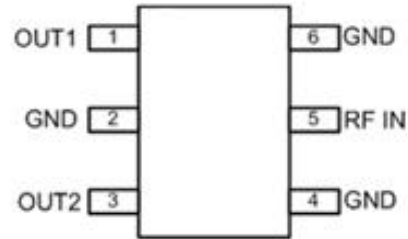


GaAs MMIC monolithic integrated 0 degree power divider , 2800-4200M Hz

Performance characteristics

- Frequency range: 2800-4200MHz
- Insertion loss : 0.8 dB
- Isolation: 25dB
- Phase imbalance: 0.5 °
- Amplitude imbalance: 0.1dB
- 50Ohm input / output
- Chip size: SOT23

Functional Block Diagram



Product Introduction

GPD-028042A-ST23 monolithic integrated 0 degree power divider has low insertion loss, good isolation, and low phase and amplitude imbalance in the frequency range of 2800 ~ 4200MHz , which is very suitable for microwave hybrid integrated circuits and multi-chip modules. This chip adopts SOT23 plastic surface mount package, and the surface of the pin pad is tinned, which is suitable for reflow soldering installation process.

Electrical performance parameters (TA = +25°C)

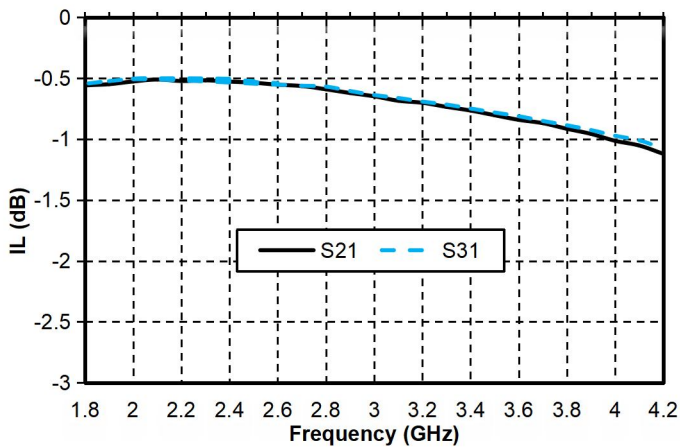
Index	Minimum	Typical Value	Maximum	Test frequency	Unit
Insertion loss*/isolation	-	0.6 / 23	-	2800 MHz	dB
	-	0.7 / 26	-	3200 MHz	dB
	-	0.8 / 25	-	3600 MHz	dB
	-	0.9 / 25	-	3800 MHz	dB
	-	1.1 / 24	-	4200 MHz	dB
Phase imbalance/amplitude imbalance	-	0.1 / 0.3	-	2800 MHz	Deg .dB
	-	0.4 / 0.1	-	3200 MHz	Deg .dB
	-	0.4 / 0.1	-	3600 MHz	Deg .dB
	-	0.5 / 0.1	-	3800 MHz	Deg .dB
	-	0.6 / 0.1	-	4200 MHz	Deg .dB
Input return loss / output return loss	-	29 / 23	-	2800 MHz	dB
	-	21 / 31	-	3200 MHz	dB
	-	19 / 27	-	3600 MHz	dB
	-	18 / 23	-	3800 MHz	dB
	-	16 / 17	-	4200 MHz	dB

* The inherent loss of the power divider has been deducted .

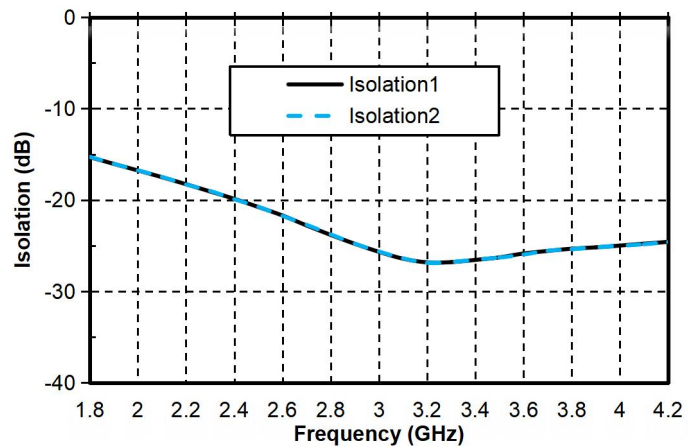
GaAs MMIC monolithic integrated 0 degree power divider , 2800-4200 MHz

