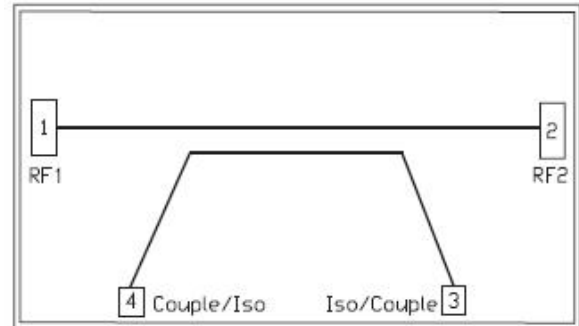


## GaAs MMIC Monolithic Integrated Directional Coupler , 2.7-6.2GHz

### Performance characteristics

- Frequency range: 2.7 -6.2 GHz
- Insertion loss : 0.35 dB Typ.
- Coupling: 15dB
- Coupling flatness: 2.5dB
- VSWR: 1.2
- 50Ohm input / output
- Chip size: 2.615 x 1.1 x 0.1mm

### Functional Block Diagram



### Product Introduction

GDC-02706215B single-chip coupler chip covers a frequency range of 2.7 GHz to 6.2 GHz , with a coupling degree of 15 dB . The chip has an insertion loss of 0.35 dB , a coupling flatness of 2.5 dB , and a port VSWR of 1.2 in the entire operating frequency band. The chip uses an on-chip through-hole metallization process to ensure good grounding, does not require additional grounding measures, and is simple and convenient to use.

#### Use restriction parameter <sup>1</sup>

Maximum input power	+40dBm
Operating temperature	-55 ~ +85°C
Storage temperature	-65 ~ +150°C

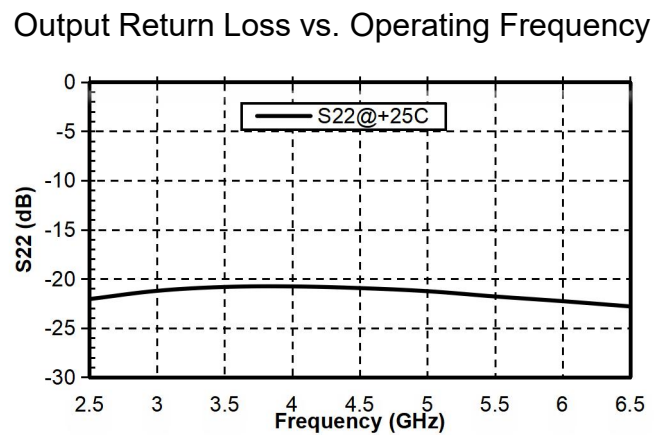
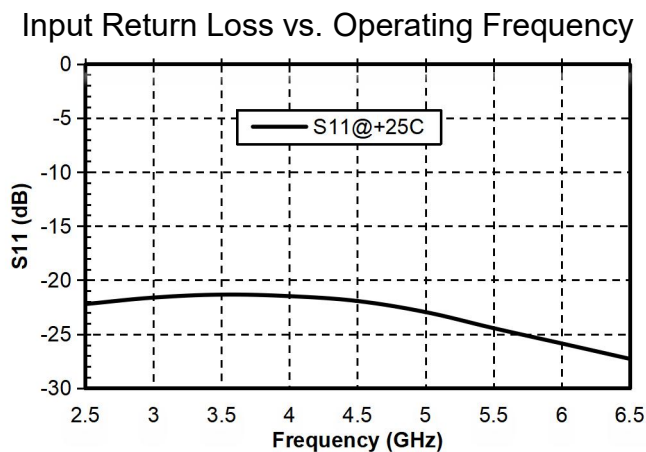
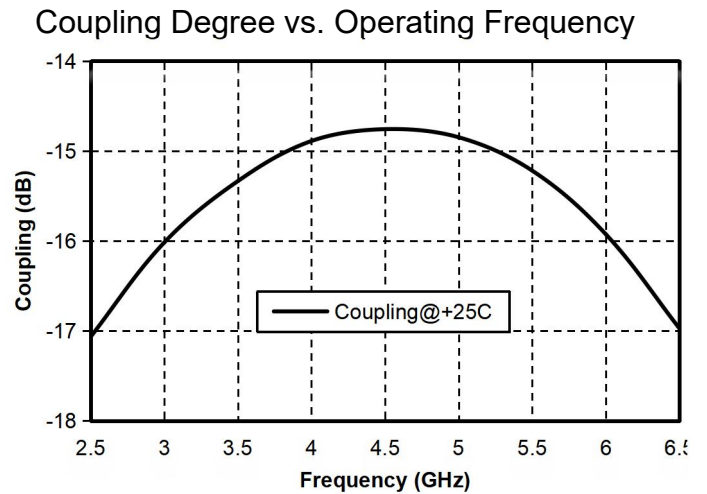
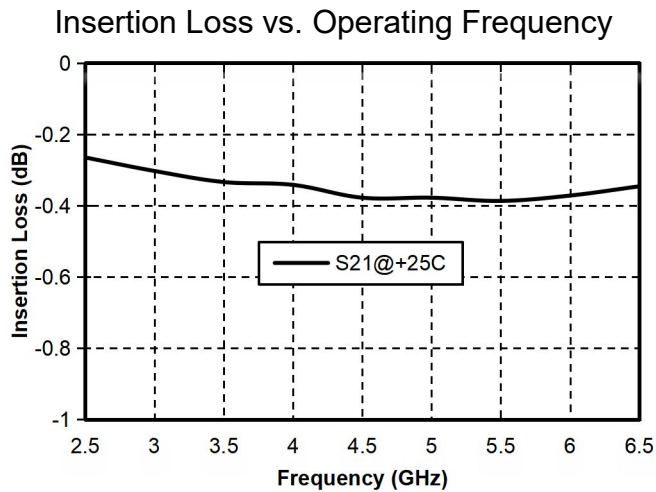
【1】 Exceeding any of these maximum limits may cause permanent damage.

