

# Data Sheet

## HC2000U03

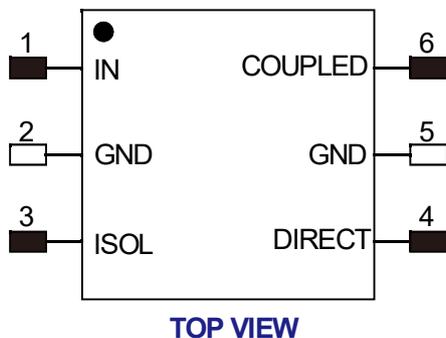
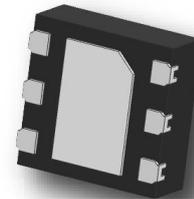
### 3dB 90° Coupler IC

### 18GHz-22GHz



## Features

- Small Size (2×2mm)
- Very Low Loss
- Tight Amplitude Balance
- High Isolation
- Low VSWR
- Good Repeatability
- Tape & Reel
- Power handling
  - 4 Watts as a divider
  - 2 Watts as a combiner



## 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.

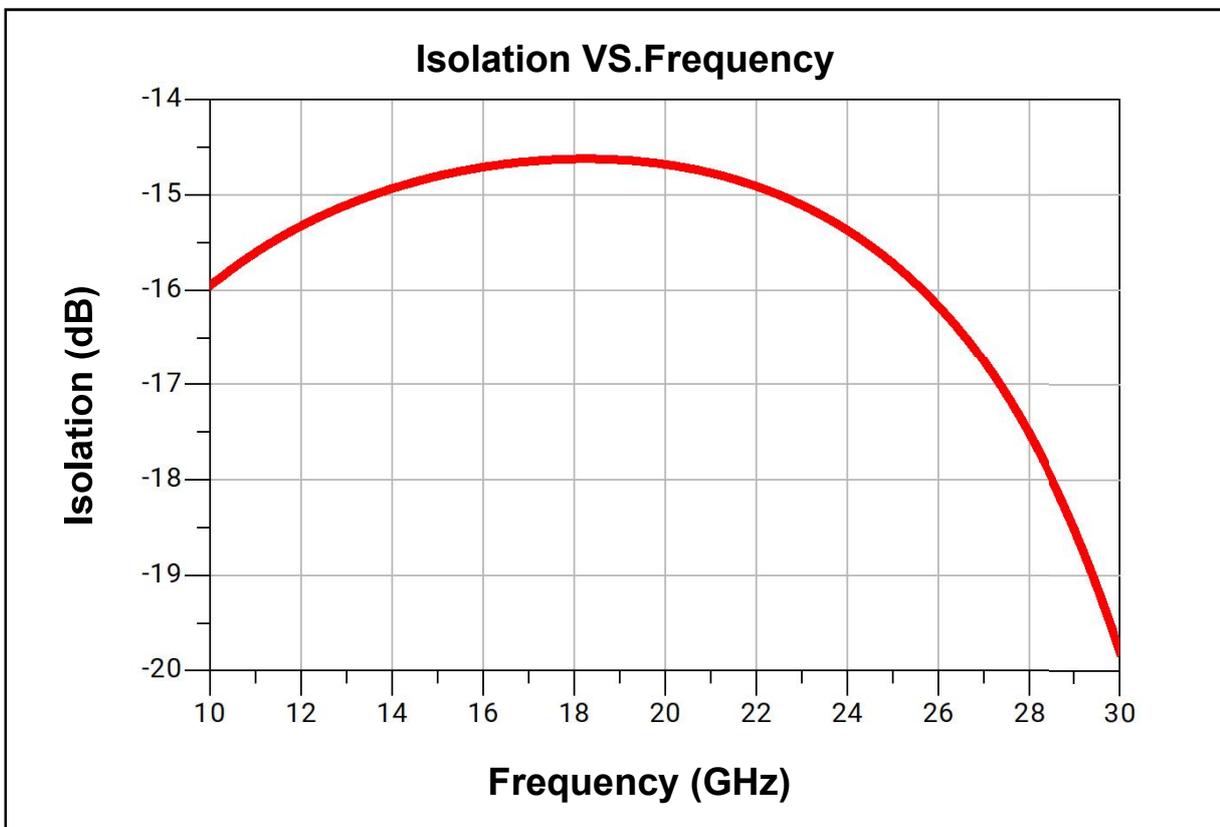
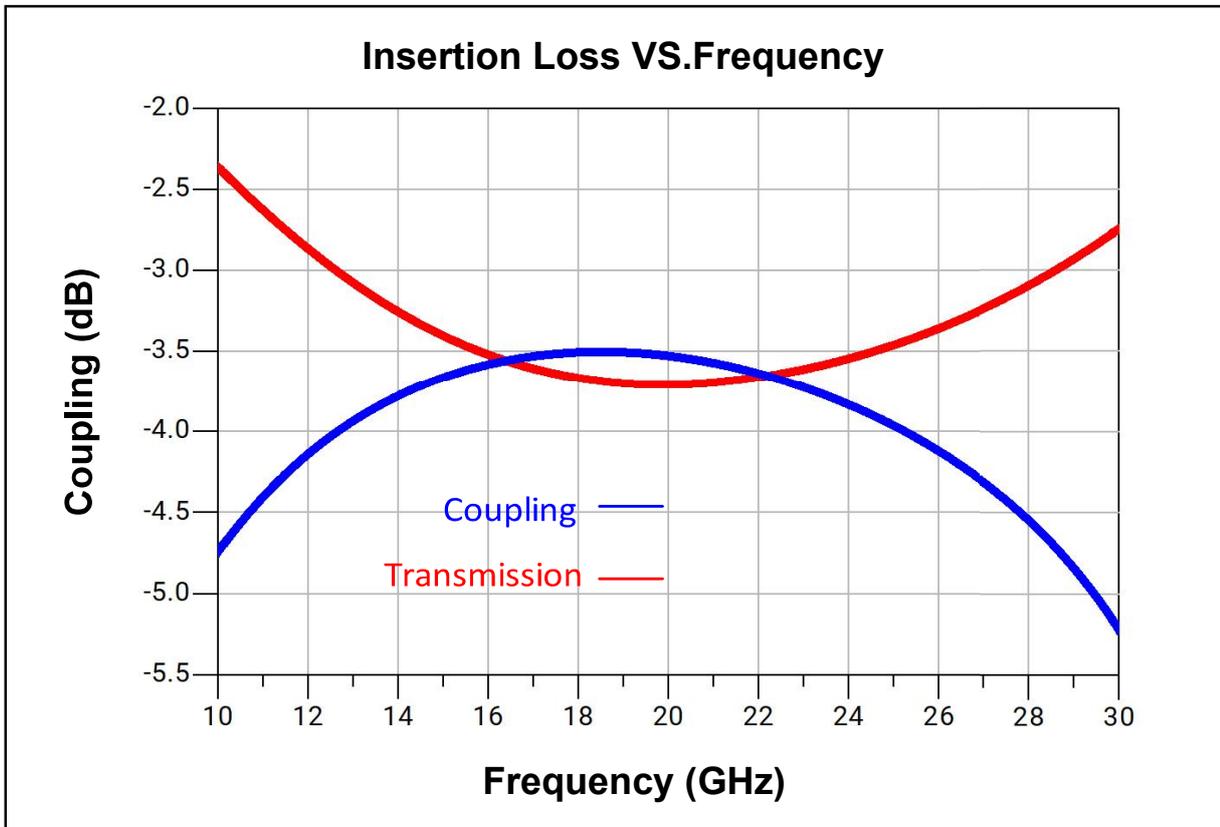
## Electrical Specifications at 25°C

