

# Data Sheet

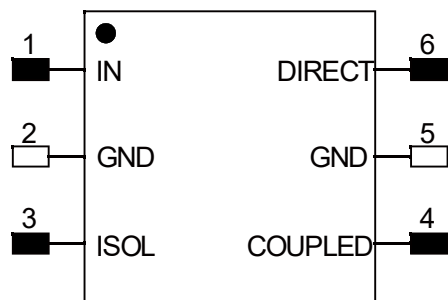
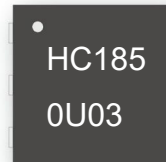
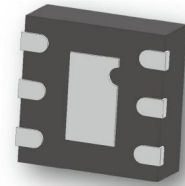
## HC1850U03-030

3dB 90° Coupler IC  
1.75 GHz-1.95 GHz



### Features

- Small Size (2×2mm)
- Passive RF IC, no need external DC power supply
- Very Low Loss
- Tight Amplitude Balance
- High Isolation
- Low VSWR
- Good Repeatability
- Tape & Reel
- Operating Temperature: -40°C to +85°C
- Power handling
  - 4 Watts as a divider
  - 2 Watts as a combiner



TOP VIEW

### Applications

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

#### Notes:

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

### Electrical Specifications at 25° C

Parameter	Symbol	Min	Typ	Max	Unit
Frequency Range	F	1750		1950	MHz
Insertion Loss (Above 3dB)	$I_L$		0.25	0.30	dB
Isolation	Isol	35	39		dB
Phase balance	$\phi_{bal}$		1.0	1.5	deg
Amplitude balance	$A_{bal}$		0.5	0.7	dB
Return Loss	$R_L$	28	32		dB

### Yantel Corporation

Add: No.308-322, 3F, Building 1, Juchuang Jingu Innovation Park, Wenyuan Road 35, Xili Street, Nanshan, Shenzhen, China  
Tel: 86-755-8355-1886 Fax: 86-755-8355-2533

For detailed performance specs & shopping online see Yantel web site : [www.yantel-corp.com](http://www.yantel-corp.com)