#### Electrical performance parameters ( TA = +25°C)

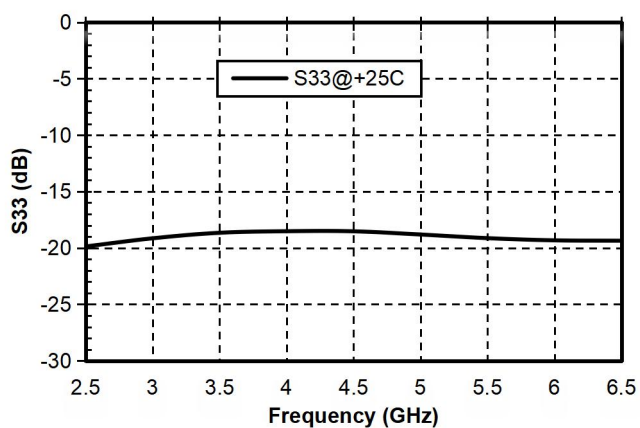
Index	Minimum	Typical Value	Maximum	Unit
Frequency Range	2.7-6.2			GHz
Insertion loss	-	0.35	-	dB
Coupling	-	15	-	dB
Input return loss	-	23	-	dB
Output return loss	-	21	-	dB
Coupled output return loss	-	19	-	dB
Isolation	-	35	-	dB

## GaAs MMIC Monolithic Integrated Directional Coupler , 2.7-6.2GHz

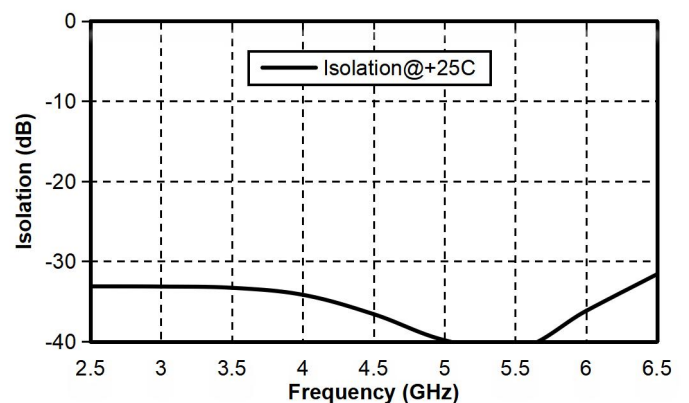
Main index test curve



Coupled Output Return Loss vs. Operating Frequency



Isolation vs. Operating Frequency



## GaAs MMIC Monolithic Integrated Directional Coupler , 2.7-6.2GHz

Appearance structure <sup>2</sup>



【 2 】 The units in the figure are all micrometers ( dimensional tolerance:  $\pm 100\mu\text{m}$ .)

### Bonding point definition $\Omega$

Bonding point number	Function Symbol	Functional Description
1	RF 1	RF signal input /output terminal
2	RF2	RF signal input /output terminal
3	Coupling/Termination	Coupled RF signal output and /or load
4	Coupling/Termination	Coupled RF signal output and /or load
Chip bottom	GND	The bottom of the chip needs to be well grounded to RF and DC

\* At the coupled RF signal output end, users can choose the internal integrated load of the chip or connect an external load.

### Recommended assembly drawing

