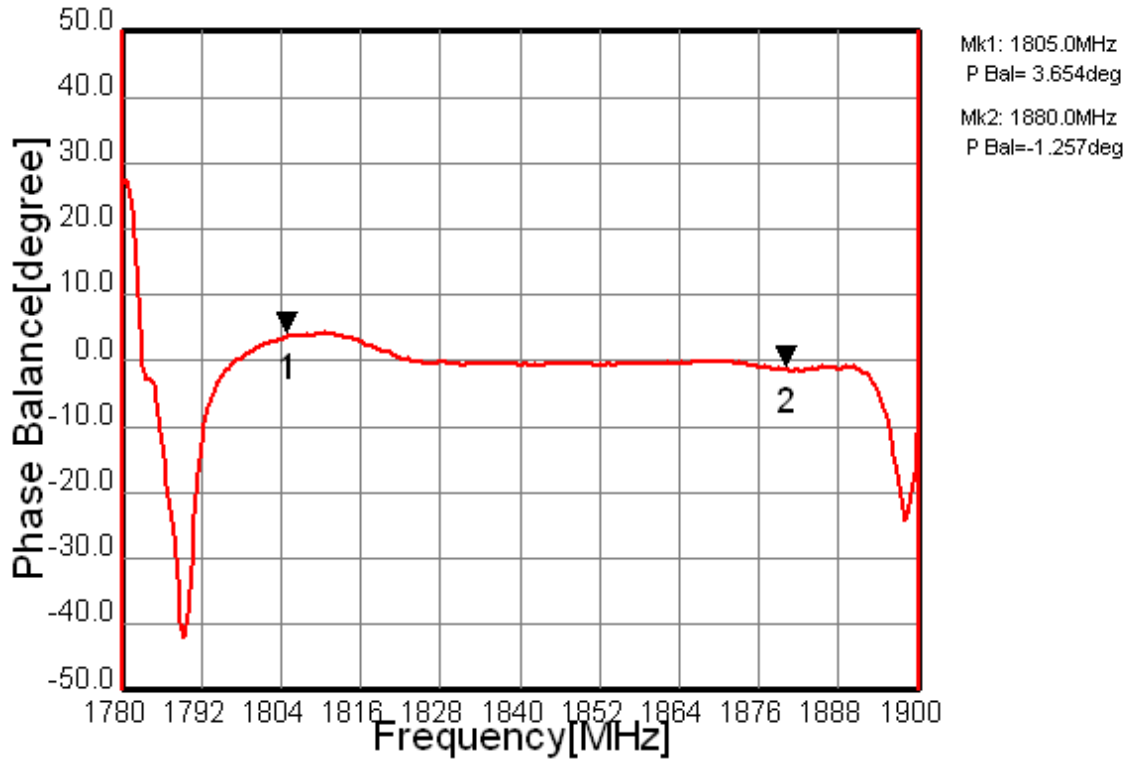


Fig.8 Phase Balance (Filter1)



