



\* Pb Free Part



MSL1

|               |                      |  |                |
|---------------|----------------------|--|----------------|
| Customer Name | Standard             | TAIYO YUDEN Mobile Technology Co.,Ltd. |                |
| System        | Band V Duplexer      | Date                                   | March 31, 2010 |
| Part Number   | FAR-D5NG-881M50-M11Z | Version 3.1de                          |                |

**Table 1. Electrical Specification**

| Item                                   |                      | Condition<br>(MHz) | Specification                |      |     | Unit    | Remarks      |  |
|--|----------------------|--------------------|------------------------------|------|-----|---------|--------------|--|
|  |                      |                    | Min                          | Typ  | Max |         |              |  |
| Tx<br>to<br>ANT                        | Insertion loss       | 824~849            | -                            | 1.45 | 1.8 | dB (*1) |              |  |
|  | Ripple               | 824~849            | -                            | 0.4  | 0.9 | dB      |              |  |
|  | VSWR                 | Ant                | 824~849                      | -    | 1.5 | 2.0     | -            |  |
|  |                      | Tx                 |                              | -    | 1.6 | 2.0     |              |  |
|  | Input Power          |                    | +29dBm, Ta=+50°C<br>50kh, CW |      |     | -       |              |  |
|  | Absolute attenuation | DC~750             | 25                           | 33   | -   | dB      |              |  |
|  |                      | 779~804            | 30                           | 38   | -   | dB      |              |  |
|  |                      | 869~894            | 45                           | 51   | -   | dB      |              |  |
| 1574~1577                              |                      | 45                 | 49                           | -    | dB  |         |              |  |
| 1648~1698                              |                      | 36                 | 47                           | -    | dB  |         |              |  |
|  | 2472~2547            | 23                 | 31                           | -    | dB  |         |              |  |
| ANT<br>to<br>Rx                        | Insertion loss       | 869~894            | -                            | 1.80 | 2.2 | dB (*1) |              |  |
|  | Ripple               | 869~894            | -                            | 0.7  | 1.3 | dB      |              |  |
|  | VSWR                 | Ant                | 869~894                      | -    | 1.7 | 2.0     | -            |  |
|  |                      | Rx                 |                              | -    | 1.7 | 2.0     |              |  |
|  | Absolute attenuation | 779~804            | 53                           | 60   | -   | dB      |              |  |
|  |                      | 824~849            | 55                           | 65   | -   | dB      |              |  |
|  |                      | 1738~1788          | 47                           | 54   | -   | dB      |              |  |
| 2400~2500                              |                      | 47                 | 52                           | -    | dB  |         |              |  |
| 2607~2682                              |                      | 47                 | 52                           | -    | dB  |         |              |  |
| Tx to Rx                               | Isolation            | 824~849            | 57                           | 66   | -   | dB      |              |  |
|  |                      | 869~894            | 48                           | 52   | -   | dB      |              |  |
| Terminating Impedance                  |                      | Tx port            | 50                           |      |     | Ohm     | Single-ended |  |
|  |                      | Rx port            | 50                           |      |     | Ohm     | Single-ended |  |
|  |                      | Ant port           | 50 // 8.2nH                  |      |     | Ohm     | Single-ended |  |
| Operating Temperature                  |                      | -30 to +85         |                              |      | °C  |         |              |  |
| Device size (L typ. x W typ. x H max.) |                      | 2.5 x 2.0 x 0.6    |                              |      | mm  |         |              |  |

(\*1) Specification of insertion loss excludes loss that comes from the test board. (Approximately 0.05dB)

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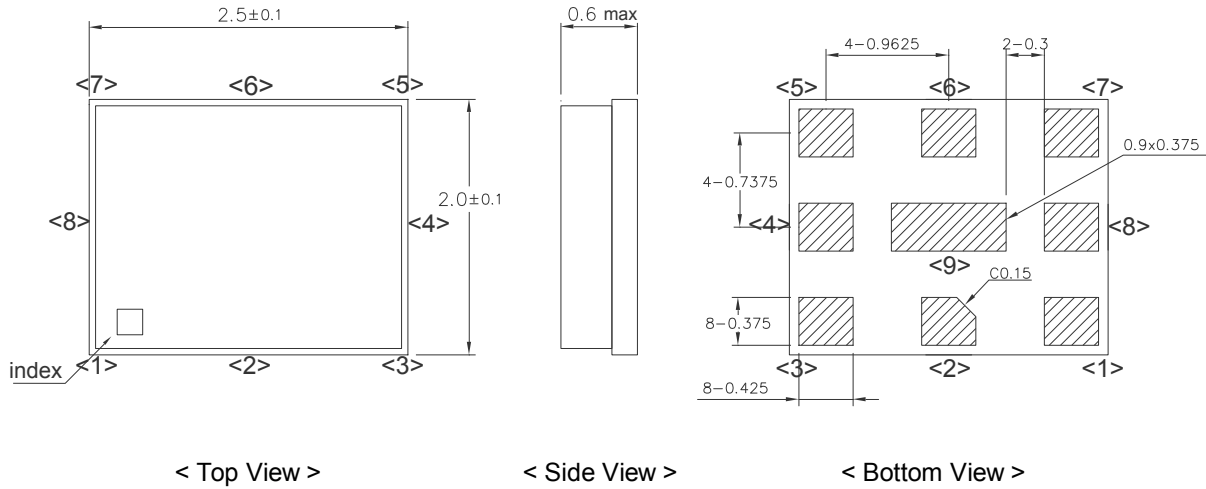
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### Dimensions



