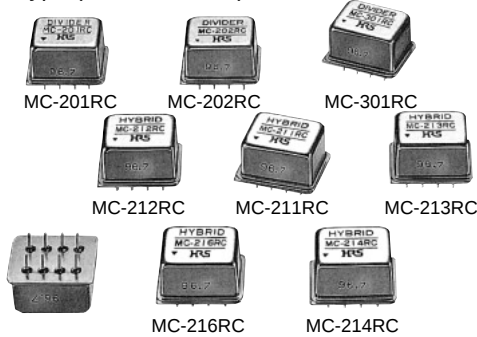


# Coil Components (Relay Headers)

## MC-R and MC-RC Series

### 75 ohms Type (MC-RC Series)



### 50 ohms Type (MC-R Series)



## ■Features

### 1.Excellent High Frequency Characteristics

The use of coils made with a special winding method based on a lumped-constant design provide a high degree of matching, low loss, and high isolation.

### 2.Highly Reliable Design

The metal case is designed with a hermetically sealed construction which contains inert gas. This permits quality to be maintained over a long period.

### 3.Easy Soldering

The pre-soldering leads give easy soldering operations.

### 4.Prevention of Flux Creepage

Use of the supplied Teflon sheet permits the prevention of solder flux creepage.

## ■Product Specifications

| Ratings | Frequency range (Note)<br>Characteristic impedance (Note)<br>Maximum Input Power | 30 to 200 MHz<br>50 ohms, 75 ohms<br>0.5 W | Operating temperature range<br>Operating relative humidity | -10°C to +65°C<br>95% Max. |
|---------|----------------------------------------------------------------------------------|--------------------------------------------|------------------------------------------------------------|----------------------------|
|---------|----------------------------------------------------------------------------------|--------------------------------------------|------------------------------------------------------------|----------------------------|

Note: The frequency range and the characteristic impedance will differ depending on the products.

| Item                | Standard                                | Conditions                                                                                                                       |
|---------------------|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| 1.Vibration         | No damage, cracks, or parts dislocation | Frequency of 10 to 2000 Hz, overall amplitude of 1.5 mm, acceleration of 98 m/s <sup>2</sup> for 4 hours in each of 3 directions |
| 2.Shock             |                                         | Acceleration of 294 m/s <sup>2</sup> , sine half-wave waveform, 3 cycles in each of the 3 axis                                   |
| 3.Temperature cycle |                                         | Temperature: -35°C → +5°C to +35°C → +85°C → +5°C to +35°C<br>Time: 30 → 15 max. → 30 → 15 max. (Minutes)<br>5 cycles            |

● The test method conforms to MIL-STD-202.

## ■Materials

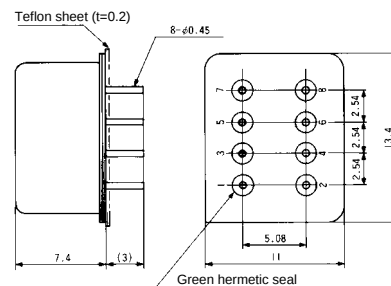
| Part          | Material          | Finish         |
|---------------|-------------------|----------------|
| Board         | Iron              | Nickel plating |
| Contacts      | Iron-nickel alloy | Solder dip     |
| Hermetic seal | Glass             | —              |