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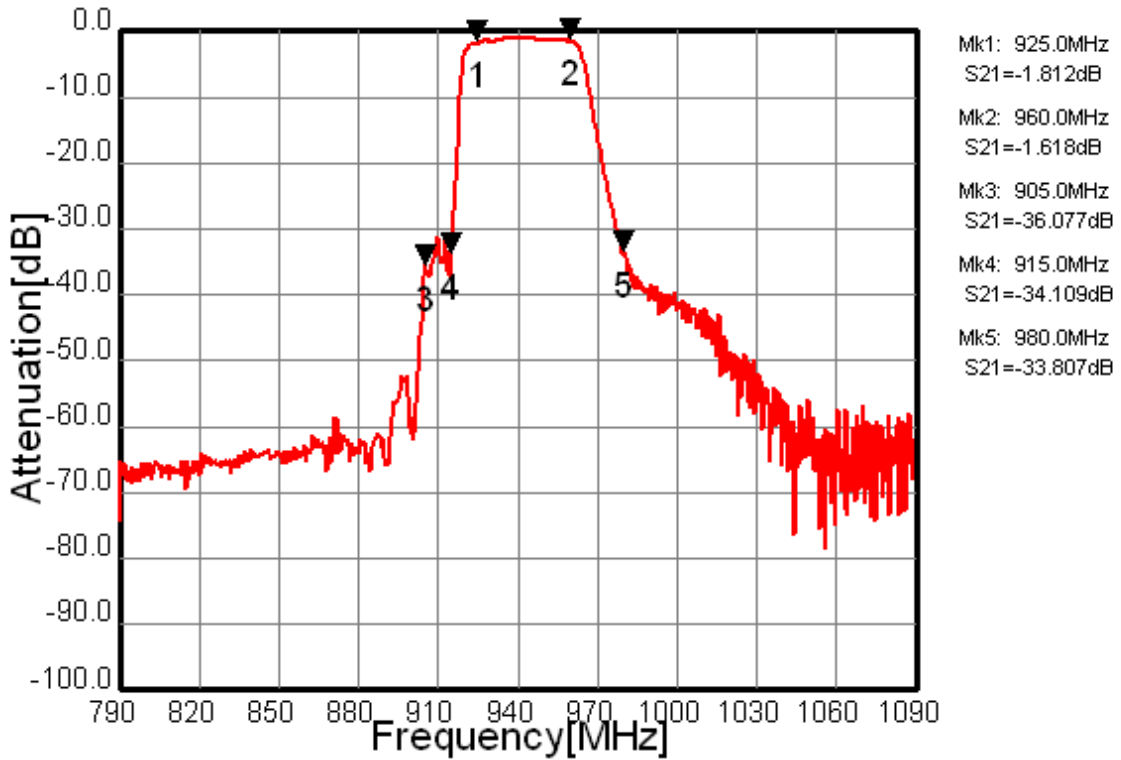


Fig.9 Pass-band Characteristic (Filter2)

