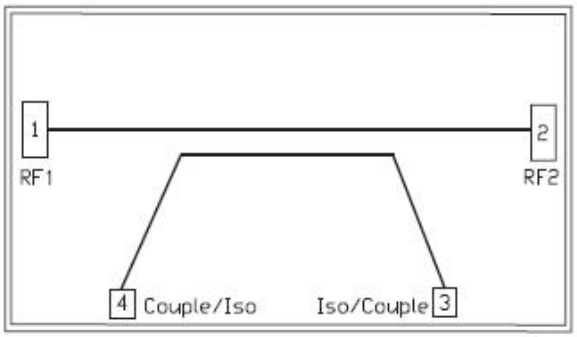
GDC - 061820D

GaAs MMIC Monolithic Integrated Directional Coupler , 6-18GHz

Performance characteristics

- Frequency range: 6 -18 GHz
- Insertion loss : 0.15 dB (typ.)
- Coupling: 20dB
- Coupling flatness: 3.0dB
- VSWR: 1.2
- 50Ohm input / output
- 100% on-wafer testing
- Chip size: 2.00 x 0.94 x 0.1mm

Functional Block Diagram



Product Introduction

The GDC-061820D single-chip coupler chip covers a frequency range of 6 GHz to 18 GHz with a coupling degree of 20 dB . The chip has an insertion loss of 0.15 dB , a coupling flatness of 3.0 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 [1]	
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.

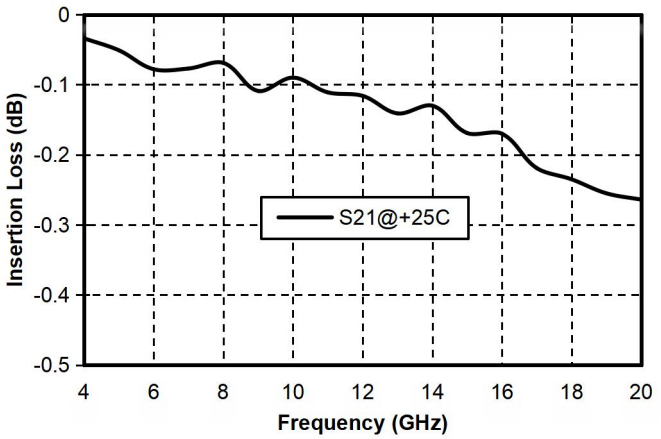
Electrical performance parameters (TA = +25°C)				
Index	Minimum	Typical Value	Maximum	Unit
Frequency Range		6-18		GHz
Insertion loss		0.15	-	dB
Coupling	-	20	-	dB
Input return loss	-	23	-	dB
Output return loss	-	23	-	dB
Coupled output return loss	-	19.5	-	dB
Isolation		38		dB

Add: 101 cecil street #14-10, tong eng building singapore 069533
Email: info@standardcircuit.com
Web: www.standardcircuit.com
Tel: +65 82613258

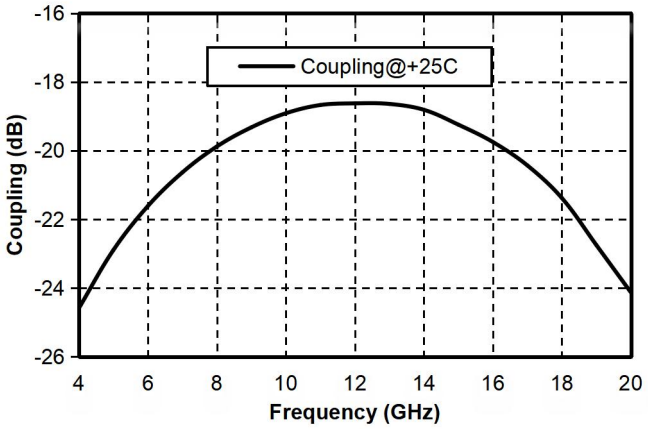
GaAs MMIC Monolithic Integrated Directional Coupler , 6-18GHz

