

Data Sheet

DC180U05-050

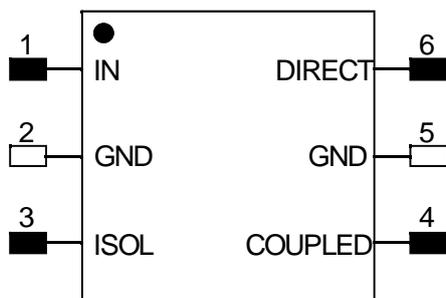
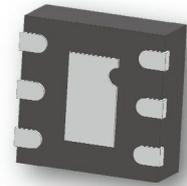
Directional Coupler

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



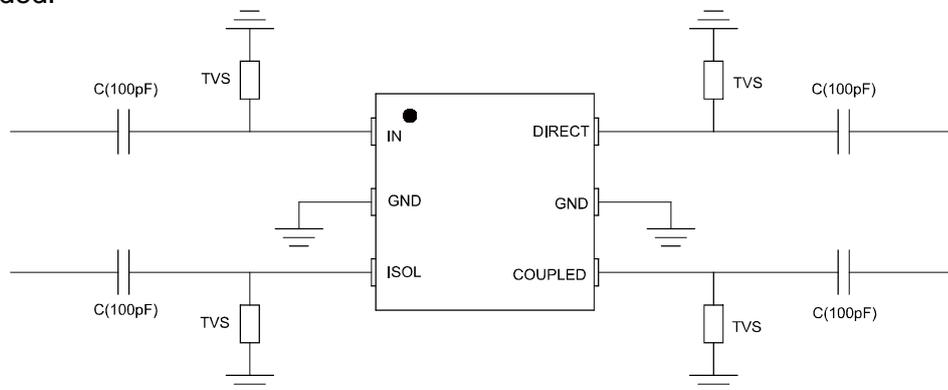
TOP VIEW

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

Data Sheet

DC1800U05-050

Directional Coupler

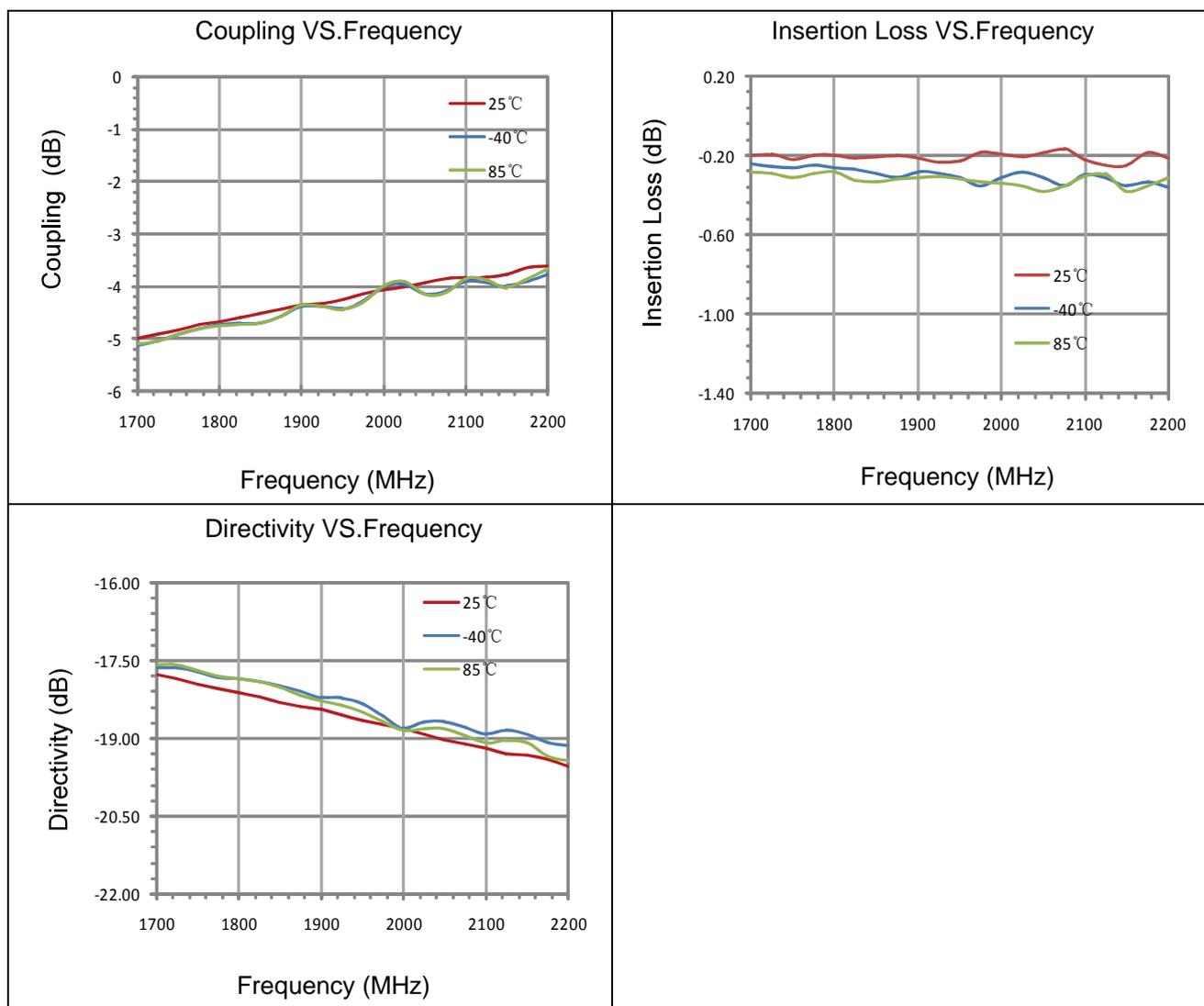
1700 MHz-2200 MHz



Electrical Specifications at 25° C

| Part No. | Freq. Range (MHz) 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)