Unit: mm

### Pin Configuration

| Pin No. | Pin name | Description     |
|---------|----------|-----------------|
| 1       | Rx       | Receiver Pin    |
| 2       | GND      | Ground Pin      |
| 3       | Tx       | Transmitter Pin |
| 4       | GND      | Ground Pin      |
| 5       | GND      | Ground Pin      |
| 6       | ANT      | Antenna Pin     |
| 7       | GND      | Ground Pin      |
| 8       | GND      | Ground Pin      |
| 9       | GND      | Ground Pin      |

**Figure 1. Dimensions and Pin assignment**



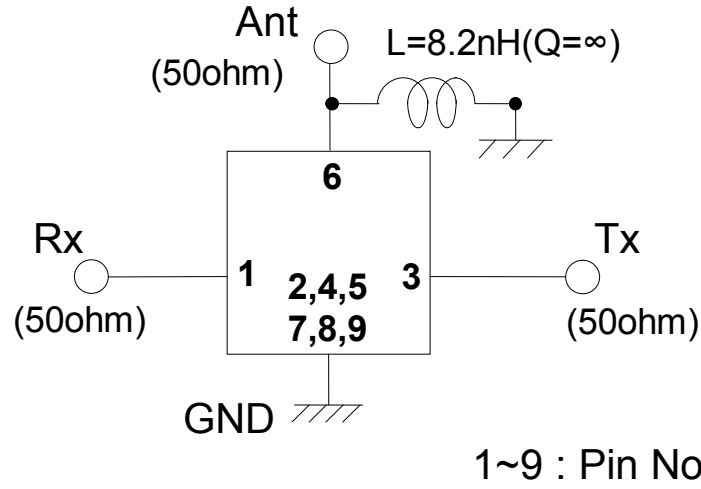
\* Pb Free Part



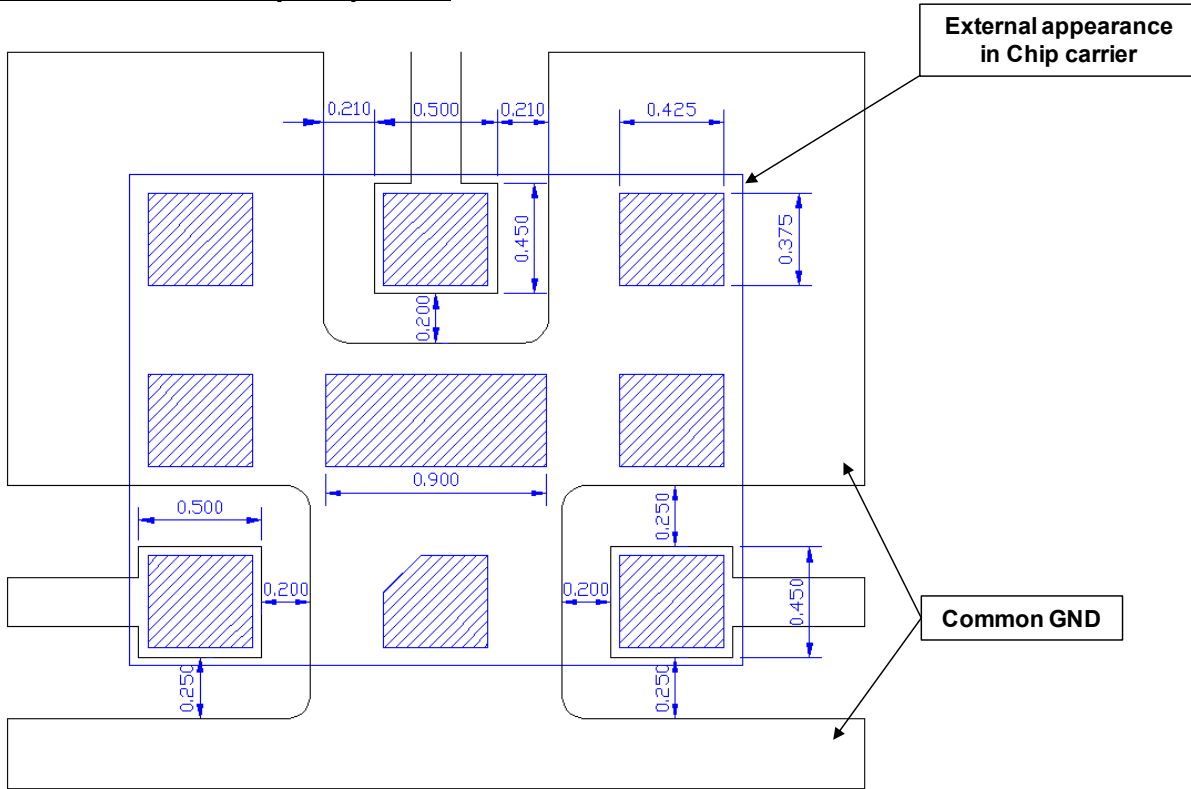
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### Evaluation Circuit



