

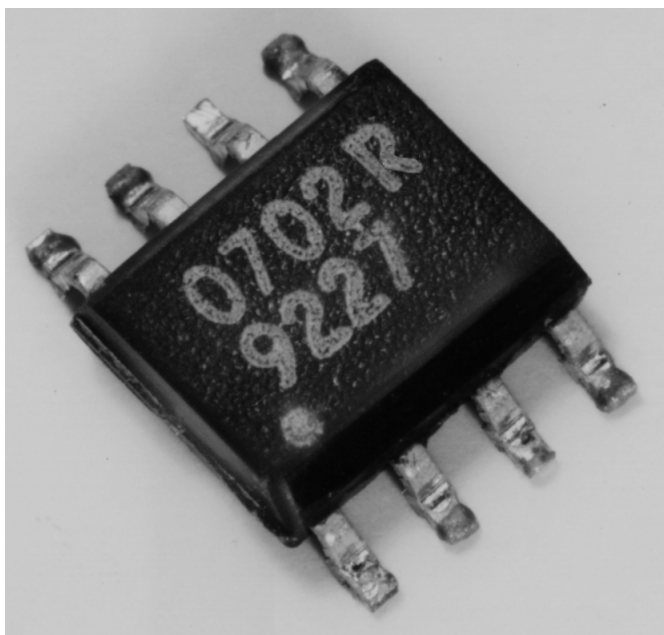
GaAs MMIC SPDT Terminated Switch, DC-2GHz

The **P35-0702R** is a high performance Gallium Arsenide monolithic single pole double throw RF switch suitable for use in broadband communications and instrumentation applications. A short circuit termination is presented at the isolated output of the switch. Control is effected by the application of complimentary 0V and -5V levels to the control lines in accordance with the truth table below.

The die is fabricated using Bookham's 0.5 μm gate length MESFET process (S20) and is fully protected using Silicon Nitride passivation for excellent performance and reliability.

Features

- Broadband performance
- Low insertion loss; 0.5dB typ at 1GHz
- Ultra low DC power consumption
- Fast switching speed; 3nS typical
- SO8 surface mount package
- 50 Ω output terminations



Electrical Performance

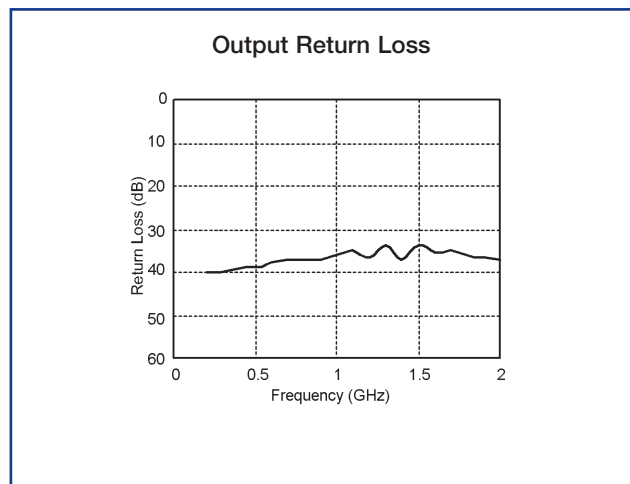
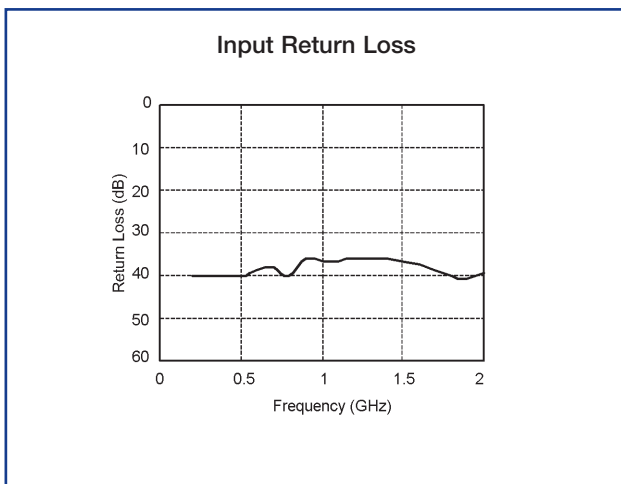
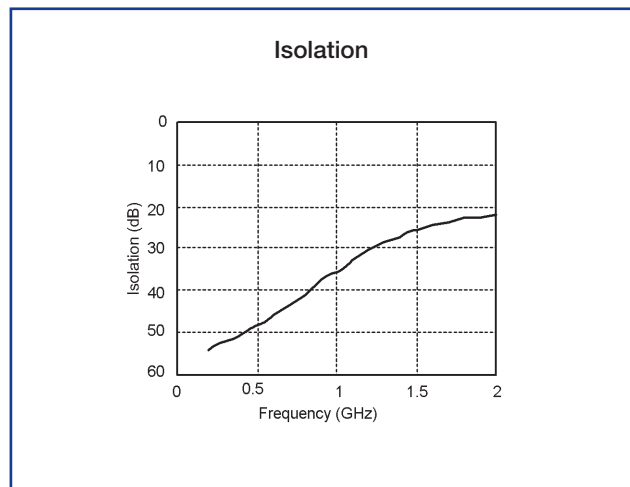
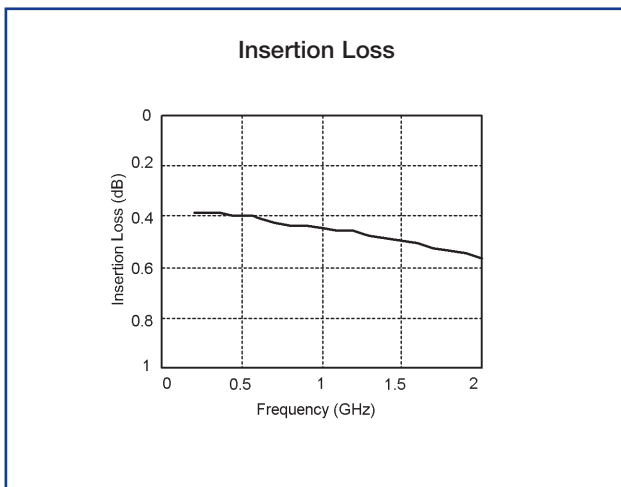
Ambient temperature = 22 ±3 °C , Zo = 50 ohms, Control voltages = 0V/-5V unless otherwise stated

