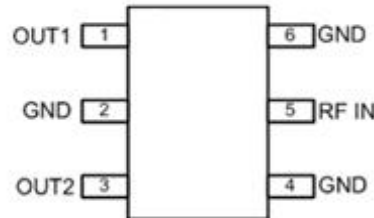


GaAs MMIC monolithic integrated 0 degree power divider , 700-1000M Hz

Performance characteristics

- Frequency range: 700-1000MHz
- Insertion loss : 0.7 dB
- Isolation: 24dB
- Phase imbalance: 0.3 °
- Amplitude imbalance: 0.1 dB
- 50Ohm input / output
- Chip size: SOT23

Functional Block Diagram



Product Introduction

GPD-007010A-ST23 monolithic integrated 0 degree power divider has low insertion loss, good isolation, low phase and amplitude imbalance in the frequency range of 700 ~ 1000MHz , and 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 / 18	-	700 MHz	dB	
	-	0.6 / 21	-	750 MHz	dB	
	-	0.7 / 24	-	800 MHz	dB	
	-	0.7 / 28	-	850 MHz	dB	
	-	0.7 / 29	-	900 MHz	dB	
			0.7 / 26		950MHz	dB
			0.8 / 23		1000MHz	dB
Phase imbalance/amplitude imbalance	-	0.3 / 0.1	-	700 MHz	Deg. / dB	
	-	0.3 / 0.1	-	750 MHz	Deg./ dB	
	-	0.2 / 0.1	-	800MHz	Deg./ dB	
	-	0.3 / 0.1	-	850MHz	Deg./ dB	
	-	0.3 / 0.1	-	900MHz	Deg./ dB	
			0.3 / 0.1		950MHz	Deg./ dB
			0.3 / 0.1		1000MHz	Deg. / dB
Input return loss / output return loss	-	27 / 17	-	700 MHz	dB	
	-	27 / 17	-	750 MHz	dB	
	-	24 / 18	-	800 MHz	dB	
	-	21 / 18	-	850 MHz	dB	
	-	19 / 19	-	900 MHz	dB	
			18 / 20		950MHz	dB

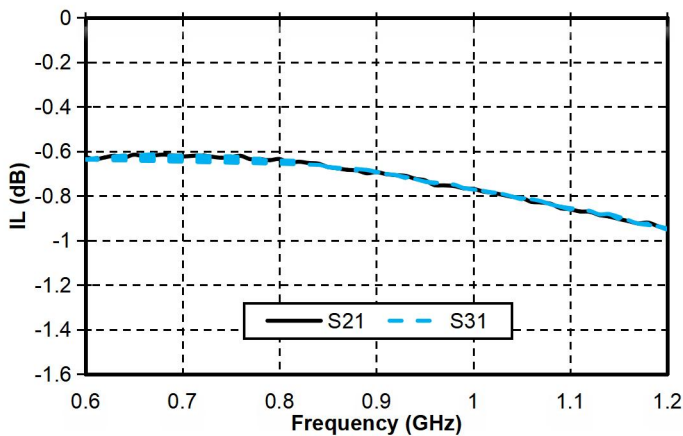
		17 / 21	1000MHz	dB
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* The inherent loss of the power divider has been deducted .

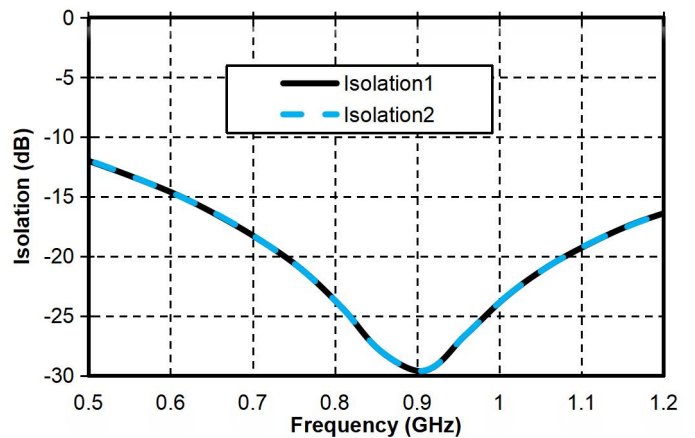
GaAs MMIC monolithic integrated 0 degree power divider , 700-1000M Hz