### Recommended foot print pattern



Unit: mm

Figure 2. Recommended foot print pattern

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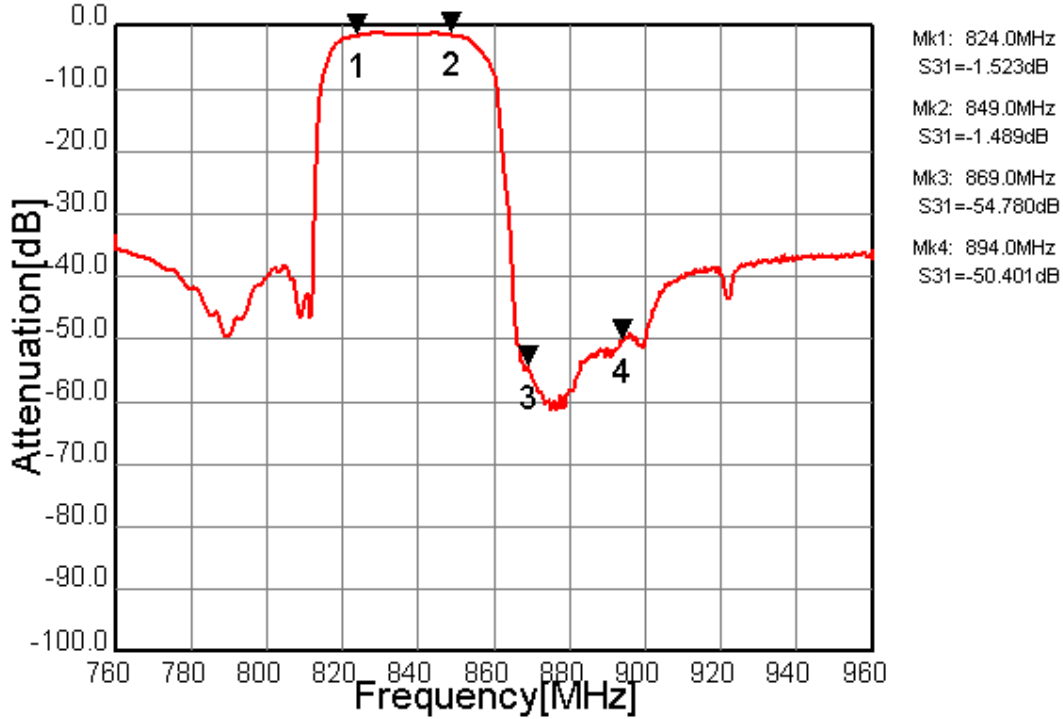
\* Pb Free Part



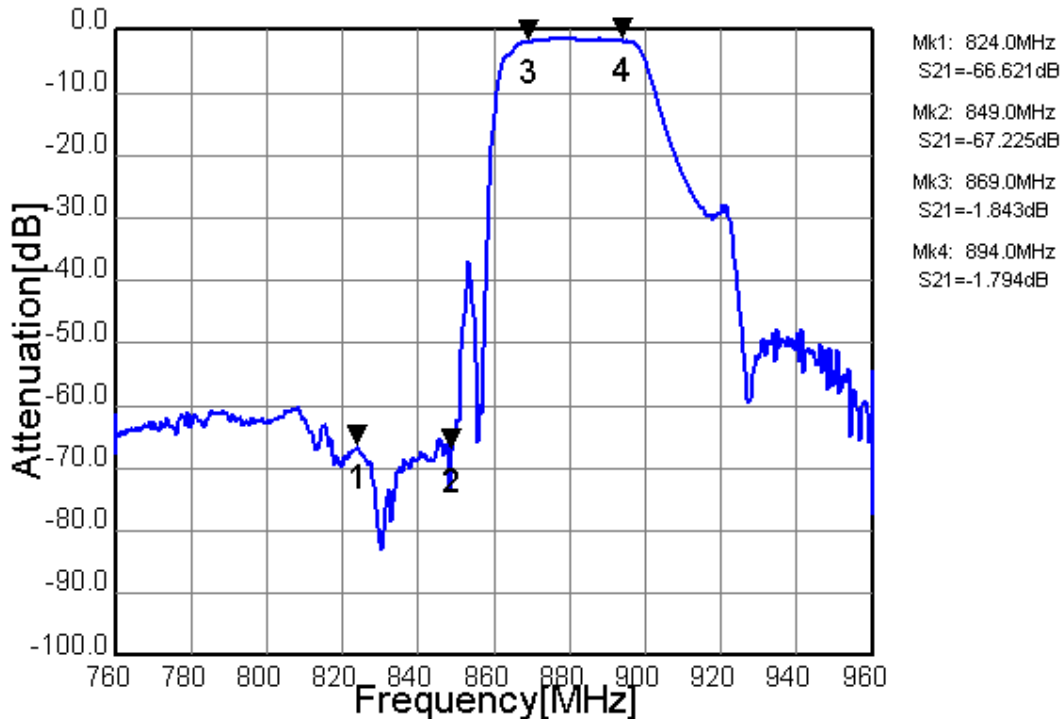
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### Tx to Ant