Parameter	Conditions	Min	Typ	Max	Units
Insertion Loss	DC - 0.5GHz	-	0.4	0.6	dB
	0.5GHz - 2GHz	-	0.6	0.8	dB
Isolation	DC - 0.5GHz	42	45	-	dB
	0.5GHz - 2GHz	20	22	-	dB
Input Return Loss ¹	DC - 0.5GHz	25	30	-	dB
	0.5GHz - 2GHz	20	25	-	dB
Output Return Loss ¹	DC - 0.5GHz	25	30	-	dB
	0.5GHz - 2GHz	20	25	-	dB
1dB power compression point ²	0/-5V Control; 50MHz	18	20	-	dBm
	0/-5V Control; 2GHz	21	22	-	dBm
	0/-8V Control; 50MHz	21	22	-	dBm
	0/-8V Control; 2GHz	29	30	-	dBm
Switching Speed	50% Control to 10%90%RF	-	3	-	ns
Third Order Intercept ³	500MHz	-	46	-	dBm

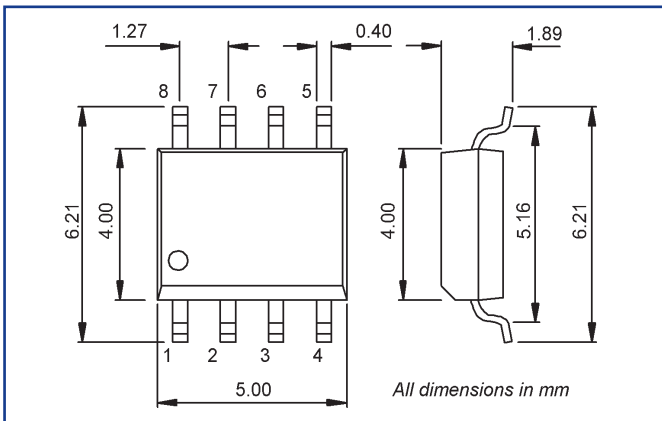
Notes

1. Return Loss measured in low loss switch state
2. Input power at which insertion loss compresses by 1dB
3. Input power 10dBm/tone

Typical Performance at 22° C



Package Outline



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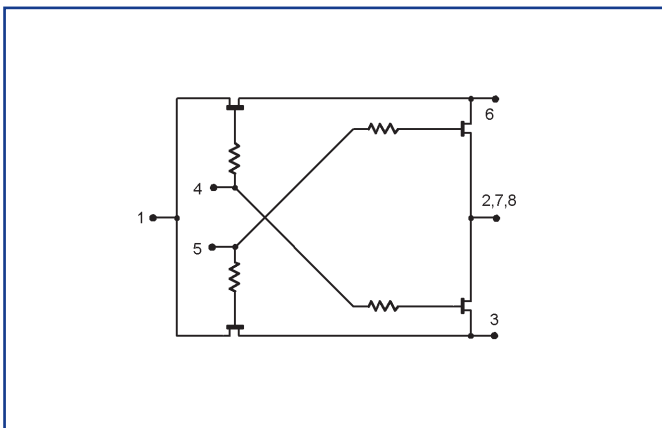
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Important Notice

Bookham Technology has a policy of continuous improvement. As a result certain parameters detailed on this flyer may be subject to change without notice. If you are interested in a particular product please request the product specification sheet, available from any RF sales representative.



Electrical Schematic



Absolute Maximum Ratings

Max control voltage	-8V
Max I/P power	+33 dBm
Operating temperature	-40°C to +85°C
Storage temperature	-65°C to +150°C

Pin Details

Pin	Function
1	RF INPUT
2	Ground
3	RF1
4	Control B
5	Control A
6	RF2
7	Ground
8	Ground

Switching Truth Table

A	B	RF IN-RF1	RF IN-RF 2
0V	-5V	Low Loss	Isolated
-5V	0V	Isolated	Low Loss

Ordering Information

P35-0702R