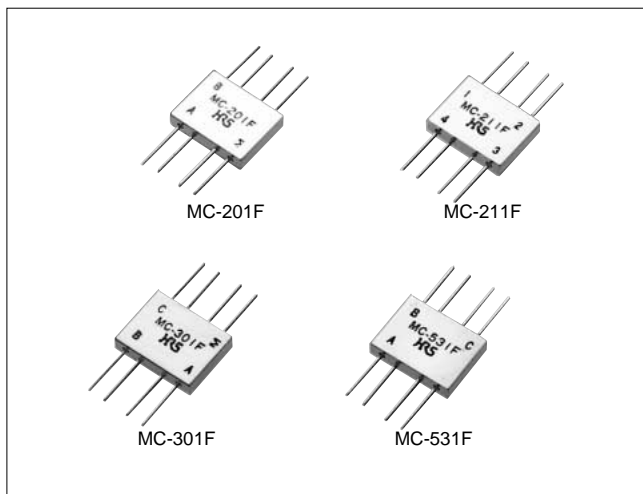


# Coil Components (Flat Pack)

## MC-F 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.

### ■ Product Specifications

Rating	Frequency range (NOTE) Characteristic impedance Maximum usable power	10 to 500 MHz 50Ω 0.5 W	Operating temperature range Operating relative humidity	-35°C to +100°C 95% or less
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NOTE: The frequency range will differ depending on the model.

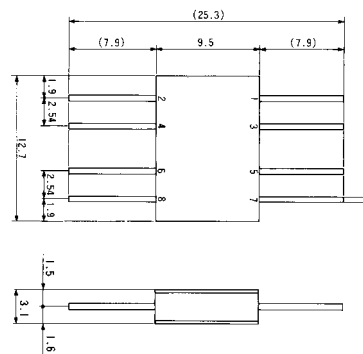
Item	Standard	Conditions
1. Vibration resistance	No damage, cracks, or parts looseness	Frequency of 10 to 2000 Hz, overall amplitude of 1.5 mm, 196 m/s <sup>2</sup> acceleration, in 3 axial directions 4 hours each
2. Shock resistance	No damage, cracks, or parts looseness	294 m/s <sup>2</sup> acceleration, half sine wave, in 3 axial directions, 3 times each
3. Temperature cycle	No damage, cracks, or parts looseness	(-65°C: 30 min. → 5 to 35°C: Within 15 min. → 125°C: 300 min. → 5 to 35°C: Within 15 min.) for 5 cycles

● The test method conforms to MIL-STD-883.

### ■ Materials

Part	Material	Processing
External Cladding	Kovar	Gold plating
Contacts	Kovar	Gold plating
Hermetic Seal	Glass	—

### ■ External Dimensions

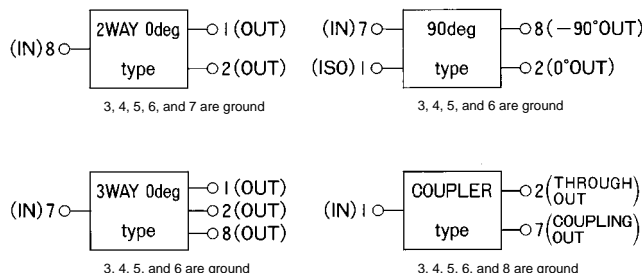


### ■ Product Number Breakdown

**MC - 2 0 1 F**  
 ① ② ③ ④ ⑤

① Series Name: MC	③ Phase Difference Indicated by phase difference of output. 0: 0° 1: 90°
② Number of Divisions Indicated by number of divisions of output. 2: 2 divisions 3: 3 divisions 5: Directional coupler	④ Suffix
	⑤ Form of Case F: Flat pack

### ■ Function Diagram



## ■ Specifications

### 2WAY 0deg type

Model No.	(MHZ) Frequency Range	(deg) Phase Difference	(dB Max) above 3dB Insertion Loss	(dB Min) True Insertion Loss	(dB Min) Isolation	V.S.W.R. (Max)	Balance		(Ω) Impedance	(g) Weight
							(deg) Phase	(dB) Amplitude		
<b>MC-201F</b>	10~500	0	0.7	3.7	25	1.3	±1	±0.2	50	2

### 3WAY 0deg type

Model No.	(MHZ) Frequency Range	(deg) Phase Difference	(dB Max) above 3dB Insertion Loss	(dB Min) True Insertion Loss	(dB Min) Isolation	V.S.W.R. (Max)	Balance		(Ω) Impedance	(g) Weight
							(deg) Phase	(dB) Amplitude		
<b>MC-301F</b>	10~500	0	0.8	5.6	20	1.3	±3	±0.2	50	2