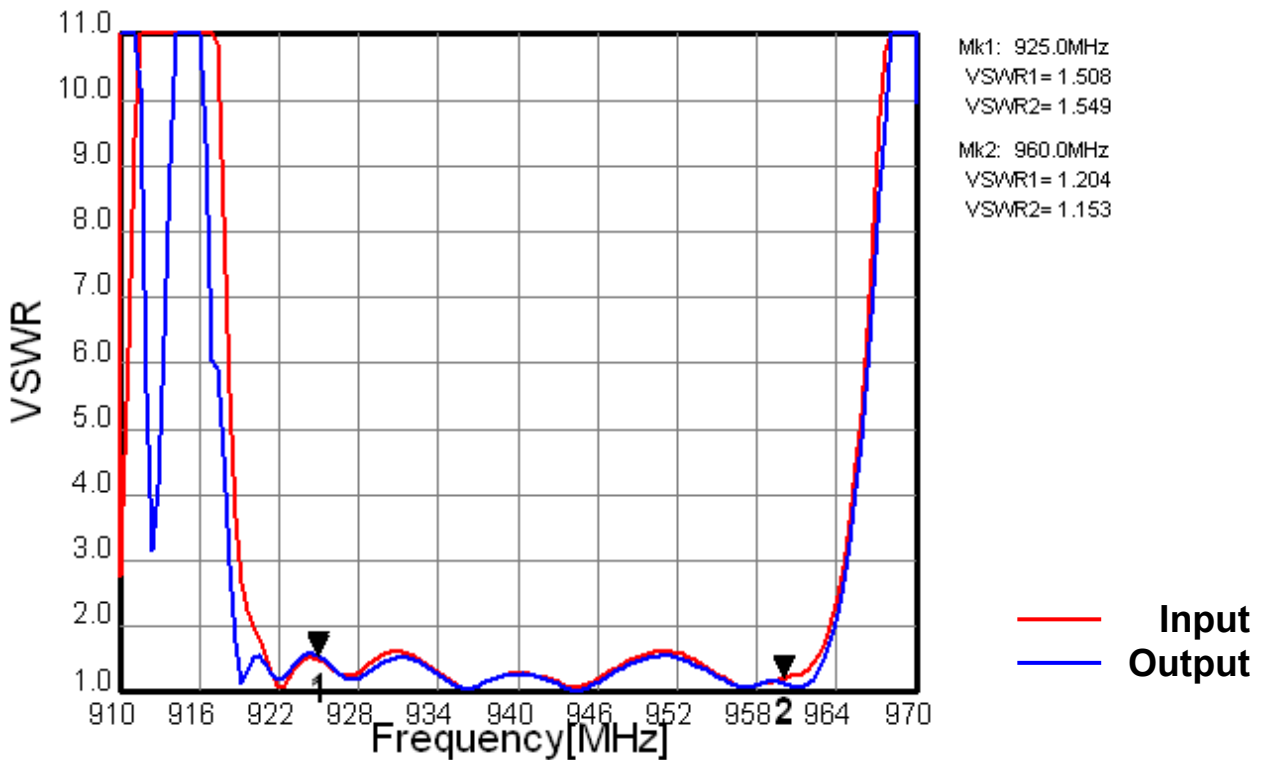


Fig.10 VSWR (Filter2)



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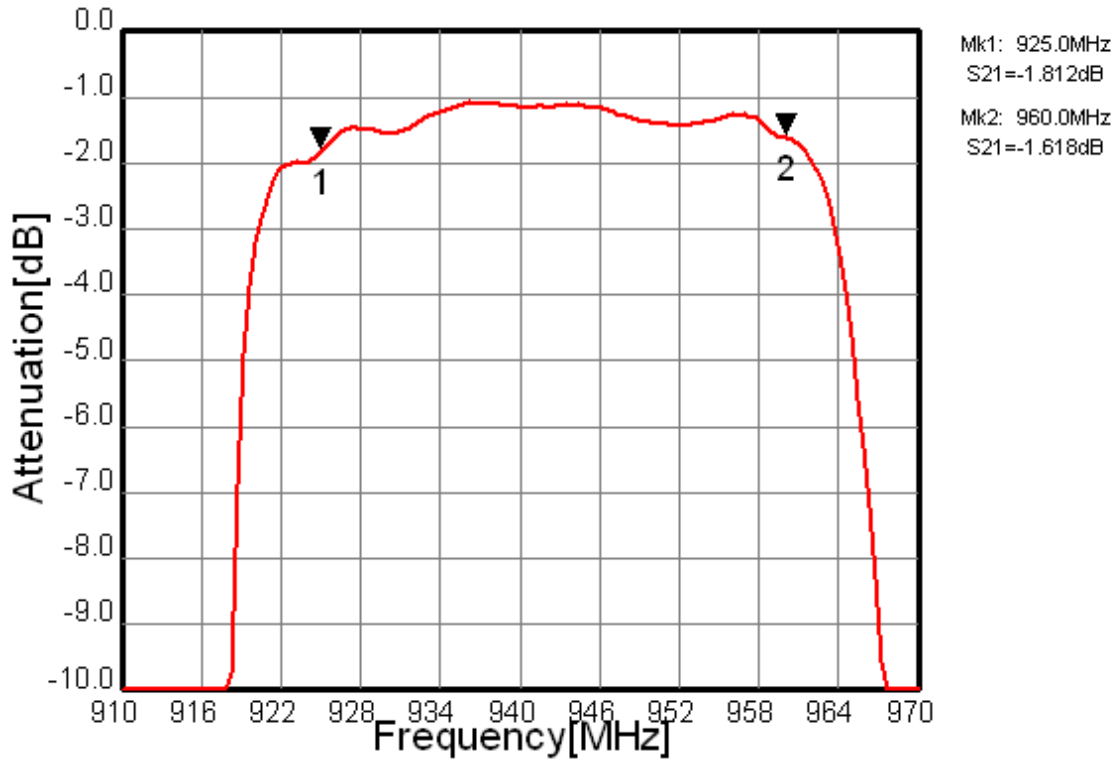


Fig.11 In-band Characteristic (Filter2)

