

# Data Sheet

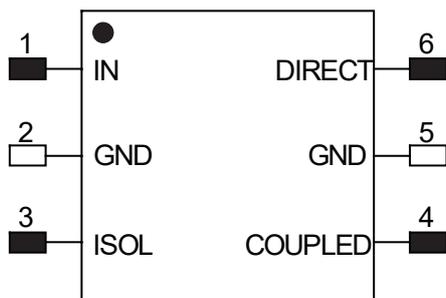
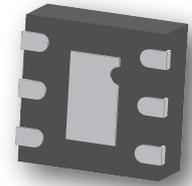
## HC085U03-010

3dB 90° Coupler IC  
820 MHz-900 MHz



### 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	820		900	MHz
Insertion Loss (Above 3dB)	I <sub>L</sub>		0.30	0.35	dB
Isolation	Isol	23	25		dB
Phase balance	∅ <sub>bal</sub>		1.0	2.0	deg
Amplitude balance	A <sub>bal</sub>		0.45	0.6	dB
Return Loss	R <sub>L</sub>	22	25		dB

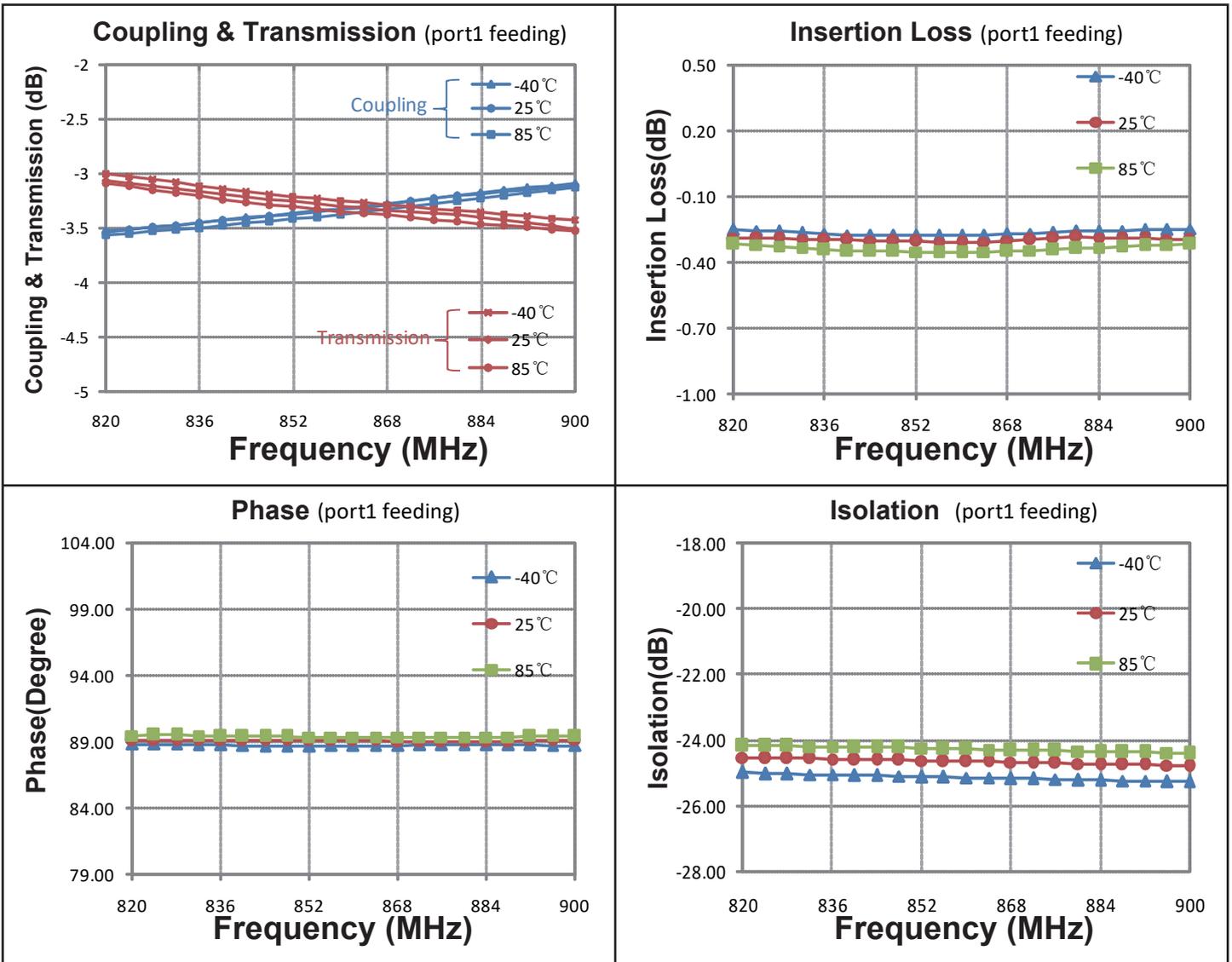
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## HC0850U03-010

