

# Data Sheet

## DC180U05-050

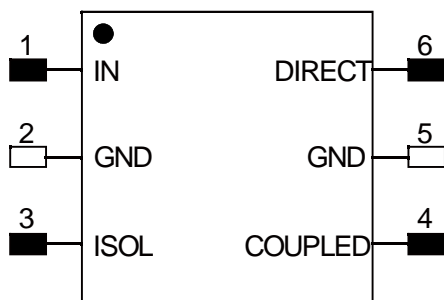
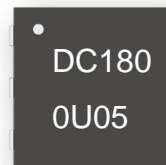
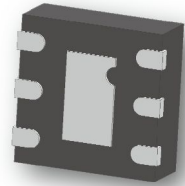
### Directional Coupler

### 1700 MHz-2200 MHz



## Features

- Small Size (2x2mm)
- Very Low Loss
- Excellent directivity
- Broad frequency coverage
- High Isolation
- Low VSWR
- Good Repeatability
- Tape & Reel
- Power handling:5 watts



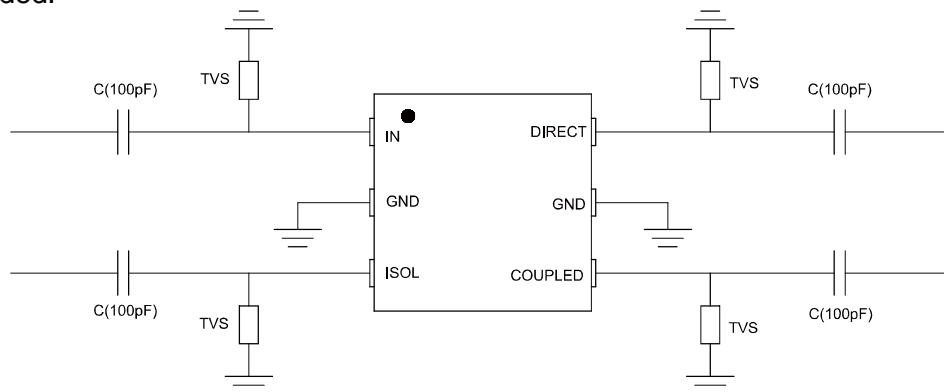
TOP VIEW

## Applications

- Phase shifter / Attenuator
- Balanced amplifier / LNA configurations
- Modulators
- Mixers
- Power combining /dividing

### Notes:

1. This part has passed through 100% RF test.
2. Suggest to add Capacitors of DC Blocker between Pins(with black color) and external circuit to prevent DC signal entry to guarantee parts normal work.
3. Suggest to add a TVS Diode in parallel between Electrode (with black color) and Capacitor of DC Blocker to provide ESD protection for the product. TVS Diode use ON Semiconductor's ESD9101 is recommended.



### ESD Rating

Human Body Model (HBM):  $\leq 650V$  in accordance with ANSI/ESD STM 5.1 - 2001  
 Machine Model (MM):  $\leq 50V$  in accordance with ANSI/ESD STM 5.2 - 1999

## Yantel Corporation

Add: 3F, Building 3, Southern District 2 of Zhongguan Honghualing Industrial Park, Xili, Nanshan, Shenzhen, China  
 Tel: 86-755-8355-1886 Fax: 86-755-8355-2533