Main index test curve

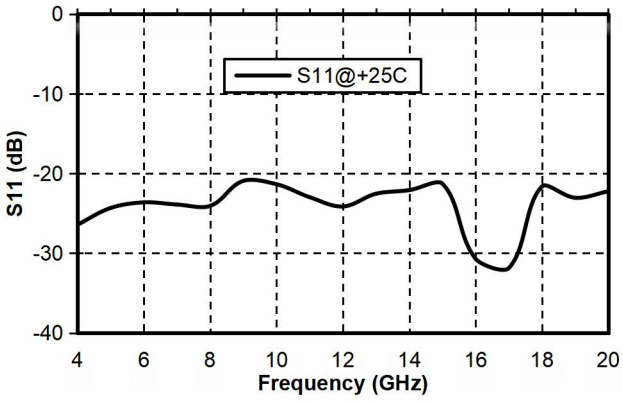
Insertion Loss vs. Operating Frequency



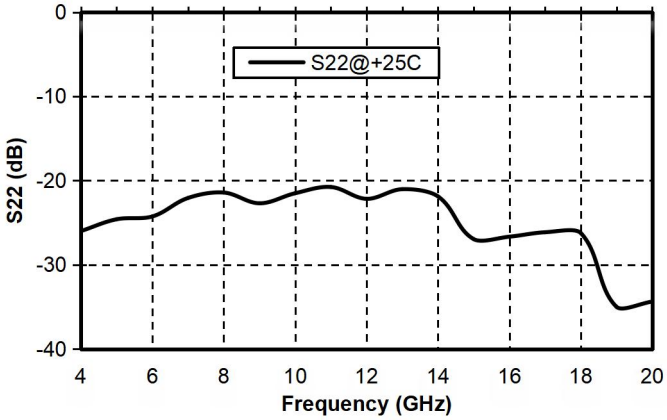
Coupling Degree vs. Operating Frequency



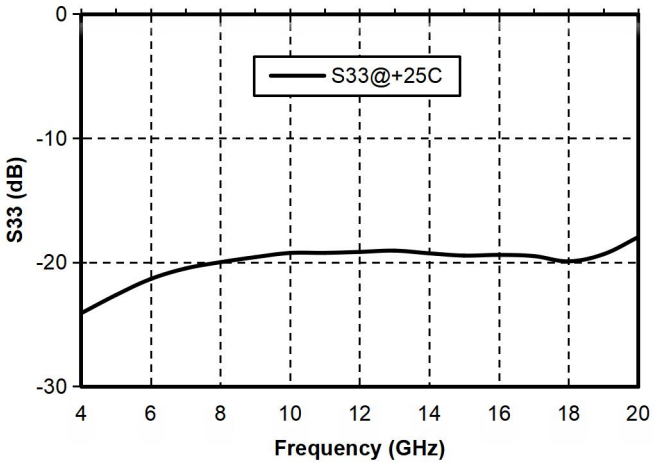
Input Return Loss vs. Operating Frequency



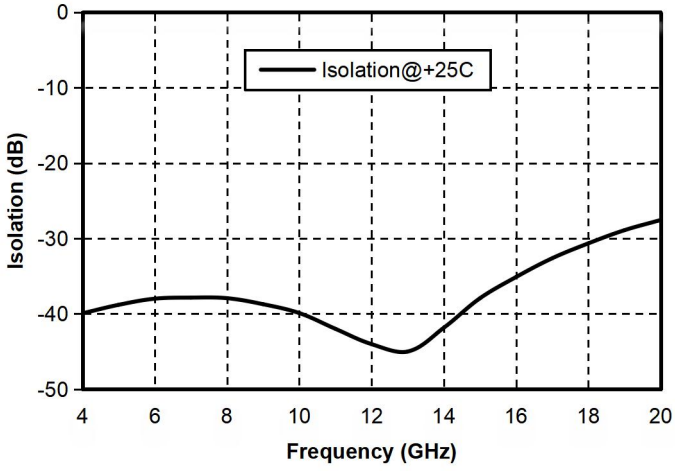
Output Return Loss vs. Operating Frequency



Coupled Output Return Loss vs. Operating Frequency

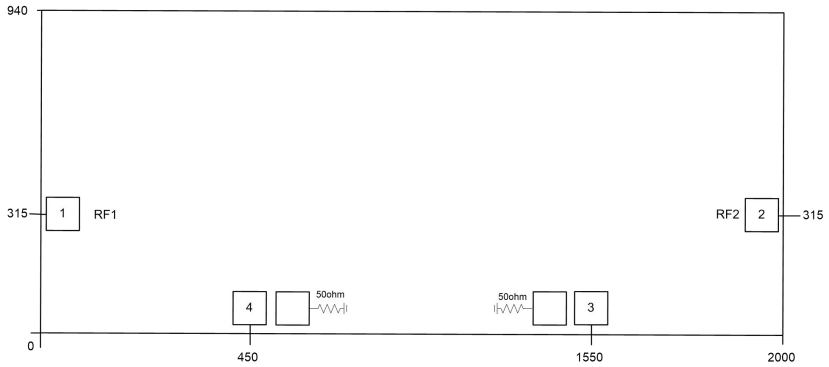


Isolation vs. Operating Frequency



GaAs MMIC Monolithic Integrated Directional Coupler , 6-18GHz

Appearance structure [2]



【 2 】All units in the figure are micrometers

Bonding point definition		
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 output end of the coupled RF signal , users can choose the chip's internal integrated load or connect an external load. When choosing the chip's internal integrated load, keep the gold wire as short as possible .

Recommended assembly drawing