3dB 90° Coupler IC  
820 MHz-900 MHz



### Typical Performance (-40°C, 25°C, 85°C: 820-900 MHz)



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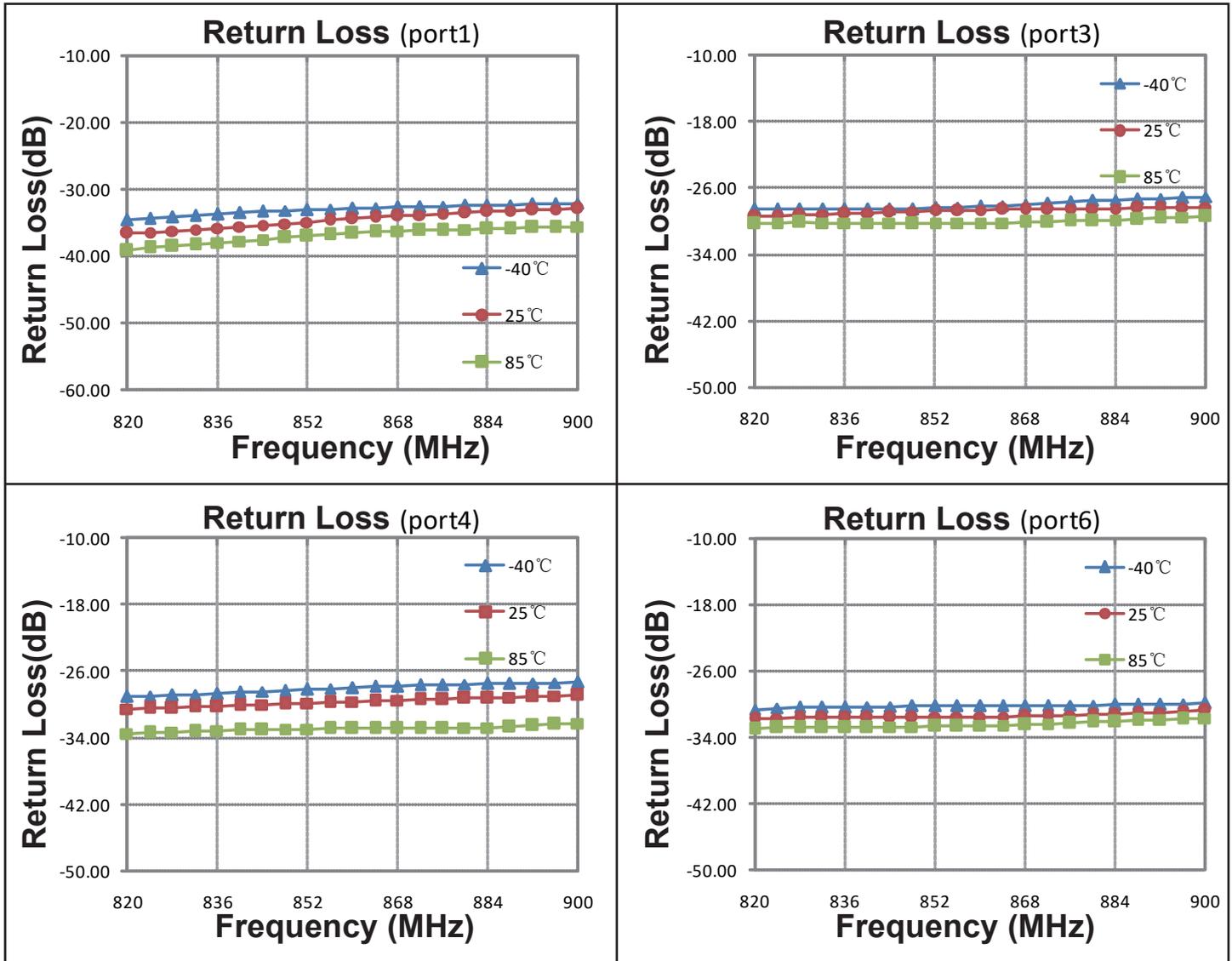
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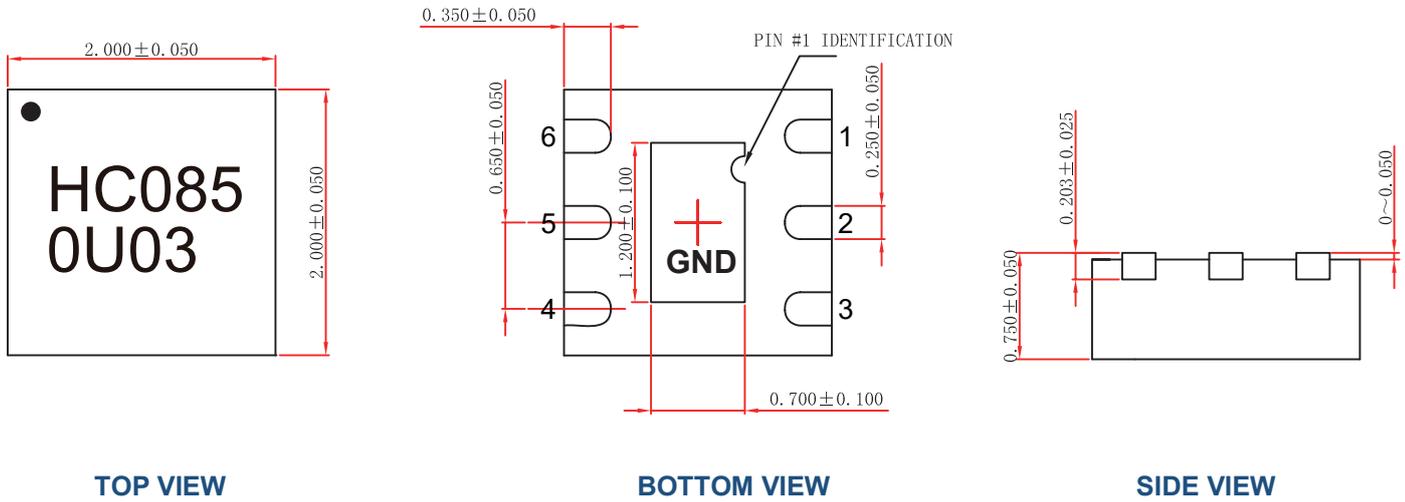
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## HC0850U03-010