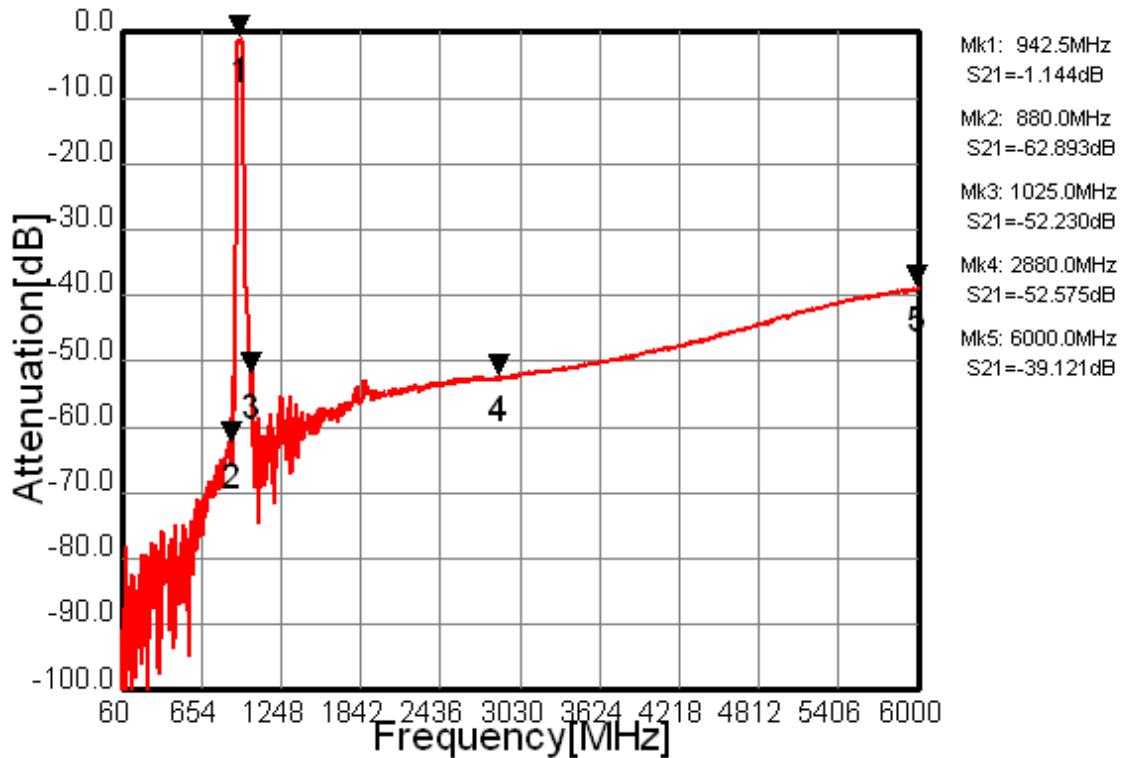


Fig.12 Wide-band Characteristic (Filter2)



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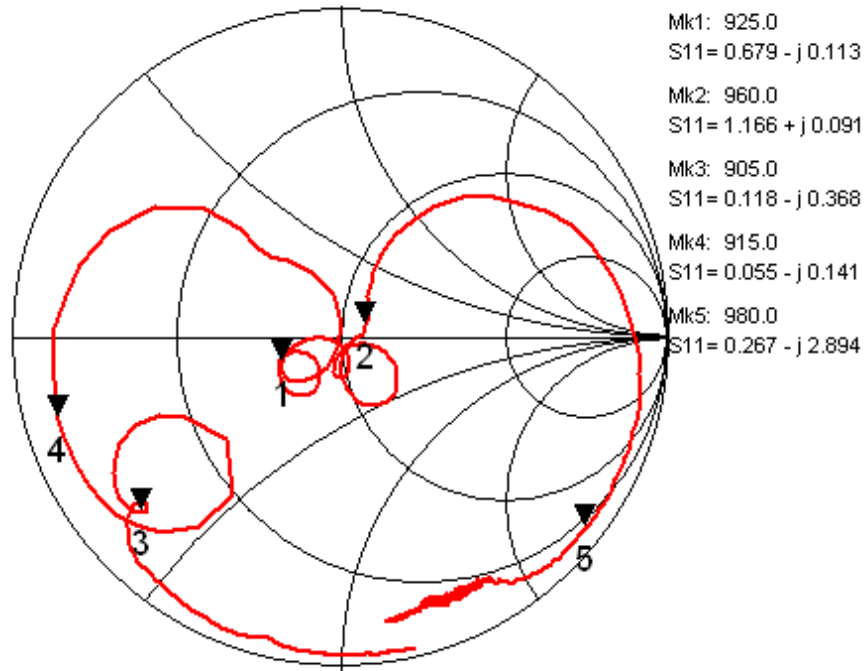