Main index test curve

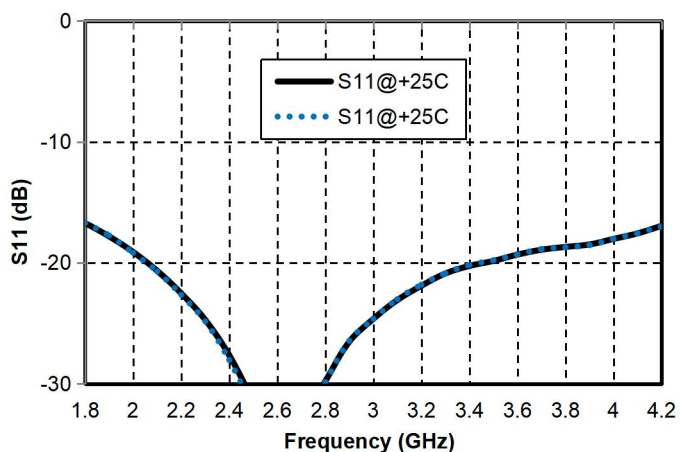
Insertion Loss vs. Operating Frequency



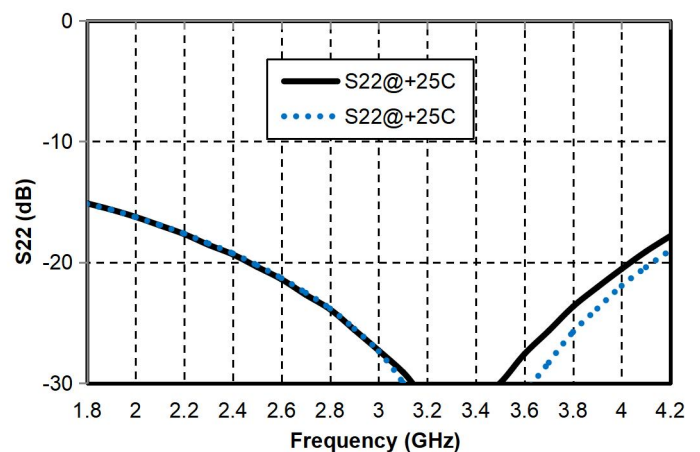
Isolation vs. Operating Frequency



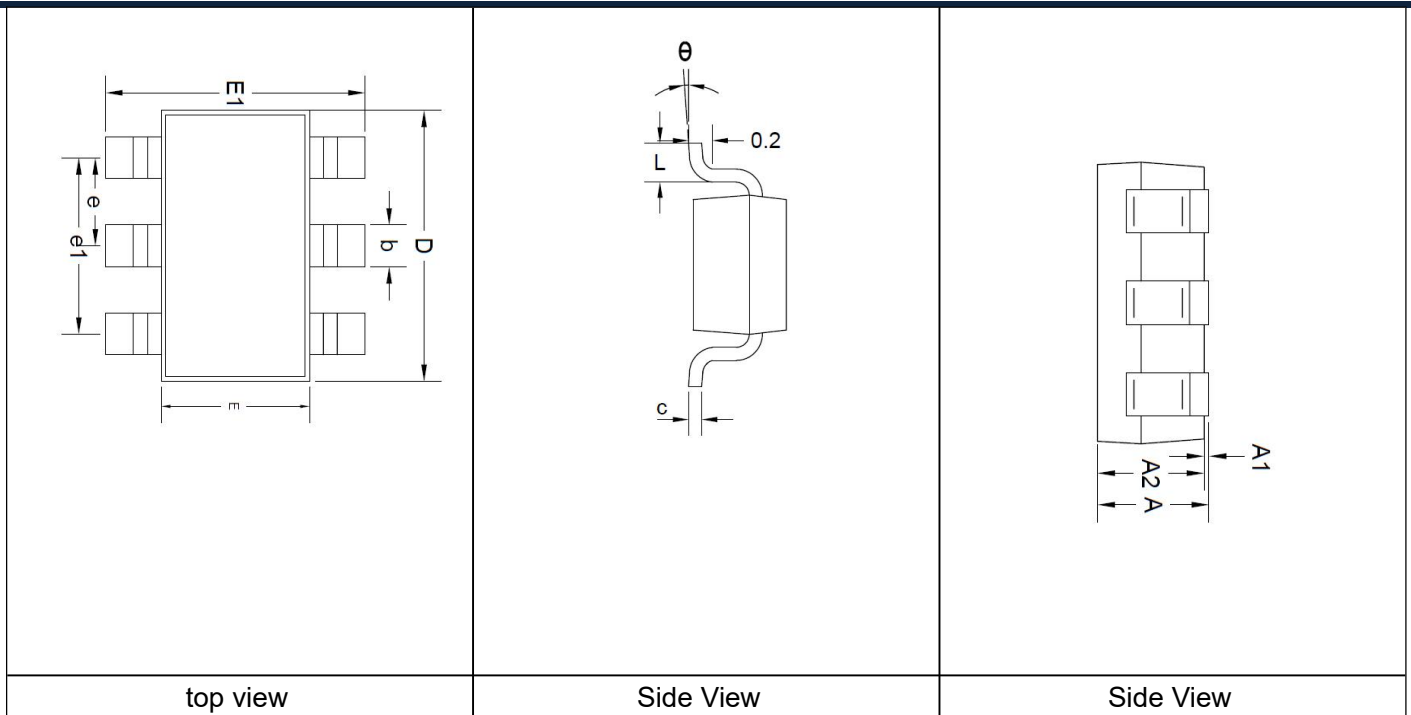
Input Return Loss vs. Operating Frequency



Output Return Loss vs. Operating Frequency



Dimensions



GaAs MMIC monolithic integrated 0 degree power divider , 2800-4200 MHz

Structure size

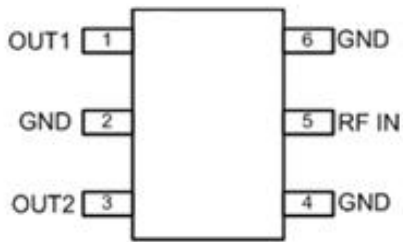
Annotation	Minimum	Standard	Maximum	Annotation	Minimum	Standard	Mmaximum
A	1.050	1.150	1.250	E	1.500	1.600	1.700
A1	0.00	0.05	0.100	E1	2.650	2.800	2.950
A 2	1.050	1.150	1.250	e	0.950BSC		
b	0.300	0.400	0.500	e1	1.800	1.900	2.000
c	0.100	0.150	0.200	L	0.300	0.450	0.600
D	2. 820	2.920	3. 020	θ	0 °	4 °	8 °

The unit in the figure is mm. If no tolerance is specified, it is ± 0.05 .

Pin Definition

Bonding point number	Function Symbol	Functional Description
5	RFIN	RF signal input terminal
1,3	RFOUT	RF signal output terminal
2, 4, 6	GND	The bottom of the chip needs to be well grounded to RF and DC

Assembly diagram



Precautions for use

- Sealing material : Low-pressure injection molding plastic that meets ROHS specifications
- Lead frame material: copper alloy
- Lead surface plating: 100% matte tin
- Maximum reflow peak temperature: 260 °C

Use restriction parameter ¹

Maximum input power	+30dBm (CW)
Operating temperature	-40 ~ + 100 °C
Storage temperature	-65 ~ +150°C

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