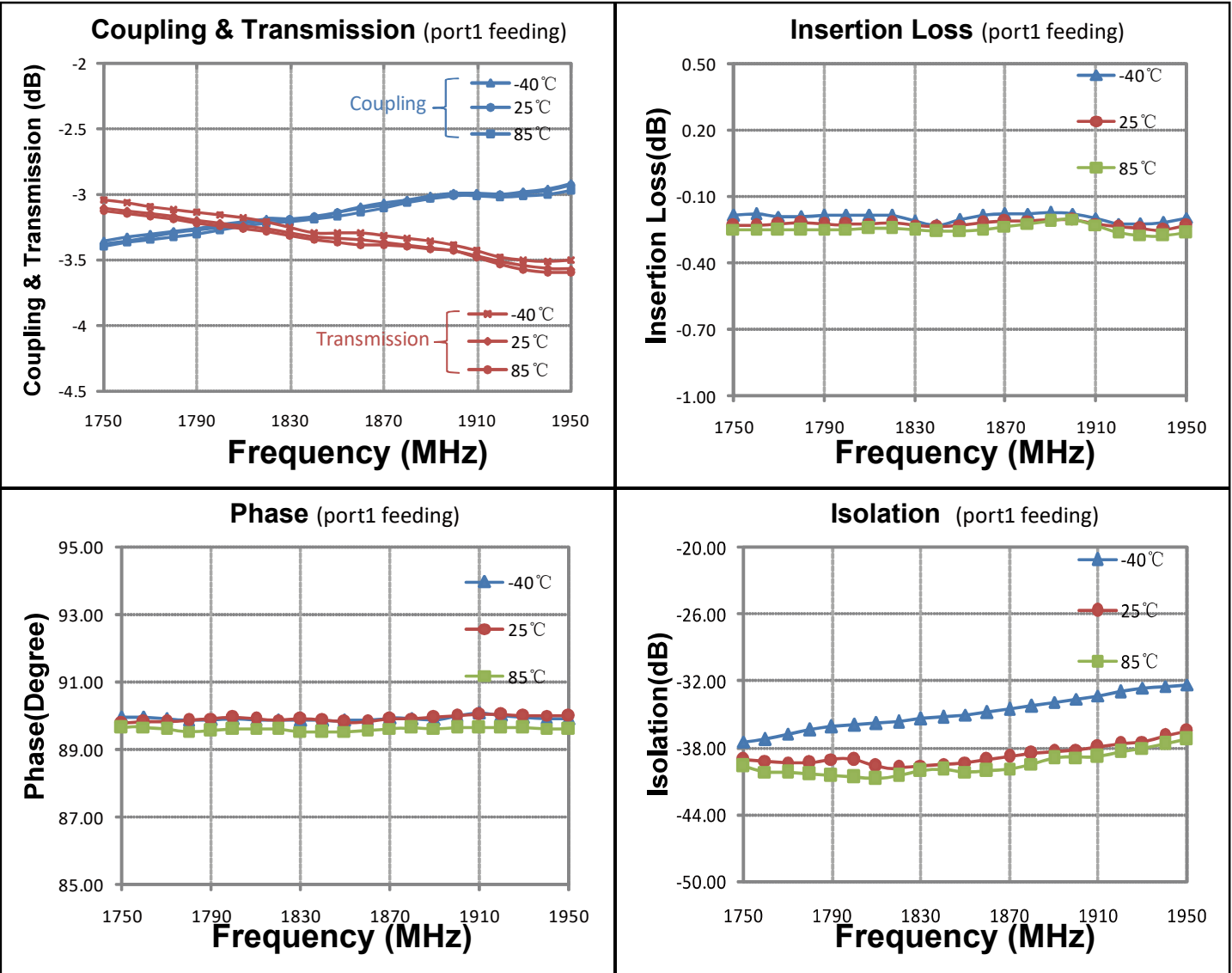
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**Typical Performance (-40°C, 25°C, 85°C: 1750-1950 MHz)**