### Ant to Rx



**Figure 3-1. Electrical Characteristics**

These data include loss that comes from the test board. (Approximately 0.05dB)

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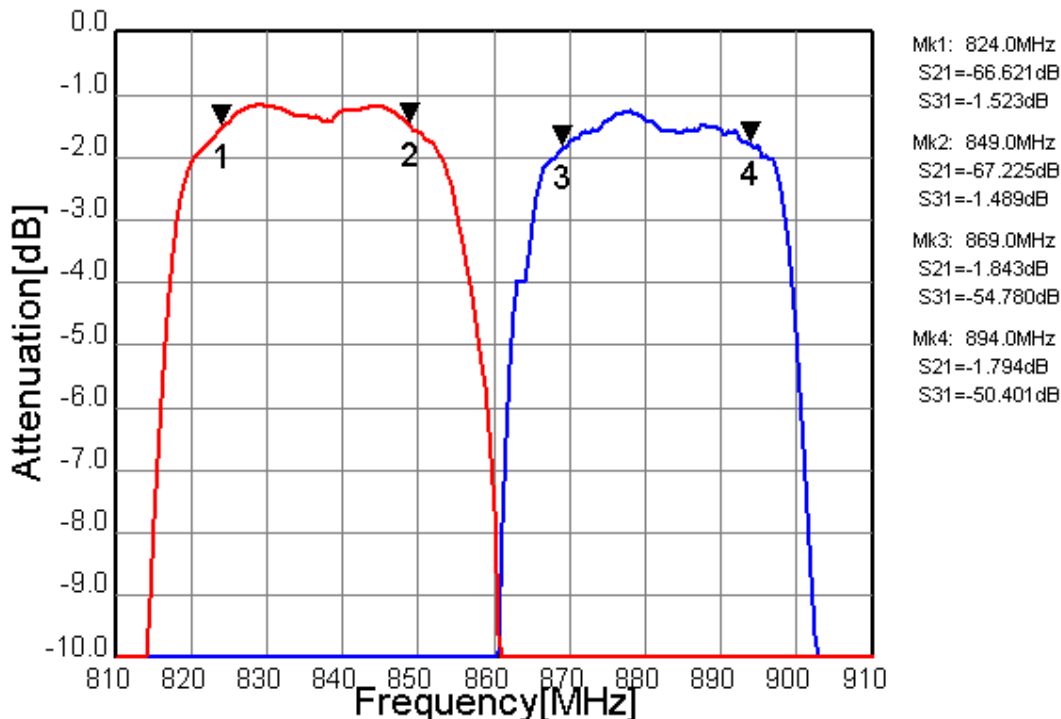
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### Tx to Ant, Ant to Rx