Yantel Corporation

Data Sheet

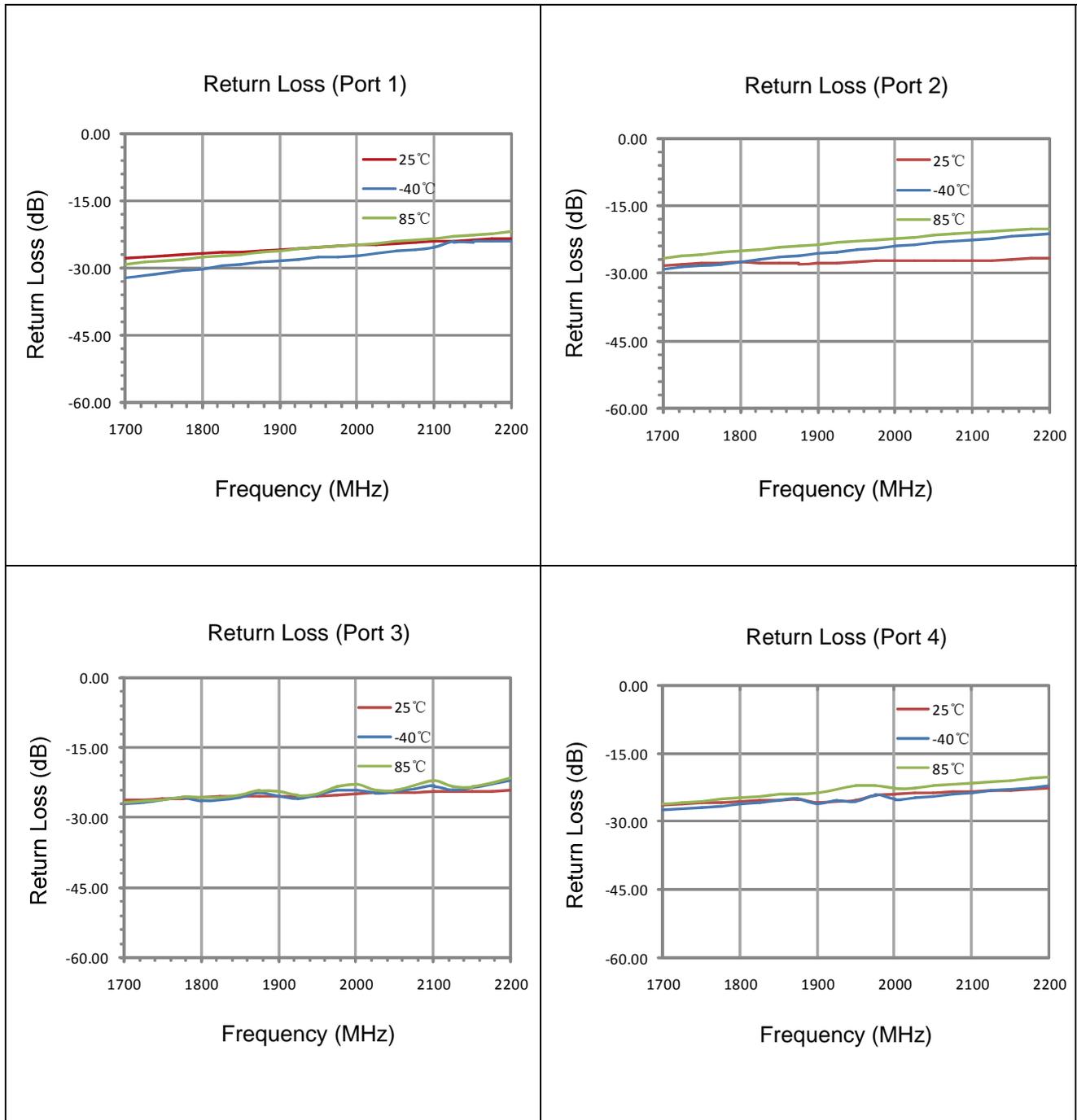
DC1800U05-050

Directional Coupler

1700 MHz-2200 MHz



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



Yantel Corporation

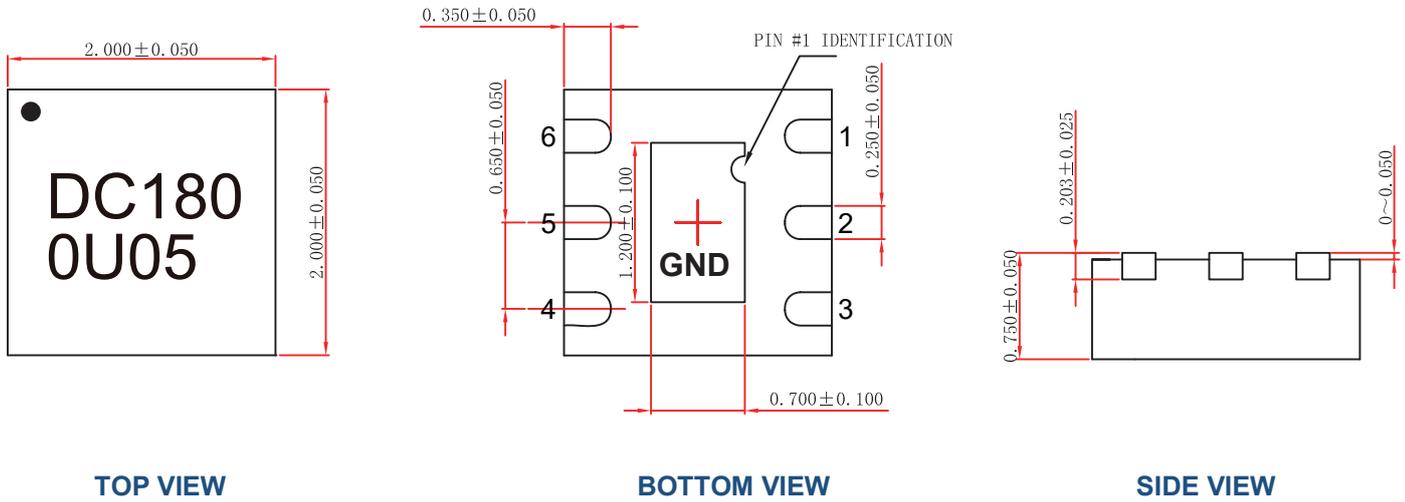
Data Sheet

DC1800U05-050