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## DC1800U05-050

### Directional Coupler

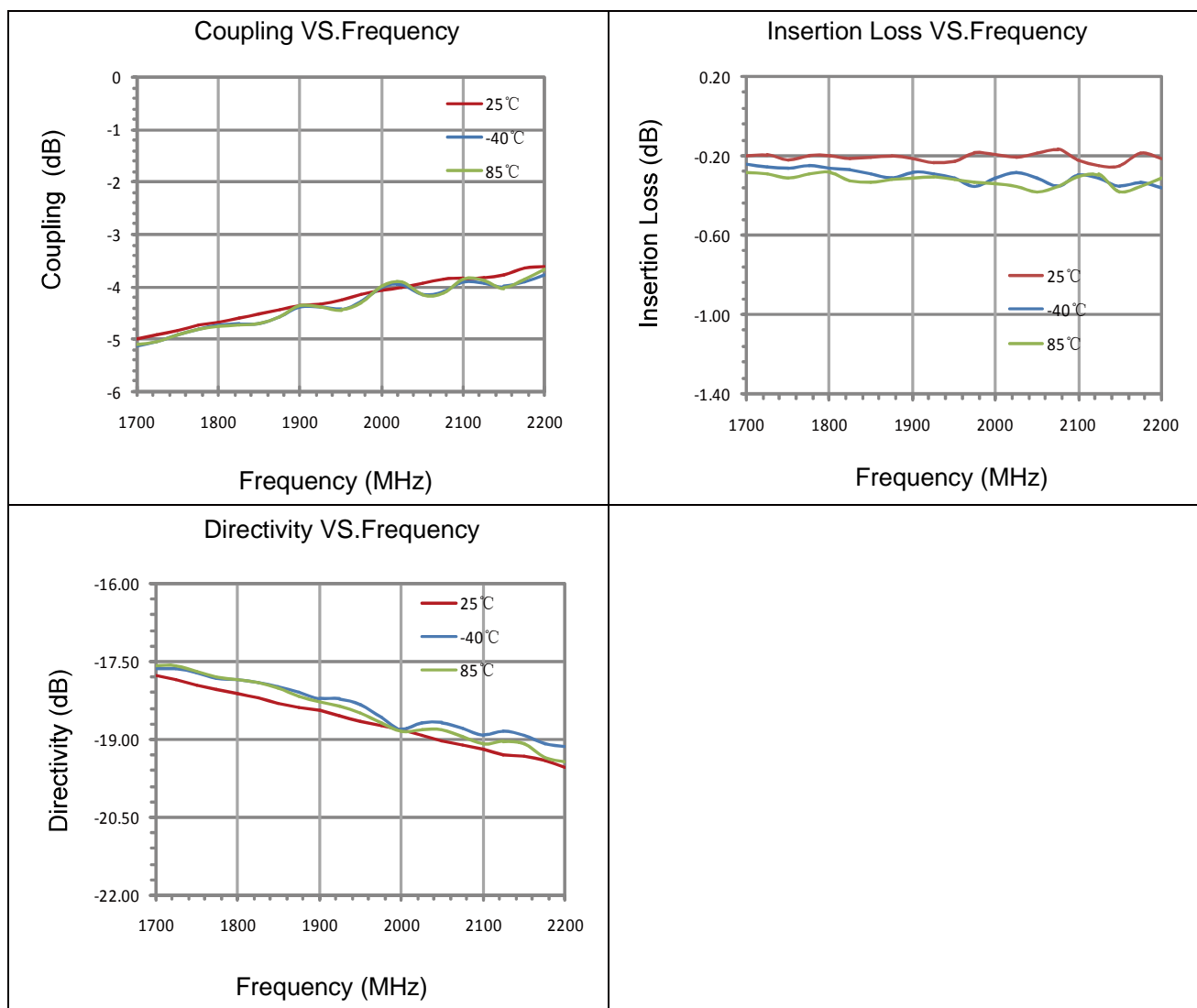
### 1700 MHz-2200 MHz



#### Electrical Specifications at 25° C

| Part No.      | Freq. Range (MHz)<br>FL~FU | Power (W) | Size LxW (mm) | Coupling (dB) | Insertion loss (dB) | VSWR(:1) | Directivity (dB) |
|---------------|----------------------------|-----------|---------------|---------------|---------------------|----------|------------------|
| DC1800U05-050 | 1700~1850                  | 5         | 2X2           | 4.5~5.0       | 0.22                | 1.11     | 17.7             |
|               | 1850~2050                  |           |               | 3.9~4.5       | 0.23                | 1.14     | 18.3             |
|               | 2050~2200                  |           |               | 3.6~3.9       | 0.25                | 1.16     | 19.0             |