### Tx to Rx Isolation

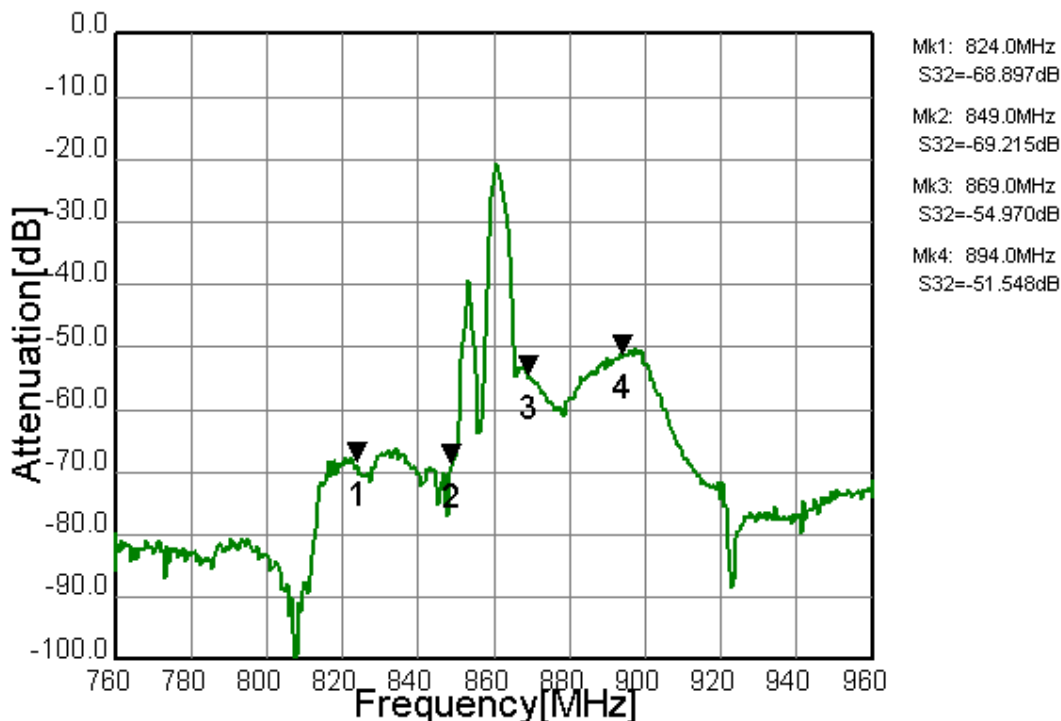


Figure 3-2. Electrical Characteristics

These data include loss that comes from the test board. (Approximately 0.05dB)

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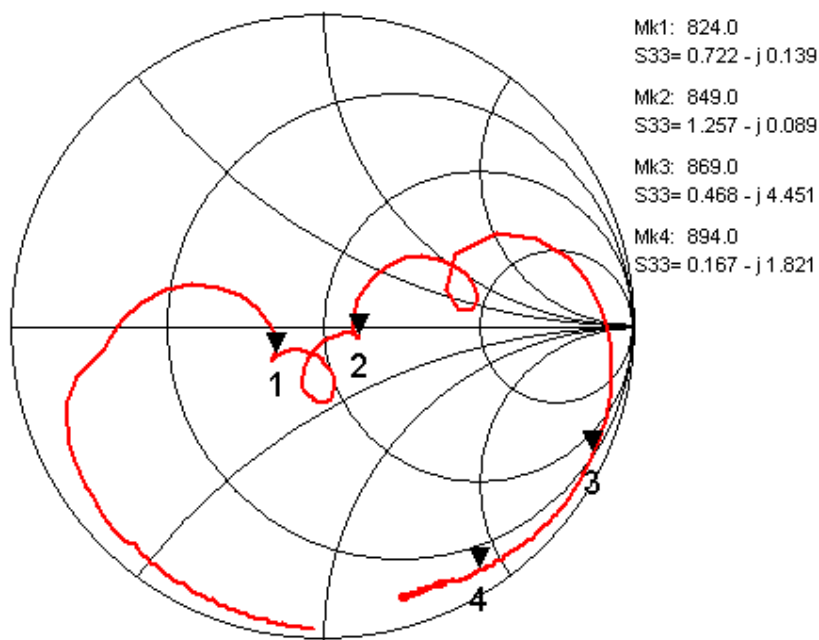
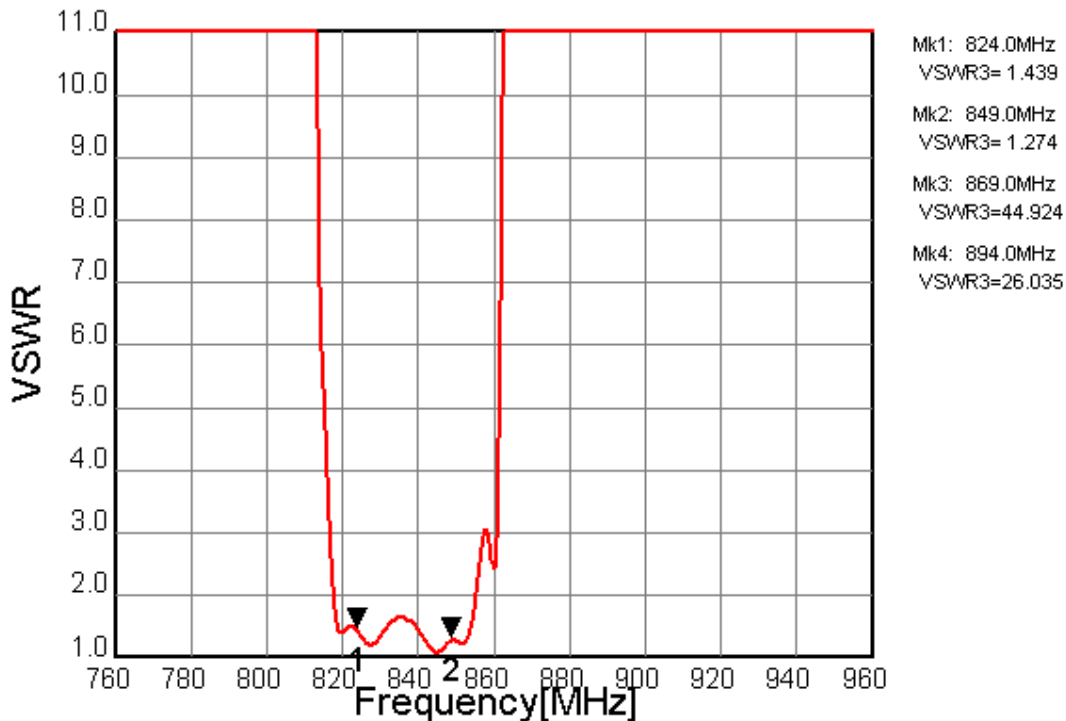
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## Tx Port