## ■Ordering Information

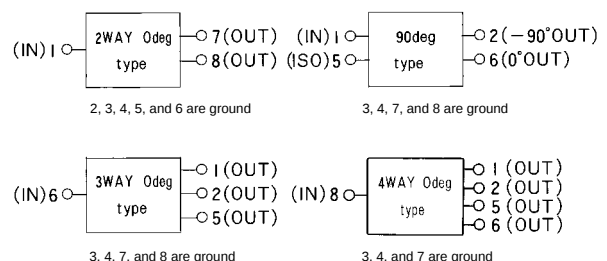
**MC - 2 0 1 R C**  
① ② ③ ④ ⑤ ⑥

|                                                                                     |                                                      |
|-------------------------------------------------------------------------------------|------------------------------------------------------|
| ① Series Name: MC                                                                   | ④ Suffix                                             |
| ② Number of Divisions<br>Indicated by number of divisions of output.                | ⑤ Form of Case<br>R: Relay header                    |
| ③ Phase Difference<br>Indicated by phase difference of output.<br>0 : 0°<br>1 : 90° | ⑥ Characteristic Impedance<br>C : 75Ω<br>Blank : 50Ω |

## ■External Dimensions



## ■Function Diagram



## ■ Specifications

### 2WAY 0°deg type (POWER COMBINERS AND SPLITTERS)

| Part Number | Frequency Range (MHZ) | Phase Difference (deg) | above 3dB Insertion Loss (dB Max) | True Insertion Loss (dB Min) | Isolation (dB Min) | V.S.W.R. (Max) | Balance     |                | Impedance (ohms) | Weight (g) |
|-------------|-----------------------|------------------------|-----------------------------------|------------------------------|--------------------|----------------|-------------|----------------|------------------|------------|
|             |                       |                        |                                   |                              |                    |                | Phase (deg) | Amplitude (dB) |                  |            |
| MC-201RC    | 30~200                | 0                      | 0.6                               | 3.6                          | 25                 | 1.3            | ±3          | ±0.1           | 75               | 3          |
| MC-202RC    | 100~180               | 0                      | 0.6                               | 3.6                          | 30                 | 1.15           | ±3          | ±0.1           | 75               | 3          |
| MC-201R     | 30~200                | 0                      | 0.6                               | 3.6                          | 25                 | 1.3            | ±3          | ±0.1           | 50               | 3          |

### 3WAY 0°deg type (POWER COMBINERS AND SPLITTERS)

| Part Number | Frequency Range (MHZ) | Phase Difference (deg) | above 3dB Insertion Loss (dB Max) | True Insertion Loss (dB Min) | Isolation (dB Min) | V.S.W.R. (Max) | Balance     |                | Impedance (ohms) | Weight (g) |
|-------------|-----------------------|------------------------|-----------------------------------|------------------------------|--------------------|----------------|-------------|----------------|------------------|------------|
|             |                       |                        |                                   |                              |                    |                | Phase (deg) | Amplitude (dB) |                  |            |
| MC-301RC    | 40~160                | 0                      | 0.7                               | 5.5                          | 25                 | 1.3            | ±3          | ±0.2           | 75               | 3          |
| MC-302RC    | 100~180               | 0                      | 0.7                               | 5.5                          | 25                 | 1.2            | ±3          | ±0.2           | 75               | 3          |

### 2WAY 90° deg type (POWER COMBINERS AND SPLITTERS)

| Part Number | Frequency Range (MHZ) | Phase Difference (deg) | ※ above 3dB Insertion Loss (dB Max) | True Insertion Loss (dB Min) | Isolation (dB Min) | V.S.W.R. (Max) | Balance     |                | Impedance (ohms) | Weight (g) |
|-------------|-----------------------|------------------------|-------------------------------------|------------------------------|--------------------|----------------|-------------|----------------|------------------|------------|
|             |                       |                        |                                     |                              |                    |                | Phase (deg) | Amplitude (dB) |                  |            |
| MC-212RC    | 50~95                 | -90                    | 0.6                                 | 3.85                         | 25                 | 1.2            | ±3          | ±0.5           | 75               | 3          |
| MC-211RC    | 110~170               | -90                    | 0.7                                 | 3.85                         | 25                 | 1.2            | ±3          | ±0.5           | 75               | 3          |
| MC-213RC    | 100~120               | -90                    | 0.7                                 | 3.85                         | 20                 | 1.2            | ±3          | ±0.5           | 75               | 3          |
| MC-215RC    | 120~140               | -90                    | 0.7                                 | 3.85                         | 20                 | 1.2            | ±3          | ±0.5           | 75               | 3          |
| MC-216RC    | 140~160               | -90                    | 0.7                                 | 3.85                         | 20                 | 1.2            | ±3          | ±0.5           | 75               | 3          |
| MC-214RC    | 160~180               | -90                    | 0.8                                 | 3.95                         | 20                 | 1.2            | ±3          | ±0.5           | 75               | 3          |
| MC-212R     | 50~95                 | -90                    | 0.6                                 | 3.85                         | 25                 | 1.2            | ±3          | ±0.5           | 50               | 3          |
| MC-213R     | 110~170               | -90                    | 0.7                                 | 3.85                         | 25                 | 1.2            | ±3          | ±0.5           | 50               | 3          |