Main index test curve

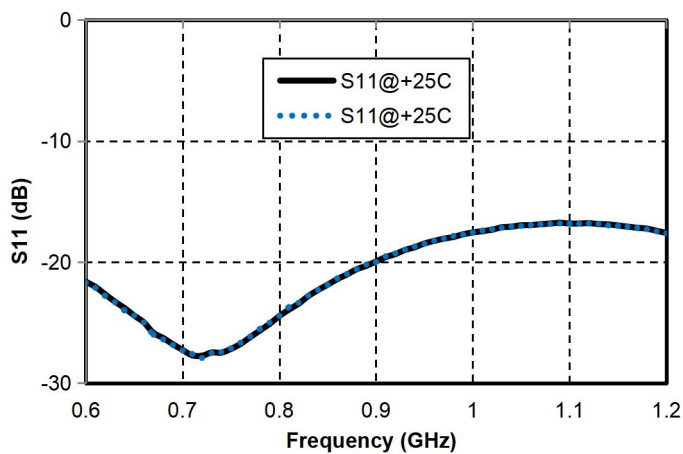
Insertion Loss vs. Operating Frequency



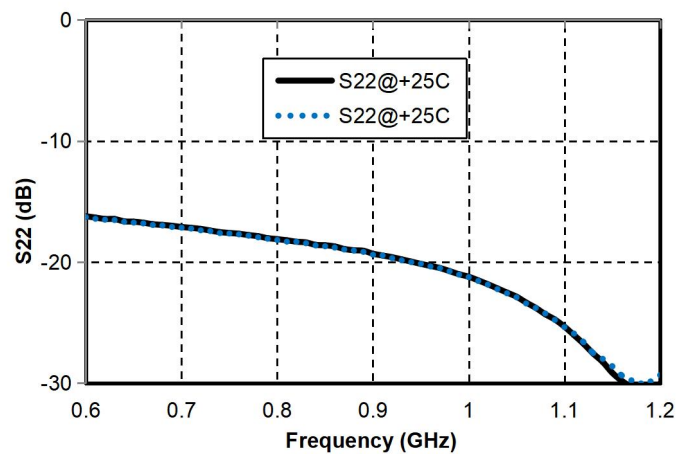
Isolation vs. Operating Frequency



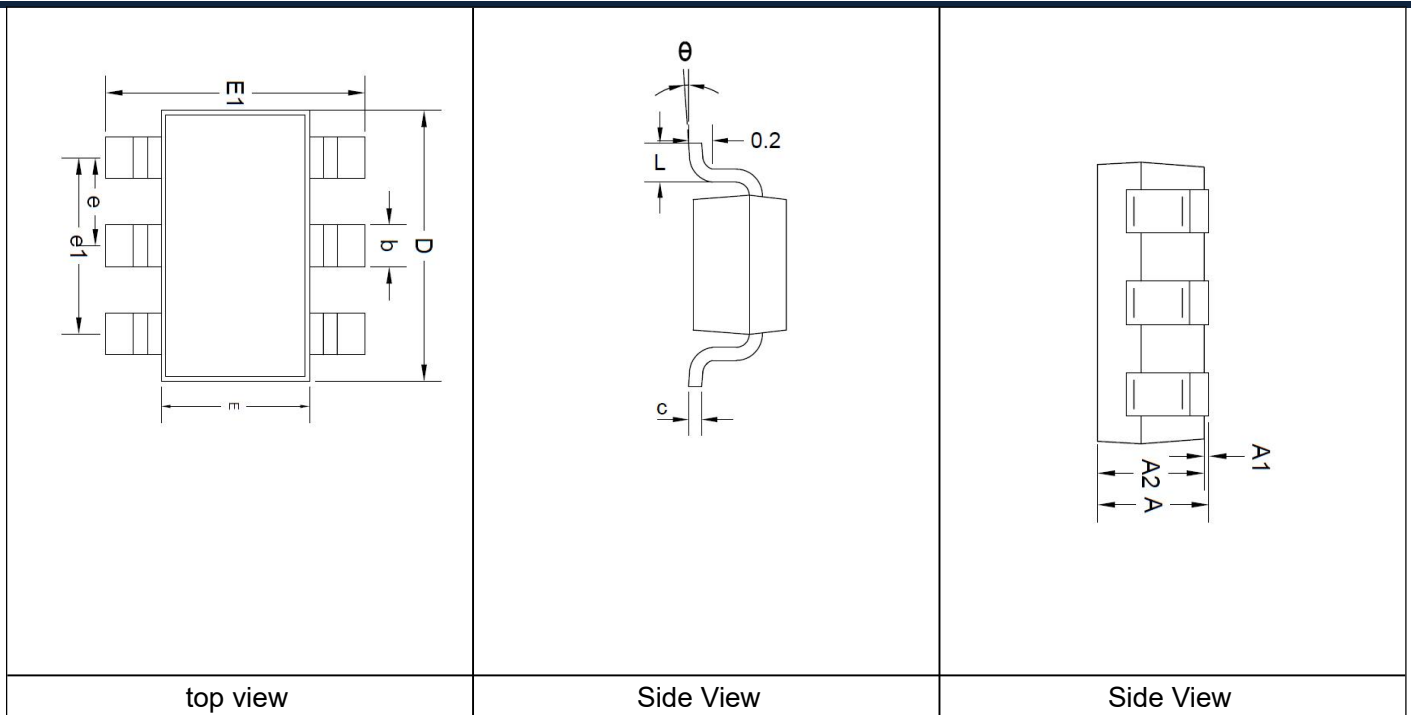
Input Return Loss vs. Operating Frequency



Output Return Loss vs. Operating Frequency



Dimensions



GaAs MMIC monolithic integrated 0 degree power divider , 700-1000M Hz

Structure size

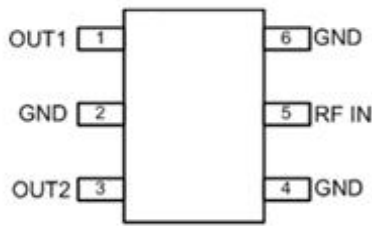
Annotation	Minimum	Standard	Maximum	Annotation	Minimum	Standard	Maximum
A	1.050	1.150	1.250	E	1.500	1.600	1.700
A1	0.00	0.05	0.100	E1	2.650	2.800	2.950
A2	1.050	1.150	1.250	e	0.950BSC		
b	0.300	0.400	0.500	e1	1.800	1.900	2.000
c	0.100	0.150	0.200	L	0.300	0.450	0.600
D	2.820	2.920	3.020	θ	0°	4°	8°

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.