**Figure 3-3. Electrical Characteristics**

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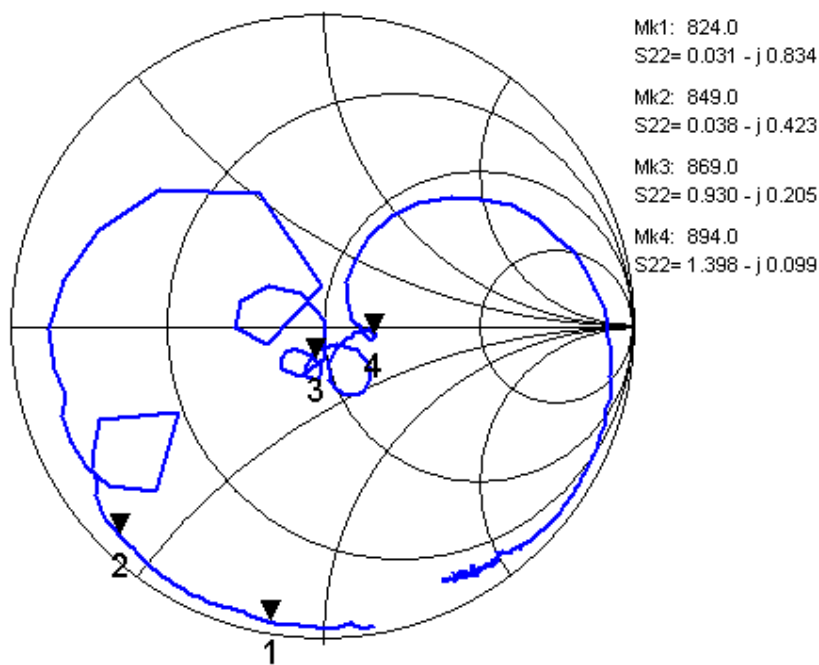
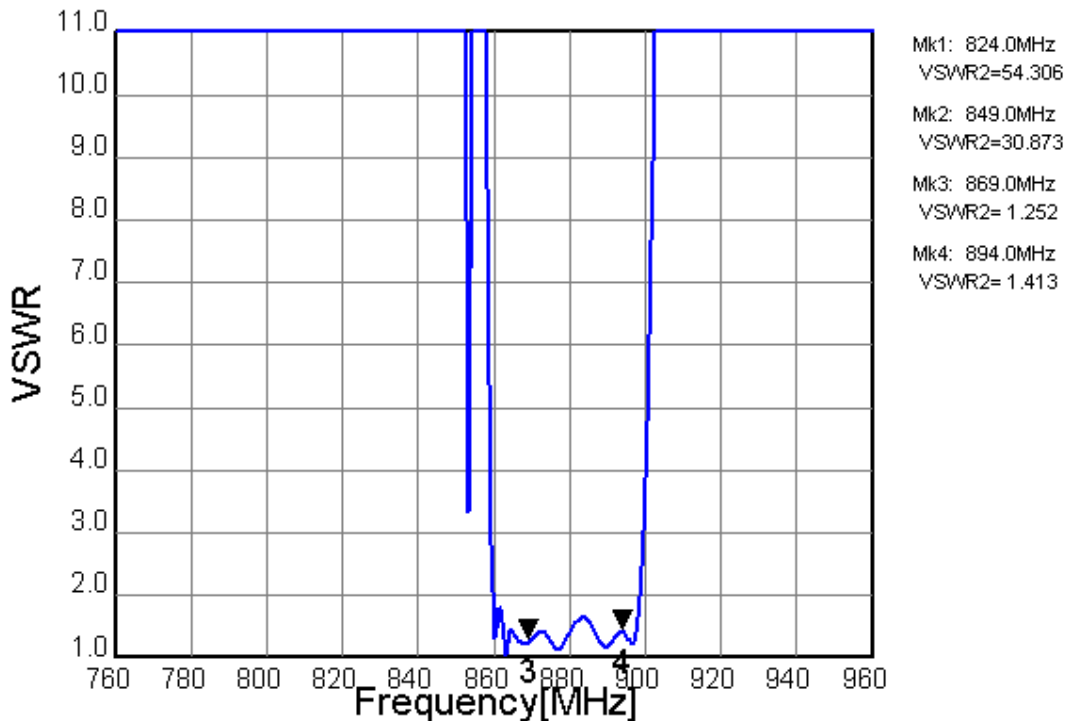
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| Part Number   | FAR-D5NG-881M50-M11Z | Version 3.1de                          |                |