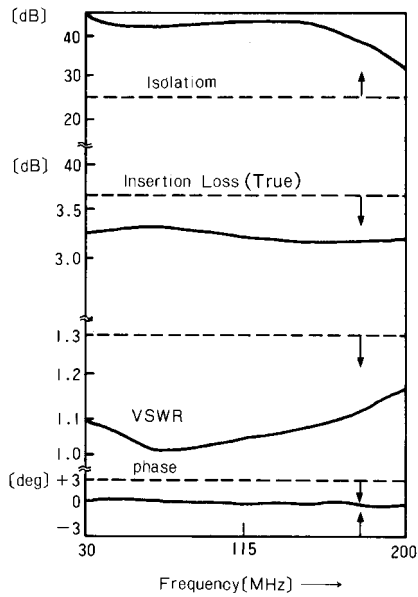
※The insertion loss of the 2-way 90° type is the average output of the 0° port and the -90° port minus 3 dB coupling.

### 4WAY 0° deg type (POWER COMBINERS AND SPLITTERS)

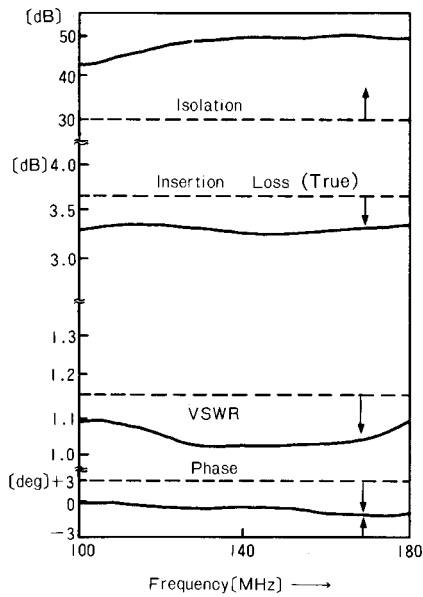
| Part Number | Frequency Range (MHZ) | Phase Difference (deg) | above 3dB Insertion Loss (dB Max) | True Insertion Loss (dB Min) | Isolation (dB Min) | V.S.W.R. (Max) | Balance     |                | Impedance (ohms) | Weight (g) |
|-------------|-----------------------|------------------------|-----------------------------------|------------------------------|--------------------|----------------|-------------|----------------|------------------|------------|
|             |                       |                        |                                   |                              |                    |                | Phase (deg) | Amplitude (dB) |                  |            |
| MC-401RC    | 40~180                | 0                      | 0.8                               | 6.8                          | 20                 | 1.3            | ±3          | ±0.2           | 75               | 3          |