Parameter	Symbol	Min	Typ	Max	Unit
Frequency Range	F	18		22	GHz
Insertion Loss (Above 3dB)	I <sub>L</sub>		0.6	1.1	dB
Isolation	Isol	13.5	16		dB
Phase Unbalance (Deviation from 90°)	∅ <sub>bal</sub>		3.0	5.0	deg
Amplitude Unbalance	A <sub>bal</sub>		0.6	1.0	dB
Input VSWR			1.3	1.5	
Output VSWR			1.3	1.5	

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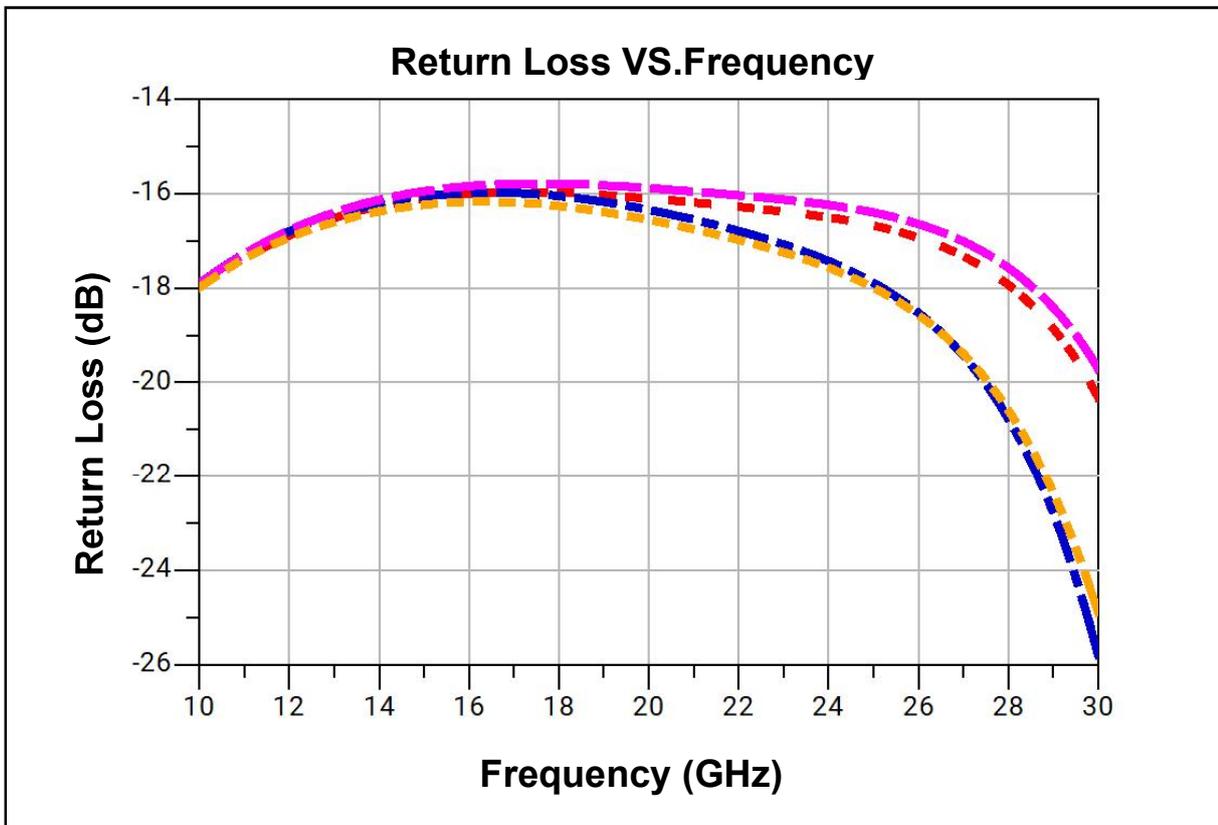
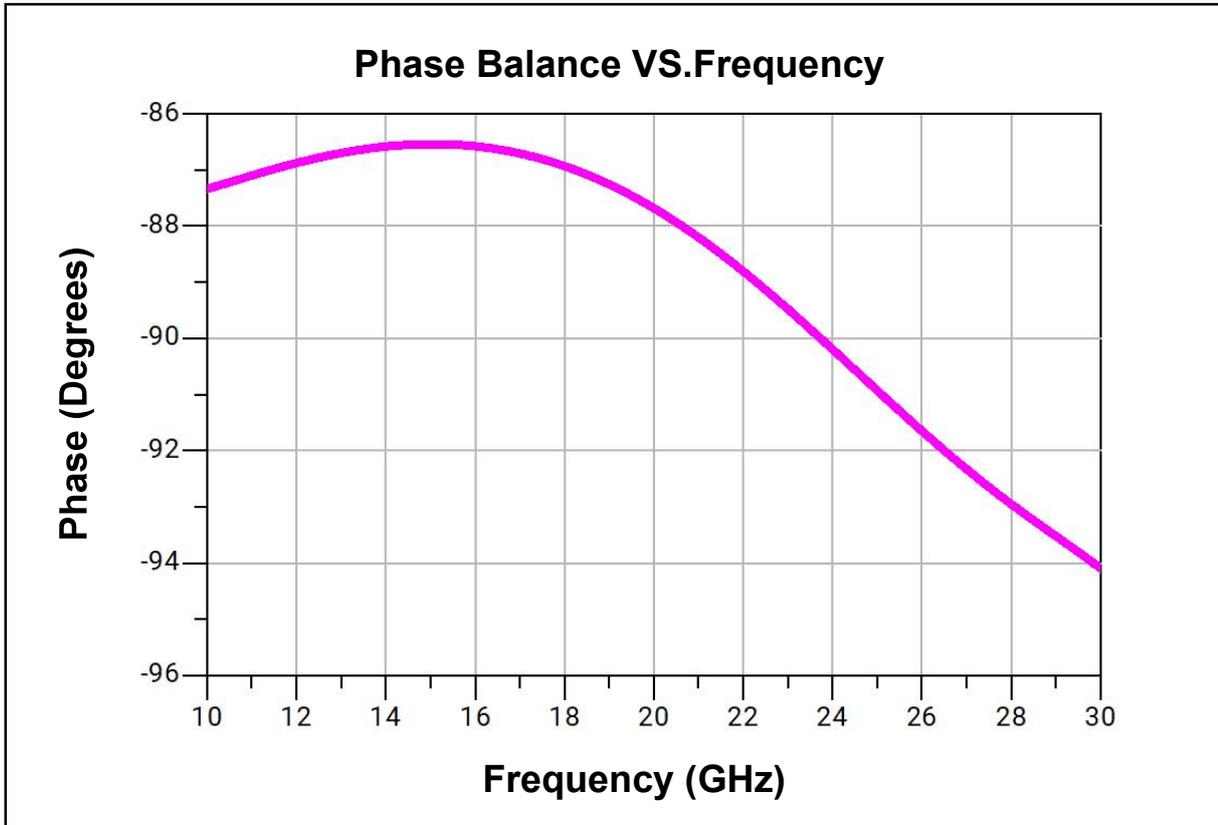