Fig.13 Impedance (S11) (Filter2)

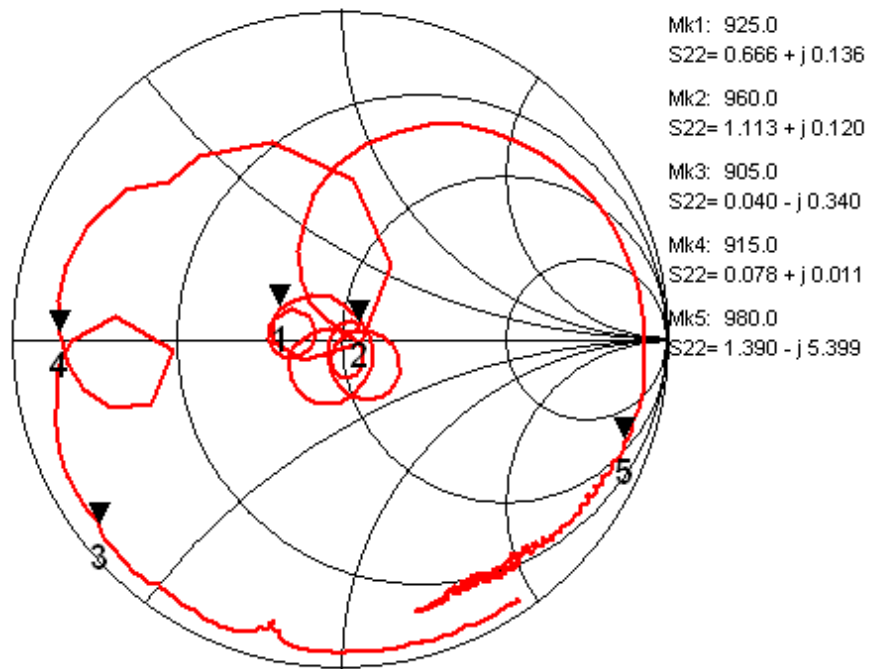


Fig.14 Impedance (S22) (Filter2)



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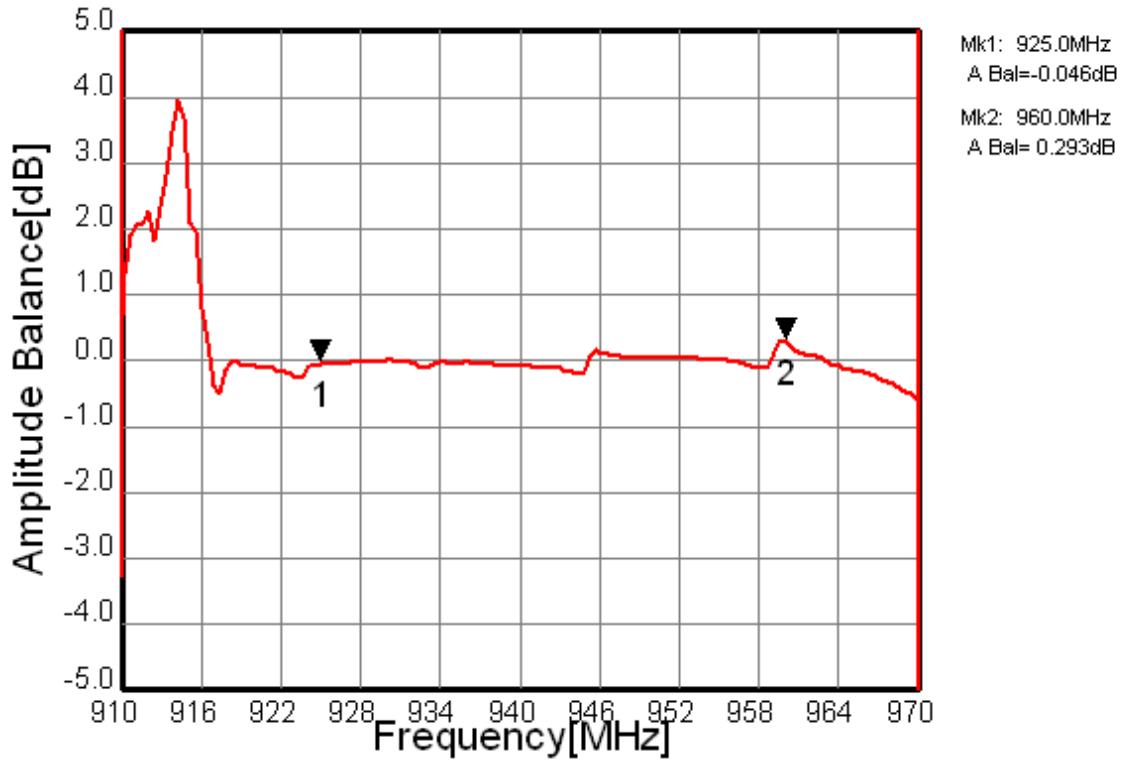