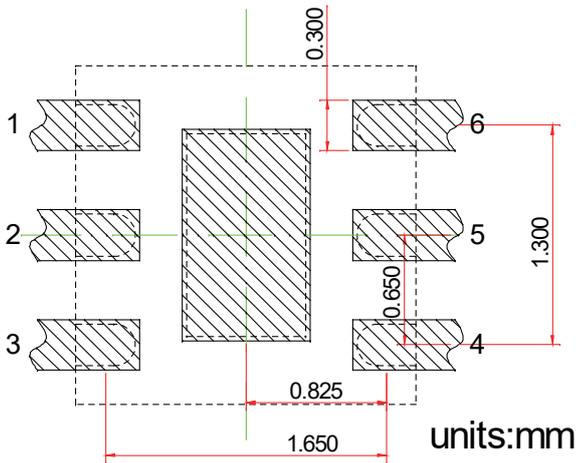
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### Outline Drawing



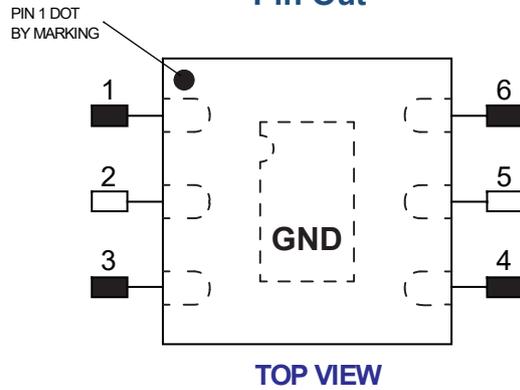
### Land Pattern



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