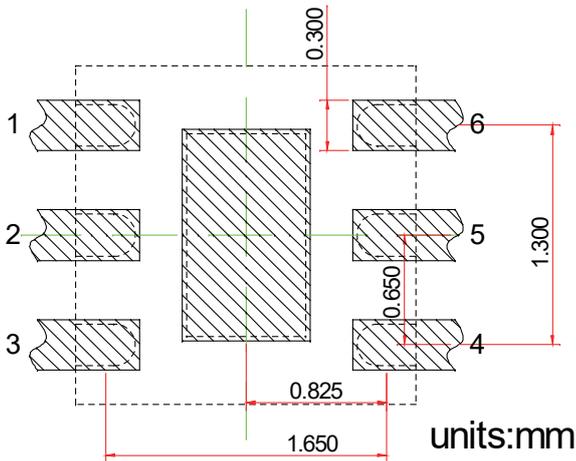
Directional Coupler
1700 MHz-2200 MHz



Outline Drawing



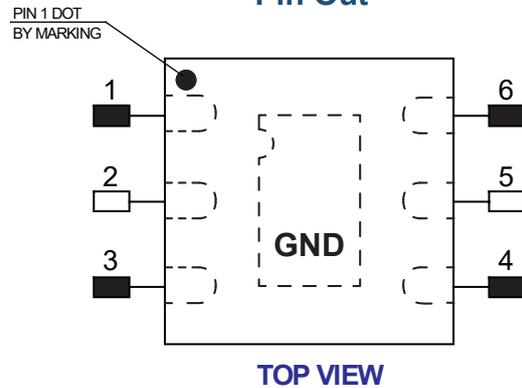
Land Pattern



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 parts 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 |
| Center Pad | GND |