

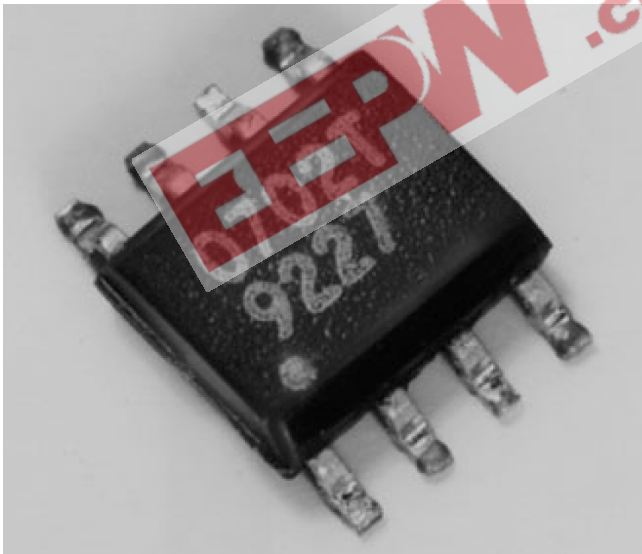
## GaAs MMIC SPDT Terminated Switch, DC-2GHz

The **P35-0702T** is a high performance Gallium Arsenide monolithic single pole double throw RF switch suitable for use in broadband communications and instrumentation applications. The isolated port of the switch is terminated with a 50  $\Omega$  load. 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 Technology's 0.5  $\mu\text{m}$  gate length MESFET process (S20) and is fully protected using Silicon Nitride passivation for excellent performance and reliability.

### Features

- Broadband performance
- Low insertion loss; 0.6dB typ at 1GHz
- Ultra low DC power consumption
- Fast switching speed; 3nS typical
- SO8 surface mount package
- 50  $\Omega$  output terminations



**Electrical Performance**

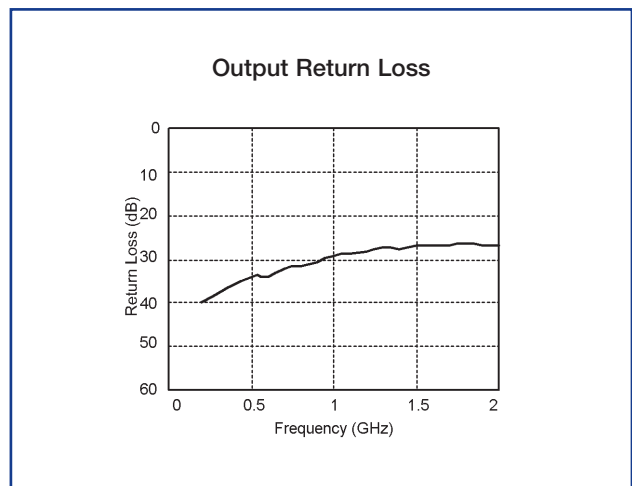
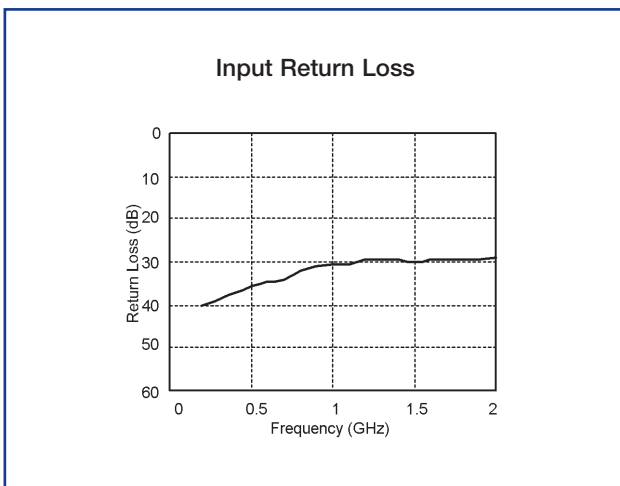
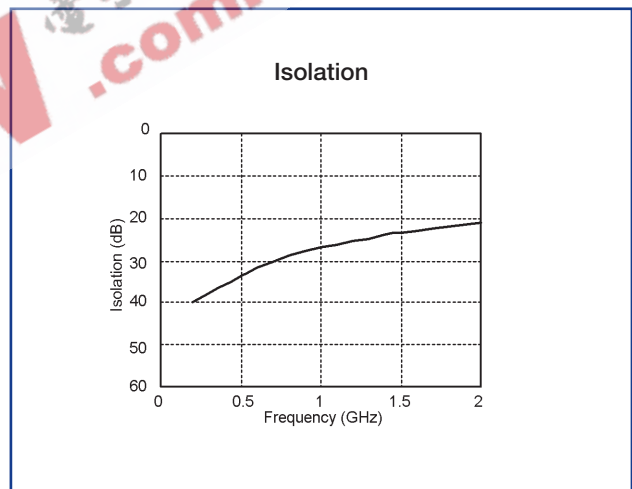
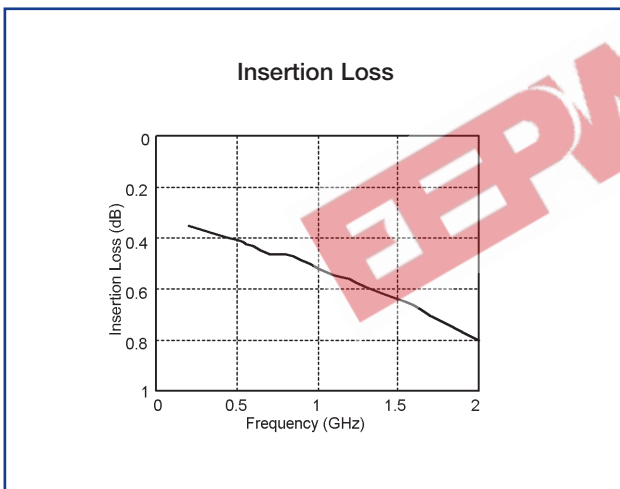
Ambient temperature = 22 ±3 °C , Zo = 50 ohms, Control voltages = 0V/-5V unless otherwise stated