## Typical Data

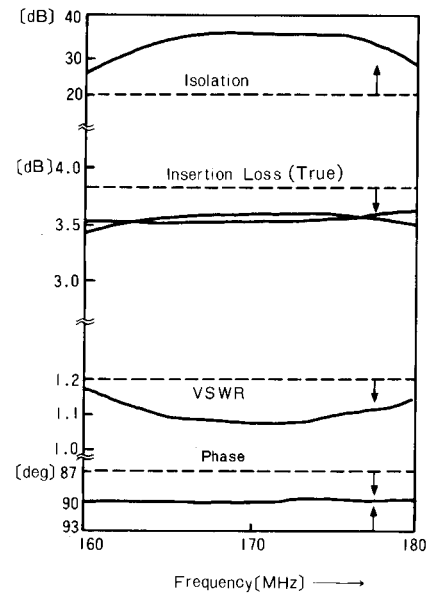
MC-201RC



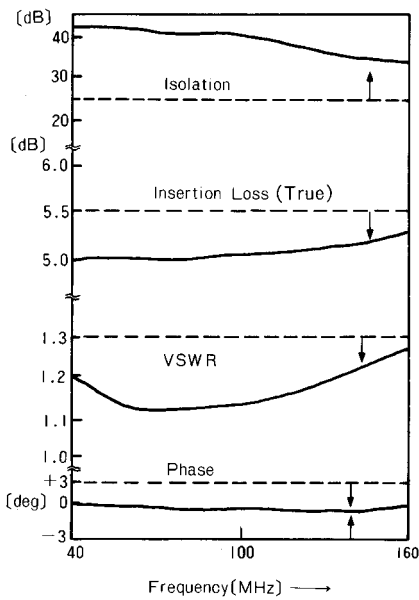
MC-202RC



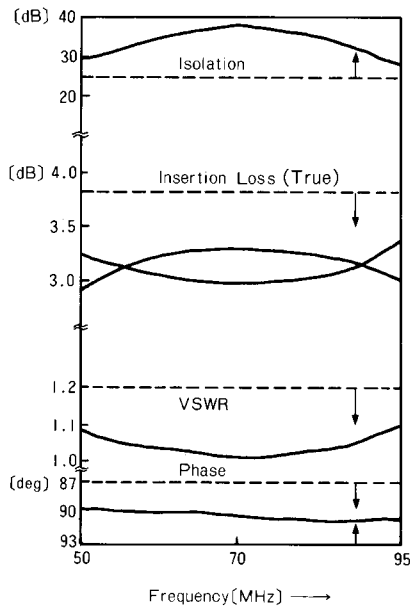
MC-214RC



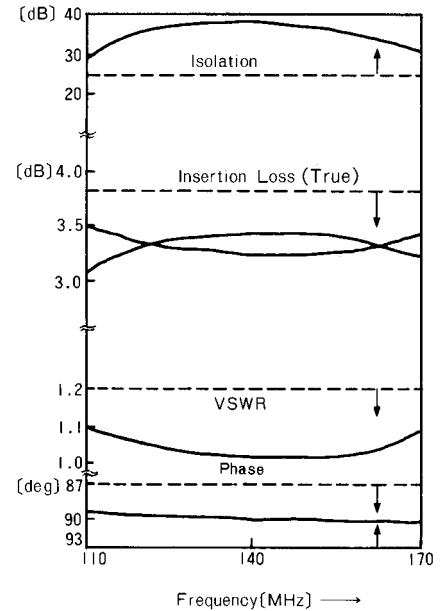
MC-301RC



MC-212RC

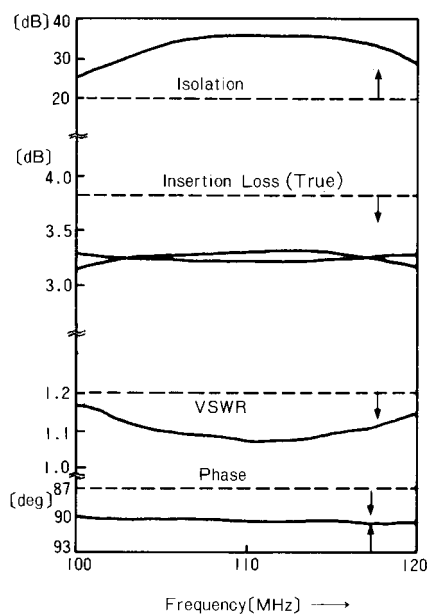