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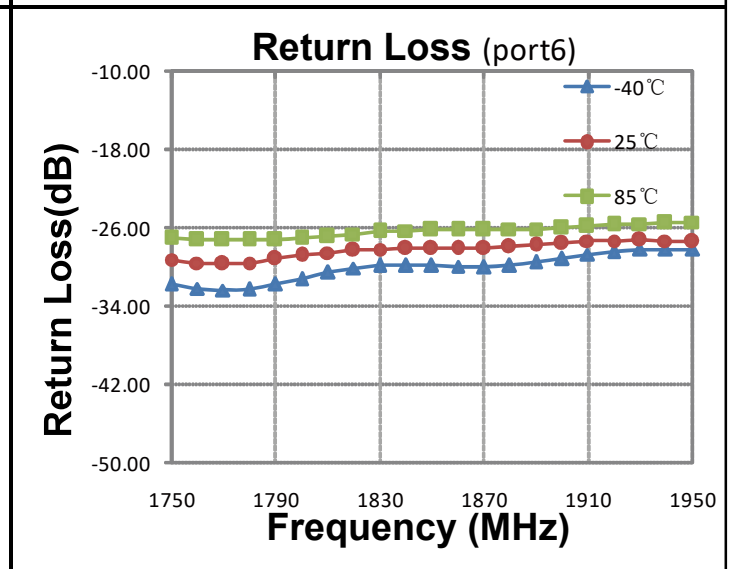
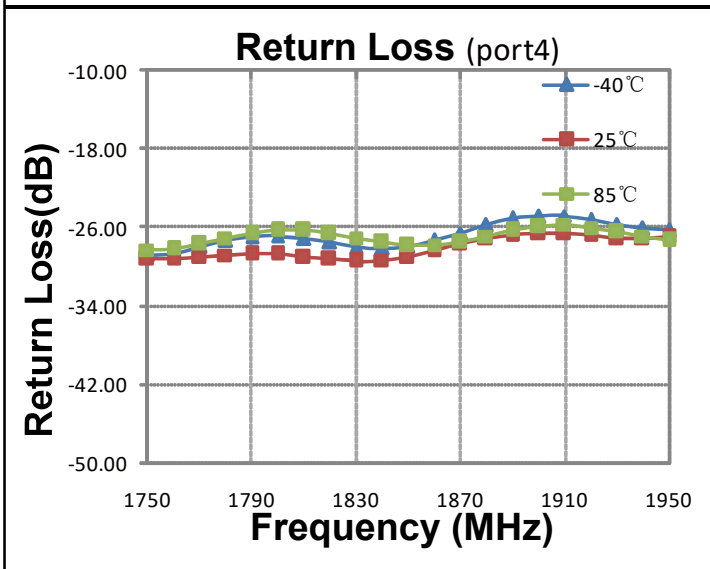
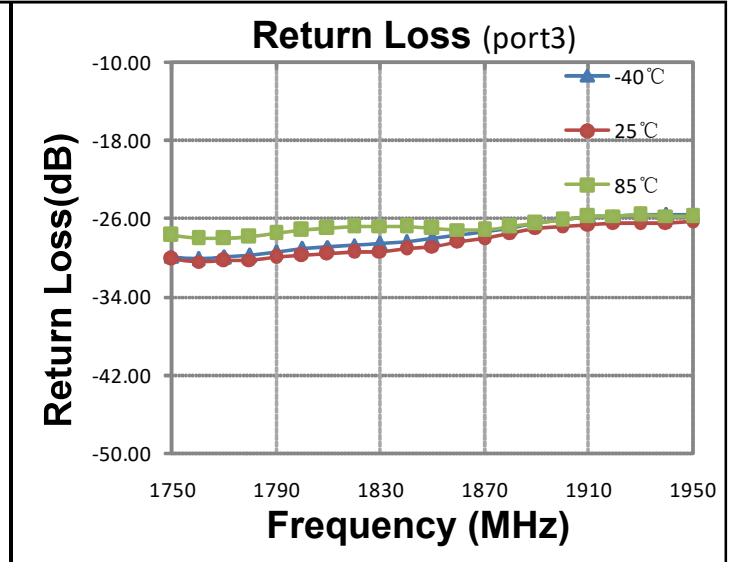
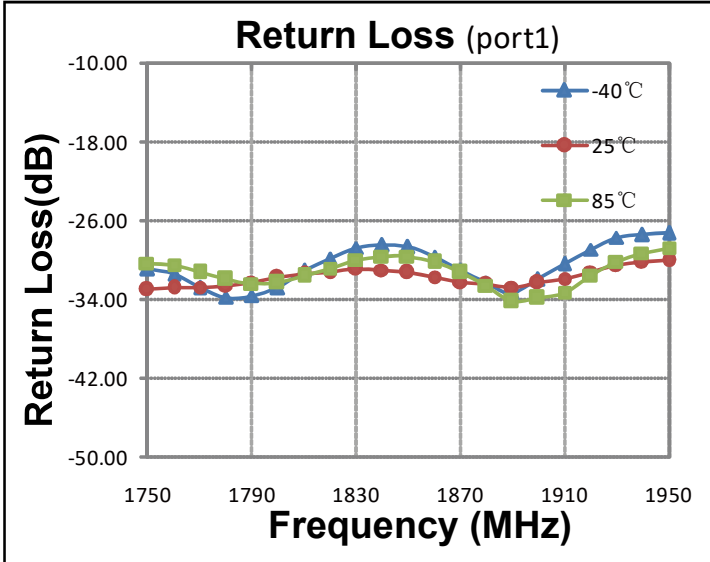
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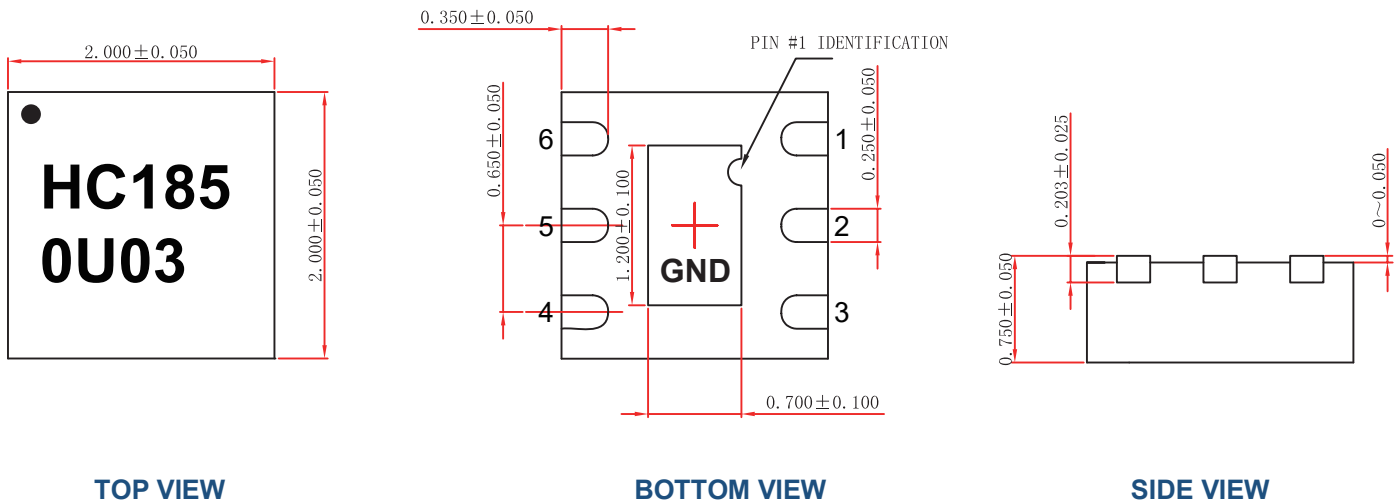
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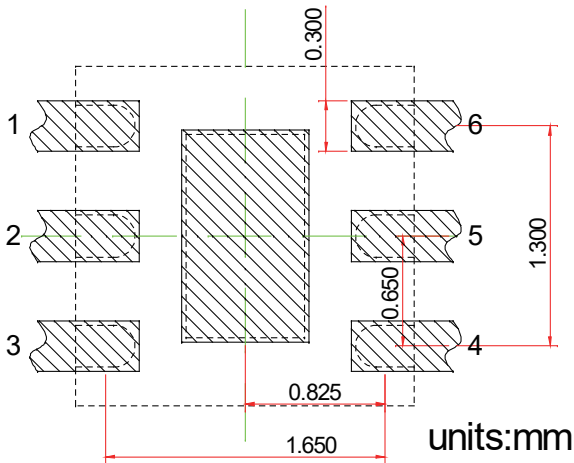
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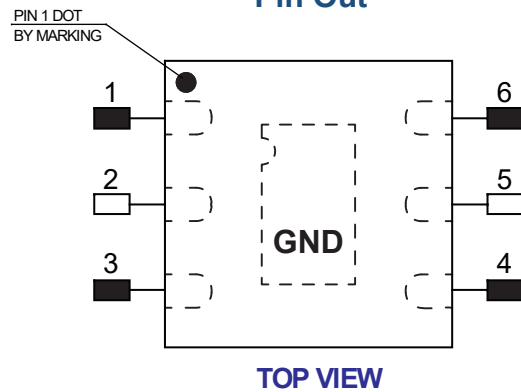
### Outline Drawing



### Land Pattern



### 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.

### Recommended Land Pattern Top View

Notes: All dimensions show in millimeters

Pin #	Connection
1	IN
2	GND
3	ISOL
4	COUPLED
5	GND
6	DIRECT
Center Pad	GND

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