

# Data Sheet

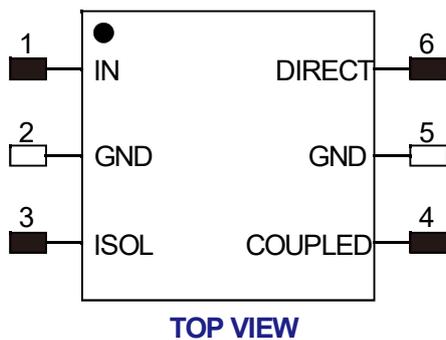
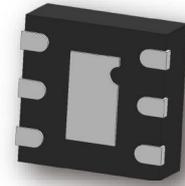
## HC1650U03-200

3dB 90° Coupler IC  
1.55GHz-1.75 GHz



### 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.

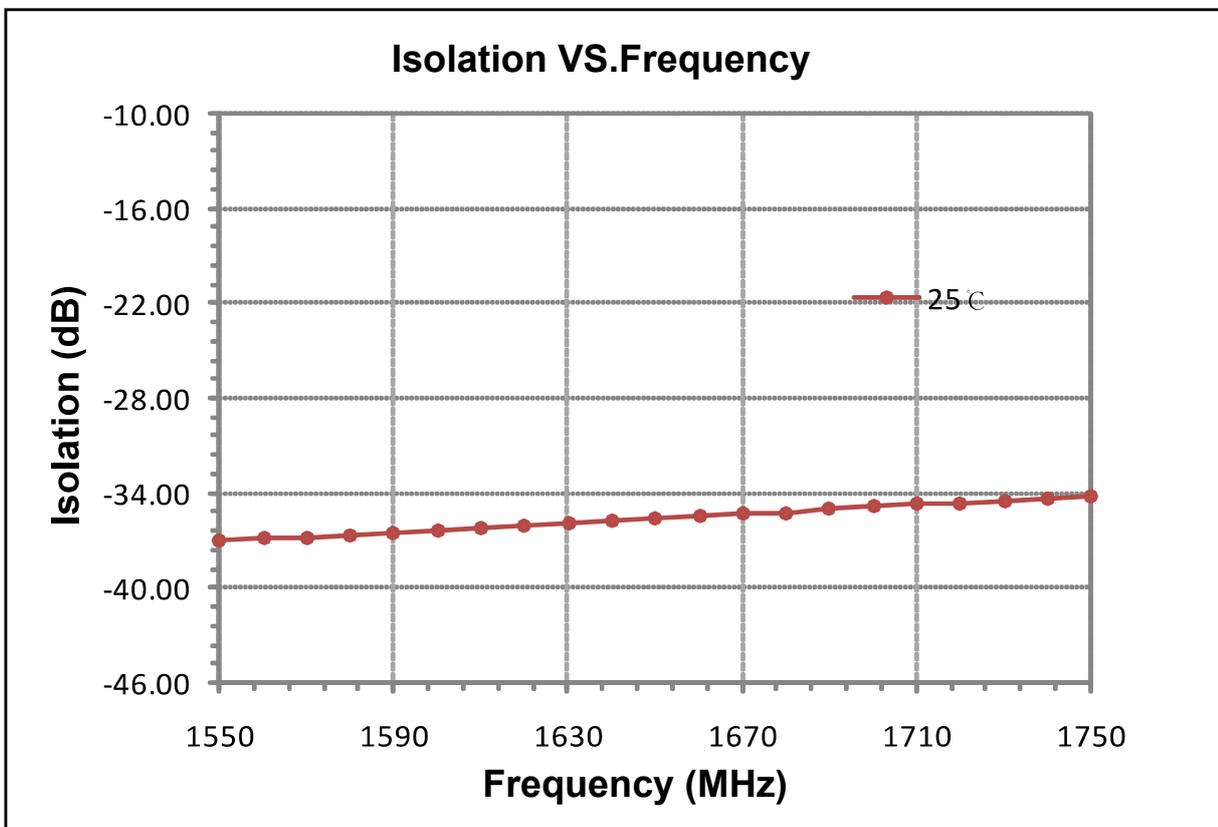
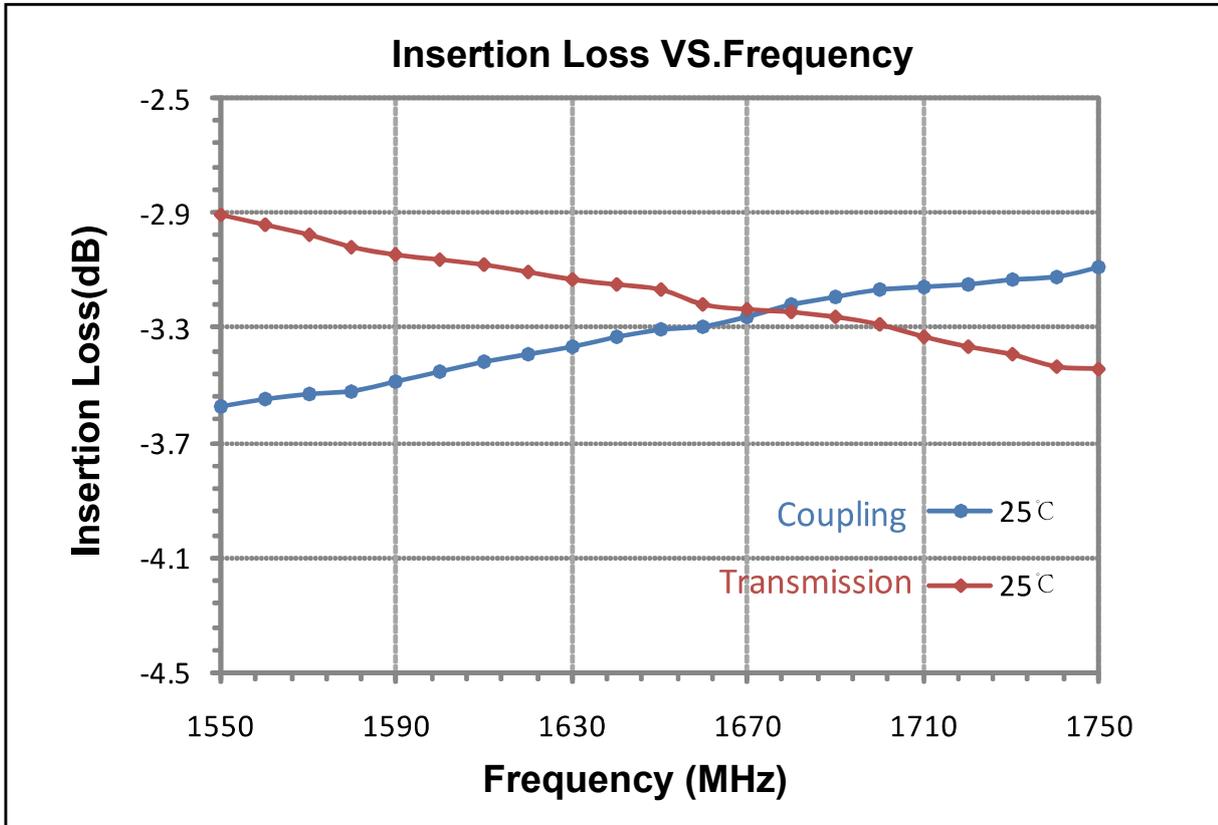
### Electrical Specifications at 25° C