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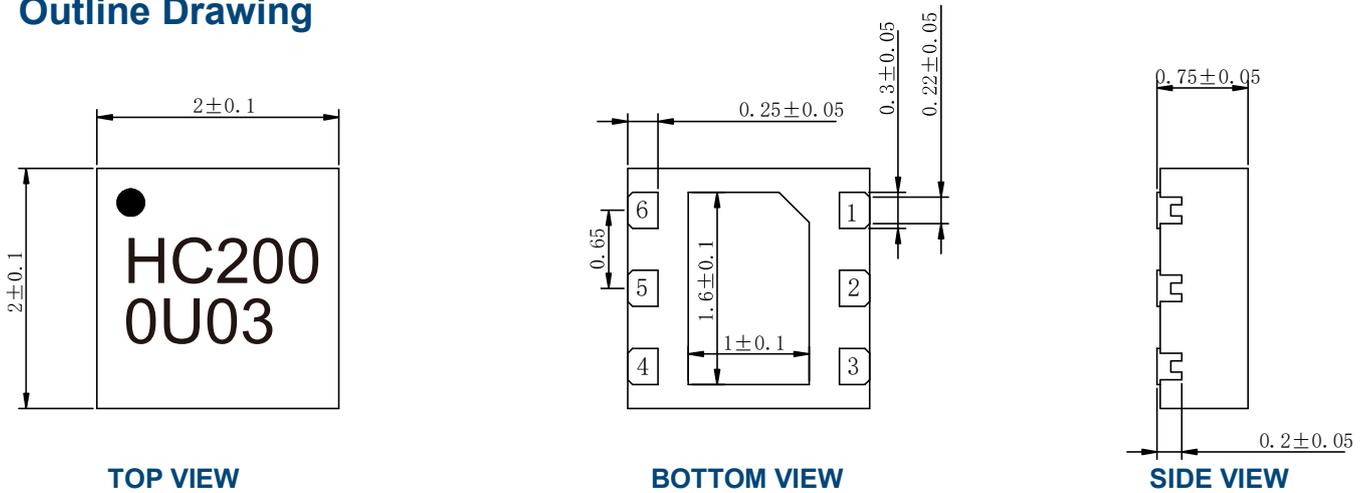
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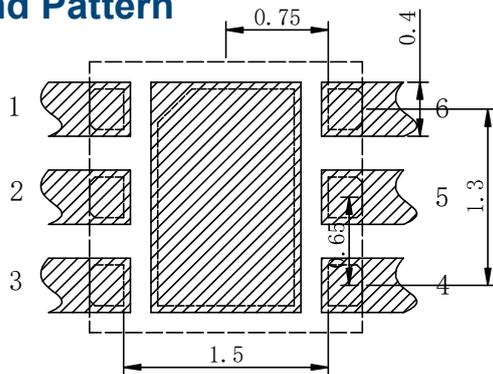
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### Outline Drawing



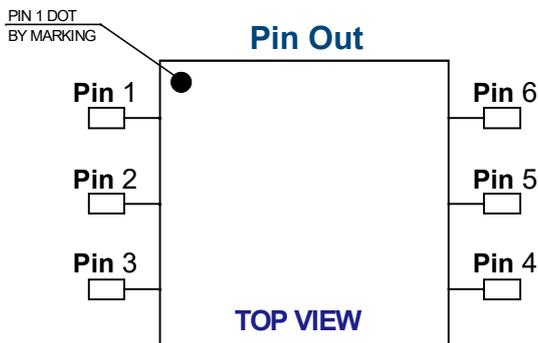
### Land Pattern



units:mm

Recommended Land Pattern Top View **Notes:** All dimensions show in millimeters

### Hybrid Coupler Pin Configuration



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