## Rx Port



**Figure 3-4. Electrical Characteristics**

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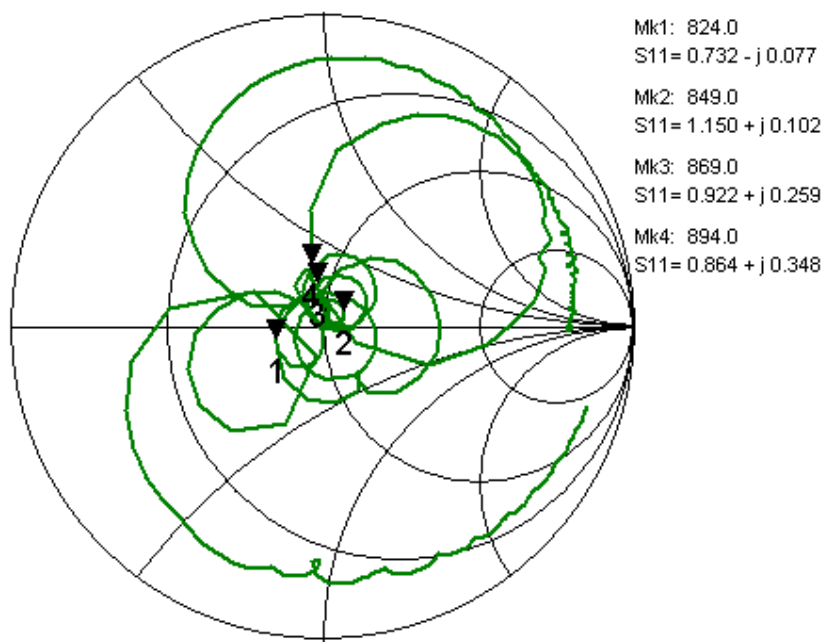
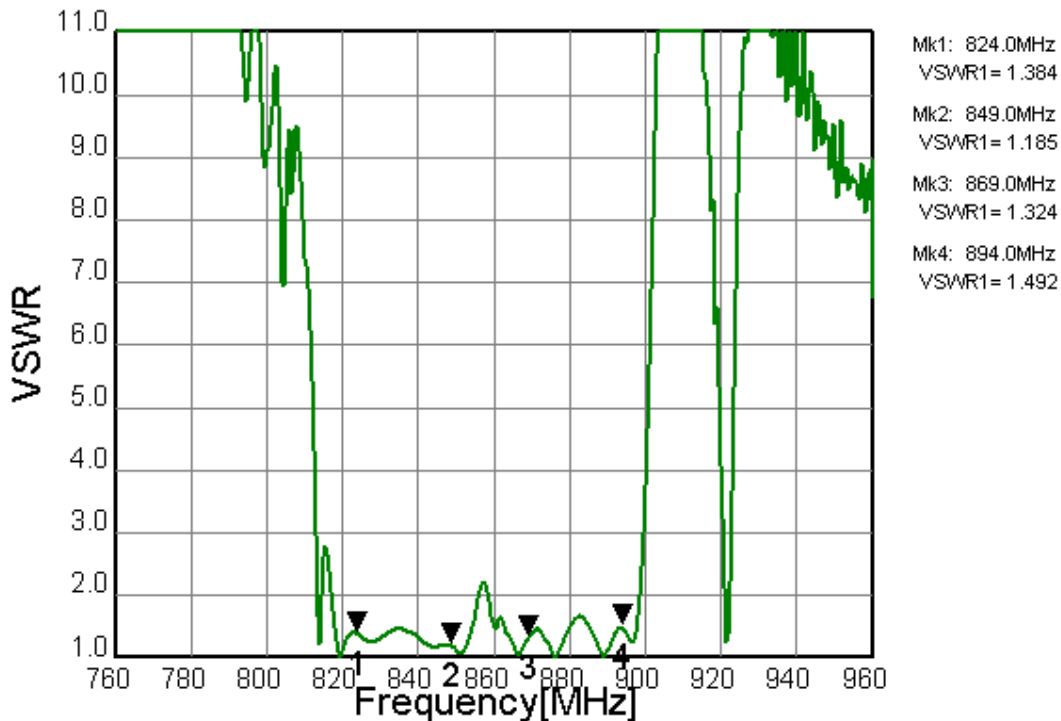
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## Ant Port