Number	Frequency (MHz)	Coupling		Transmission		Amplitude Balance (dB)	Isolation (dB)	Phase (degree)	Return Loss(dB)			
		Coupling (dB)	Phase1	Trans mission (dB)	Phase2				S11	S22	S33	S44
HC1650U03-200	1558	3.7	-90.82	3.08	179.46	0.62	36.88	89.72	30.83	30.43	28.88	32.84
	1561	3.69	-91.14	3.09	179.14	0.6	36.85	89.72	30.8	30.38	28.86	32.8
	1575	3.66	-92.61	3.13	177.58	0.53	36.7	89.81	30.56	30.15	28.79	32.67
	1609	3.56	-96.06	3.21	174.08	0.35	36.19	89.86	29.82	29.45	28.58	32.22
	1616	3.54	-96.75	3.23	173.34	0.31	36.09	89.91	29.61	29.31	28.56	32.11

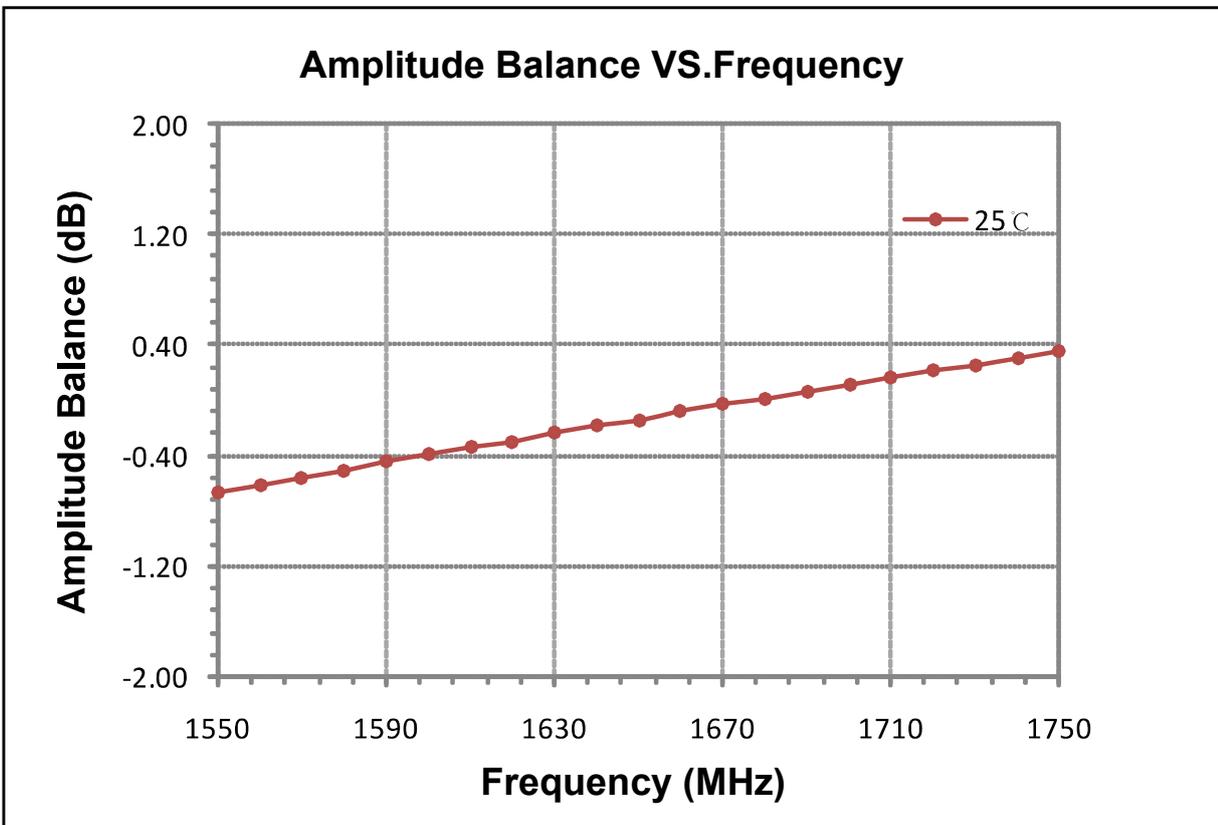
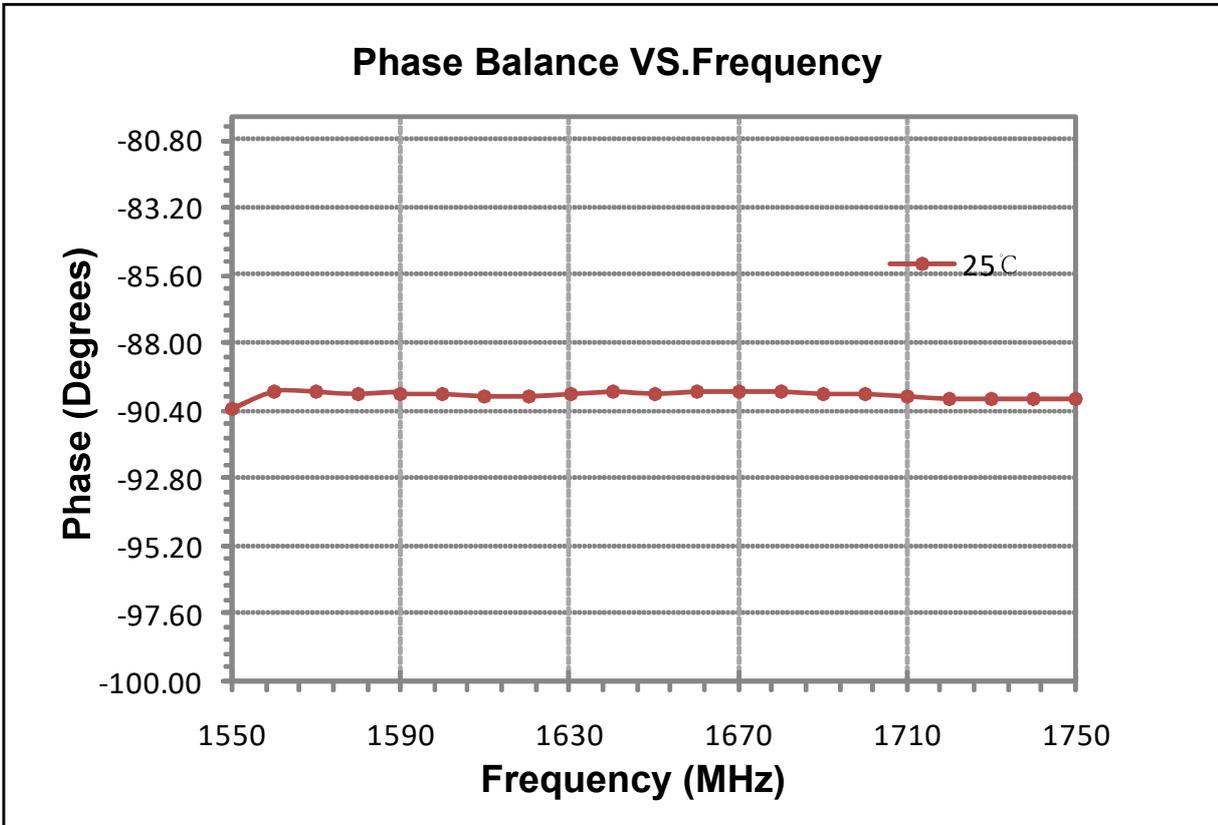
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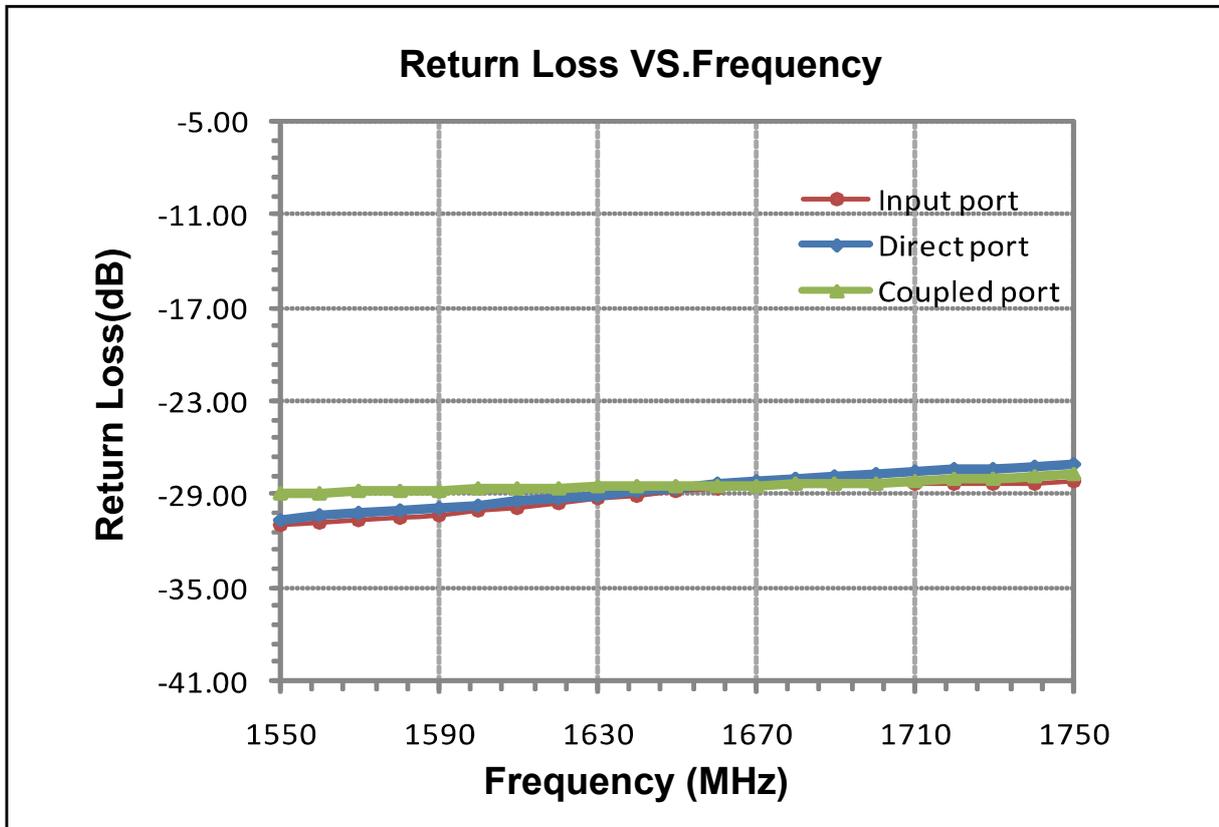
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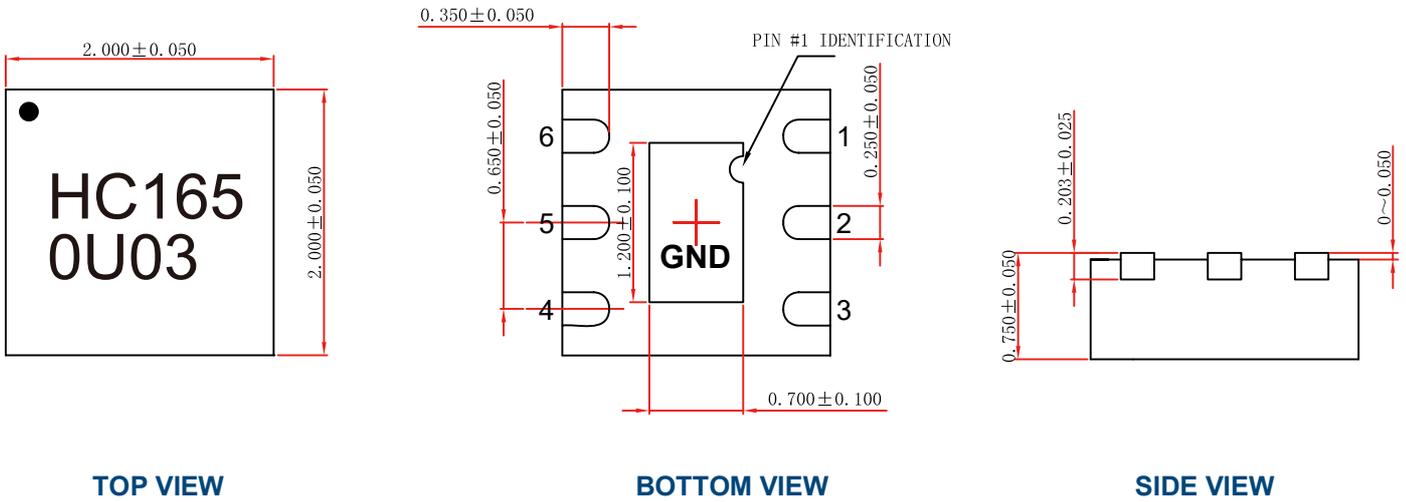
# Data Sheet