Fig.15 Amplitude Balance (Filter2)

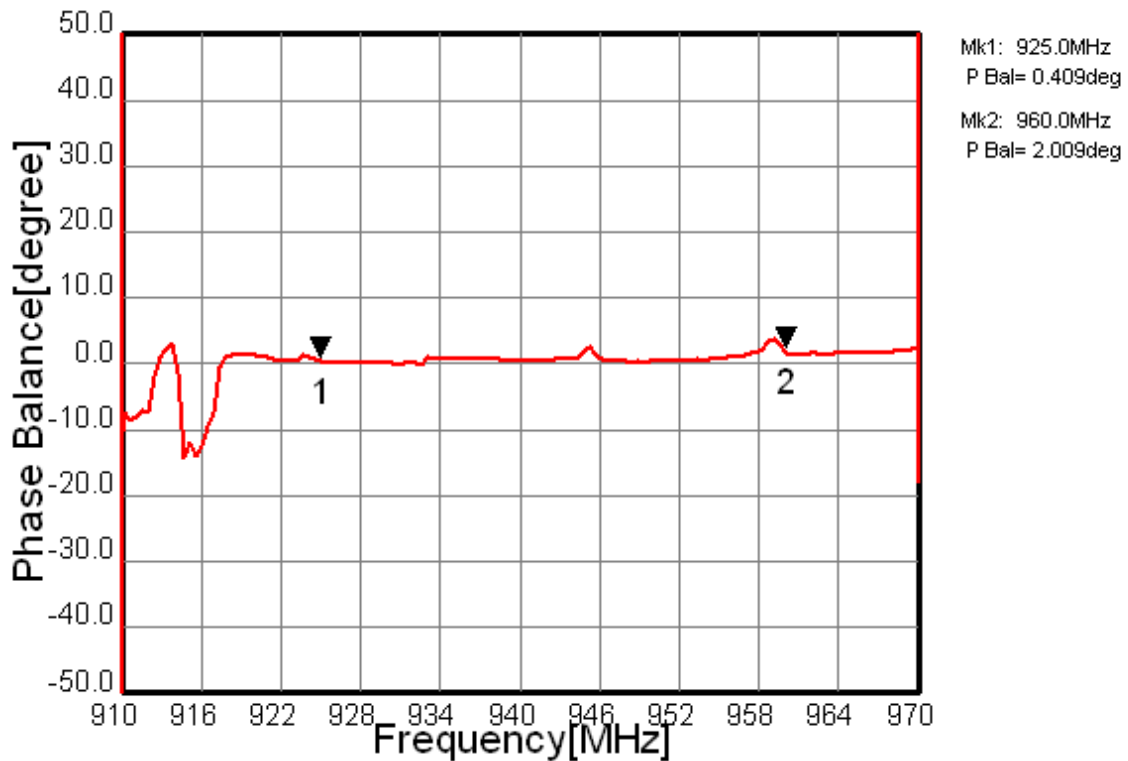


Fig.16 Phase Balance (Filter2)