**Figure 3-5. Electrical Characteristics**

**TAIYO YUDEN**





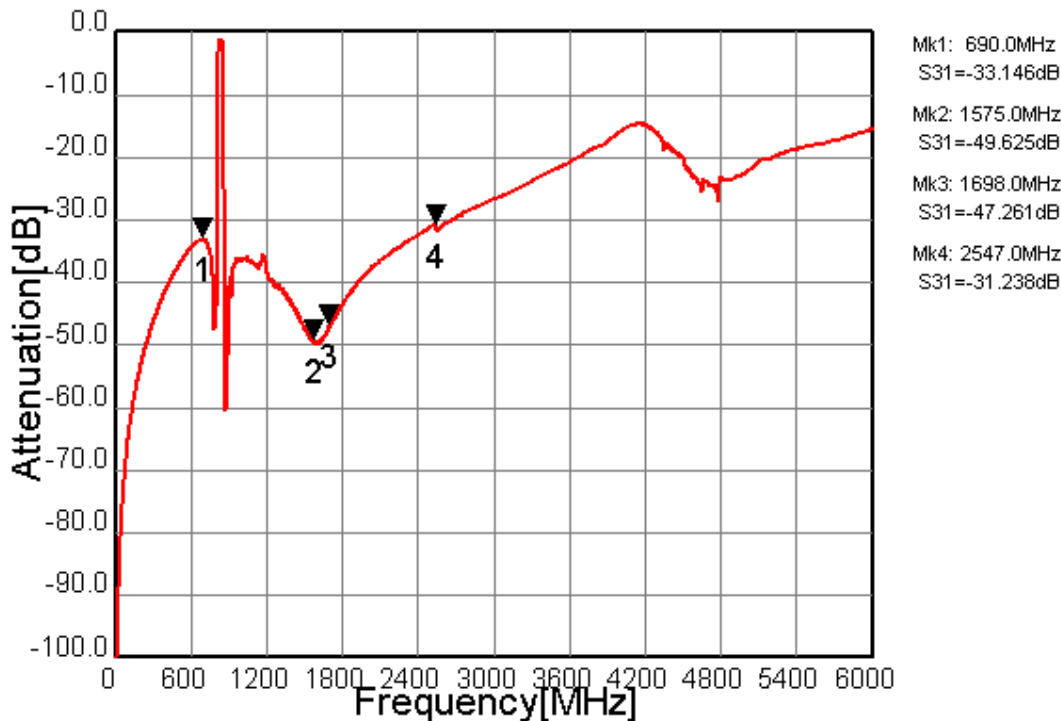
\* Pb Free Part



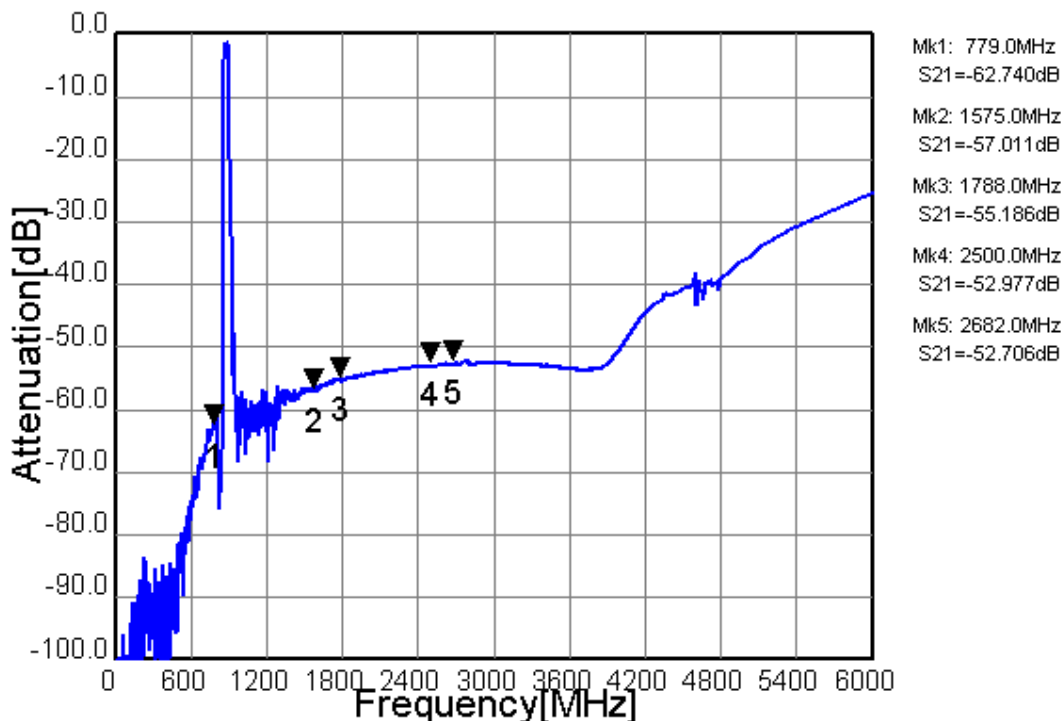
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### Tx to Ant (Wide span)



### Ant to Rx (Wide span)



**Figure 3-6. Electrical Characteristics**

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