## HC165U03-200

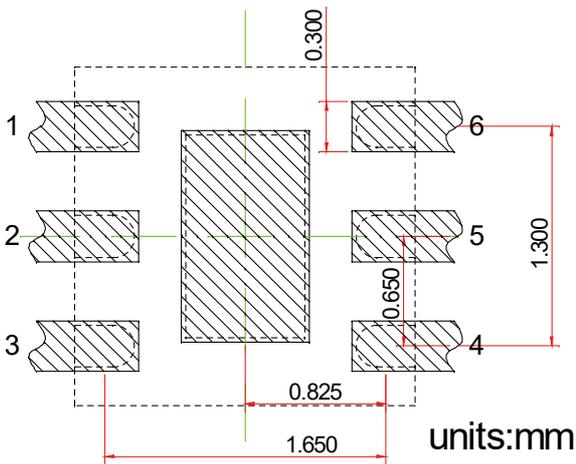
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1.55 GHz-1.75 GHz



### Outline Drawing



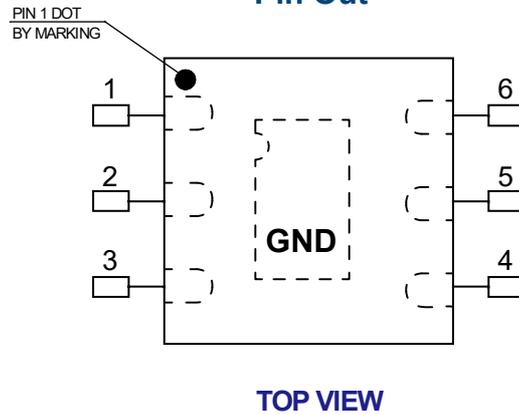
### Land Pattern



### Recommended Land Pattern Top View

Notes: All dimensions show in millimeters

### Pin Out



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