### 2WAY 90deg type

Model No.	(MHZ) Frequency Range	(deg) Phase Difference	(dB Max) ※ above 3dB Insertion Loss	(dB Min) True Insertion Loss	(dB Min) Isolation	V.S.W.R. (Max)	Balance		(Ω) Impedance	(g) Weight
							(deg) Phase	(dB) Amplitude		
<b>MC-211F</b>	225~400	-90	1.3	4.3	16	1.3	±4	±1	50	2

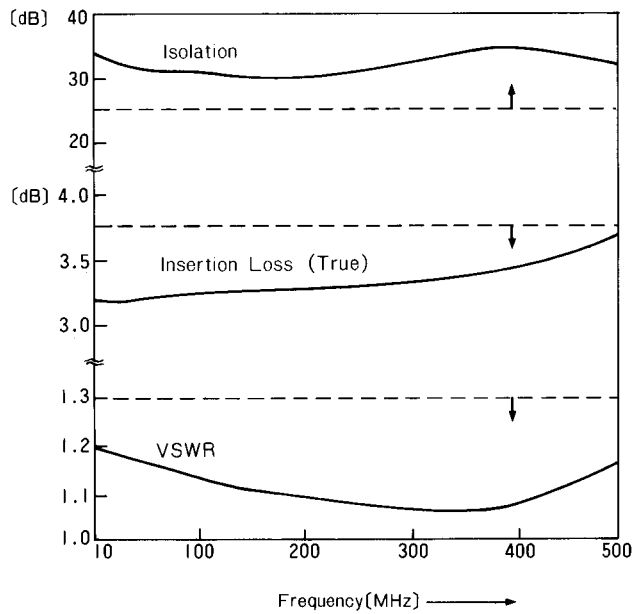
※The insertion loss of the 2-way 90° type is the average output of the 0° port and the -90° port minus 3 dB coupling.

### COUPLER type

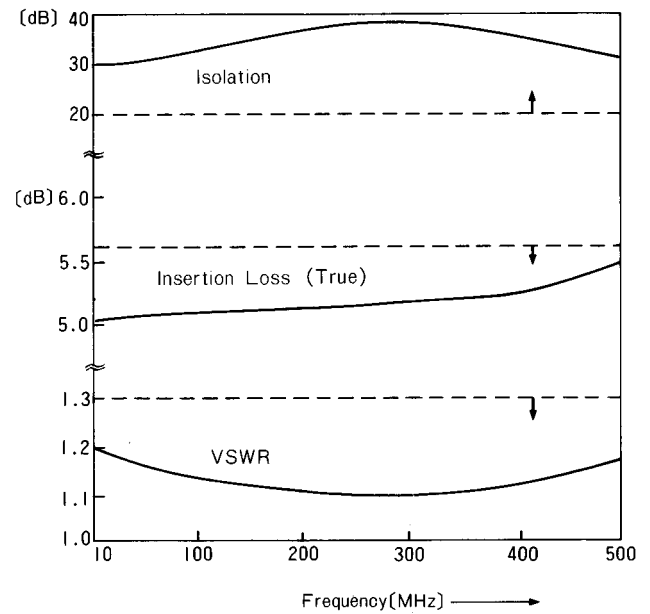
Model No.	(MHZ) Frequency Range	(dB) Coupling	(dB Max) Insertion Loss	(dB Min) Directivity	V.S.W.R. (Max)	(Ω) Impedance	(g) Weight
<b>MC-531F</b>	10~500	15±0.5	0.7	25	1.3	50	2

■ Typical Data

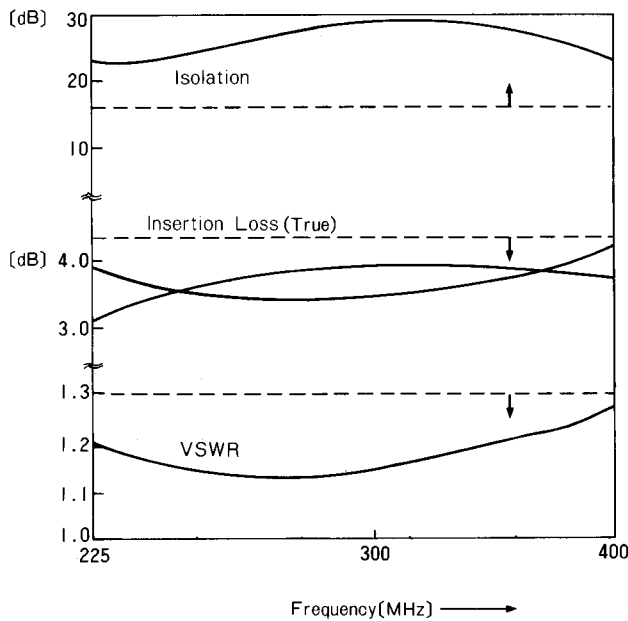
MC-201F



MC-301F



MC-211F



MC-531F