MC-211RC

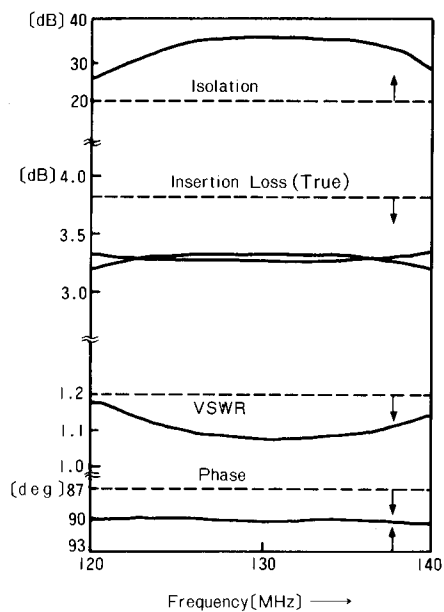


## Typical Data

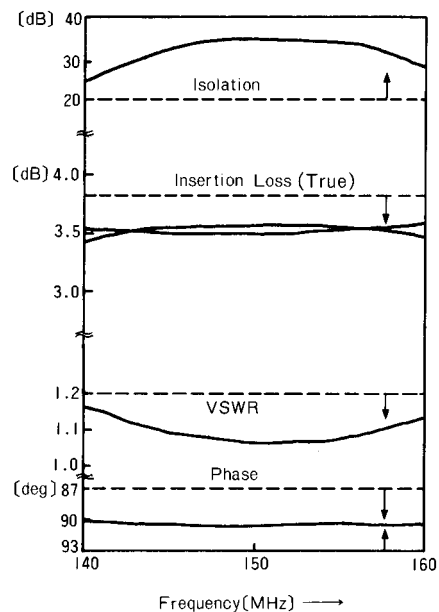
MC-213RC



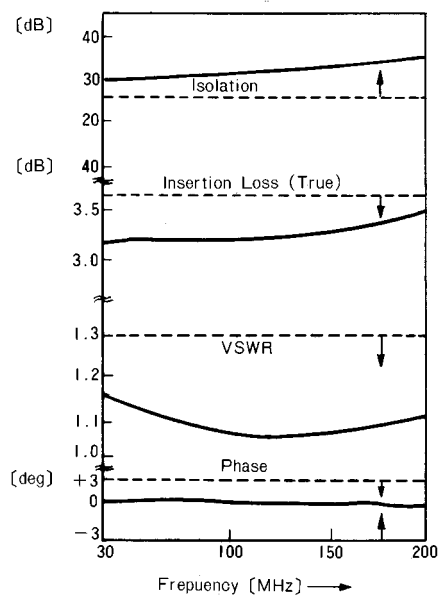
MC-215RC



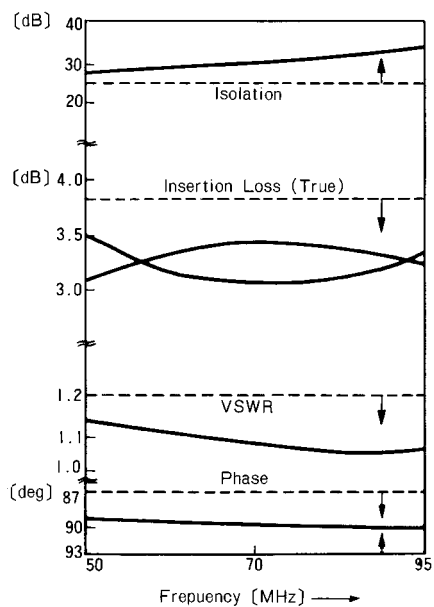
MC-216RC



MC-201R



MC-212R



MC-213R