#### Typical Performance (-40°C, 25°C, 85°C: 1700-2200 MHz)



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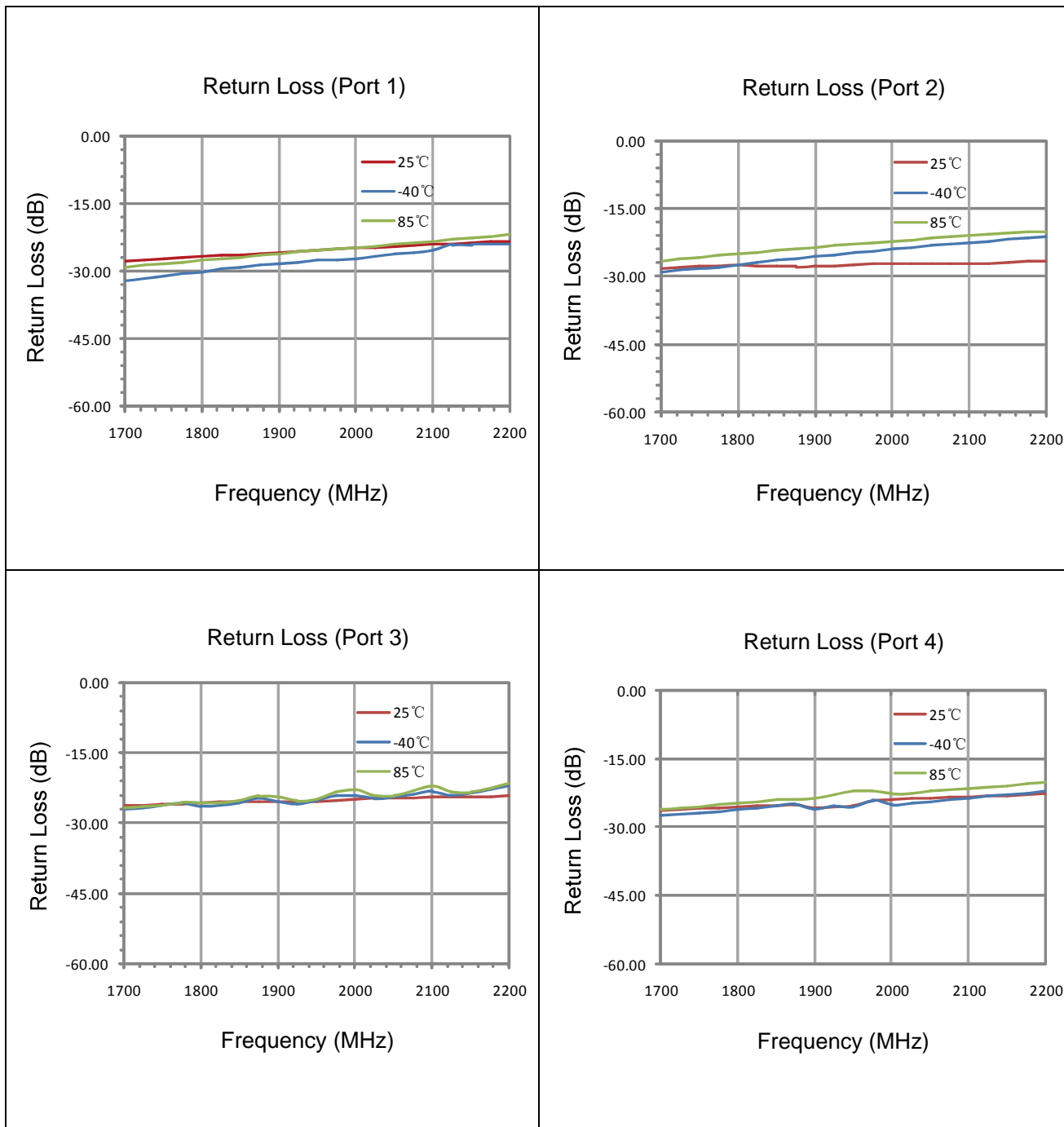
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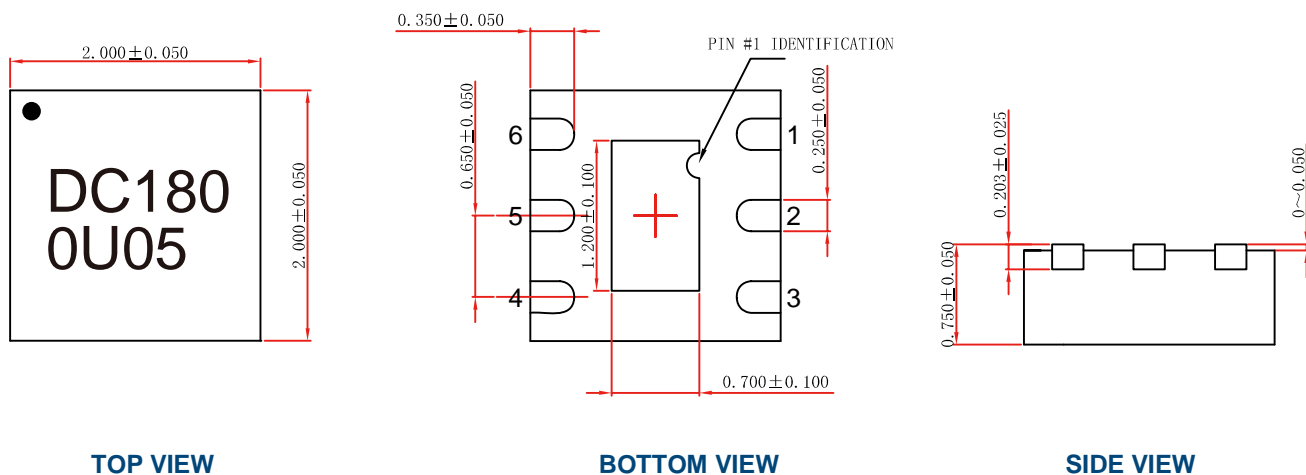
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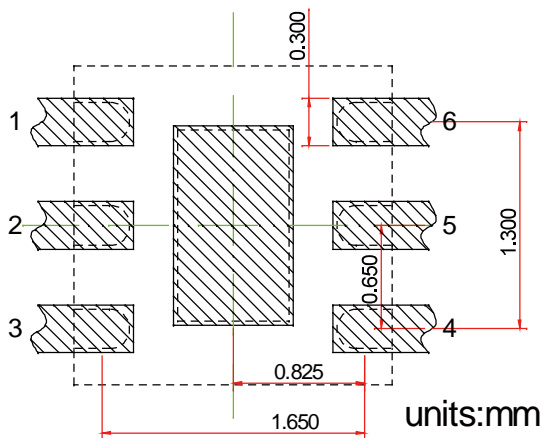
### 1700 MHz-2200 MHz



## Outline Drawing



## Land Pattern

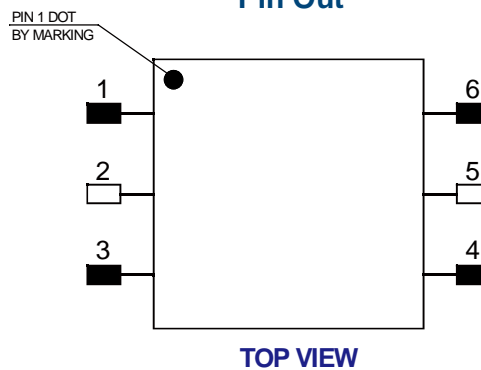


## Recommended Land Pattern

### Top View

Notes: All dimensions show in millimeters

## Pin Out



Notes:

1. Require to add Capacitors of DC Blocker between Pins (with black color) and external circuit to prevent DC signal entry to guarantee normal work.
2. This part has passed through 100% RF test.

| Pin # | Connection |
|-------|------------|
| 1     | IN         |
| 2     | GND        |
| 3     | ISOL       |
| 4     | COUPLED    |
| 5     | GND        |
| 6     | DIRECT     |

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