Parameter	Conditions	Min	Typ	Max	Units
Insertion Loss	DC - 0.5GHz	-	0.4	0.6	dB
	0.5GHz - 2GHz	-	0.9	1.0	dB
Isolation	DC - 0.5GHz	30	33	-	dB
	0.5GHz - 2GHz	20	22	-	dB
Input Return Loss <sup>1</sup>	DC - 0.5GHz	25	30	-	dB
	0.5GHz - 2GHz	20	25	-	dB
Output Return Loss <sup>1</sup>	DC - 0.5GHz	25	30	-	dB
	0.5GHz - 2GHz	20	25	-	dB
1dB power compression point <sup>2</sup>	0/-5V Control; 50MHz	19	21.5	-	dBm
	0/-5V Control; 2GHz	21	23	-	dBm
	0/-8V Control; 50MHz	21	23	-	dBm
	0/-8V Control; 2GHz	29	31	-	dBm
Switching Speed	50% Control to 10%90%RF	-	3	-	ns
Third Order Intercept <sup>3</sup>	500MHz	-	46	-	dBm

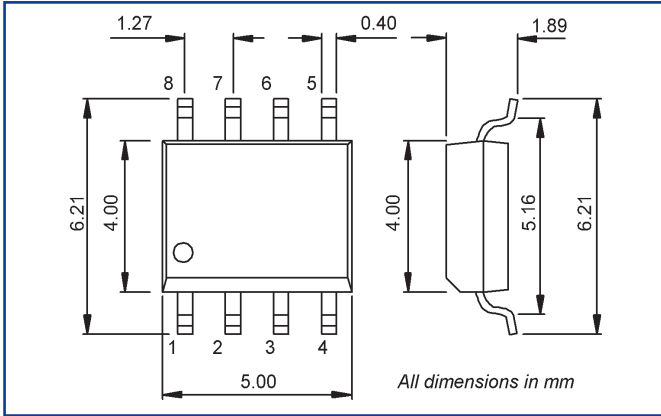
**Notes**

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

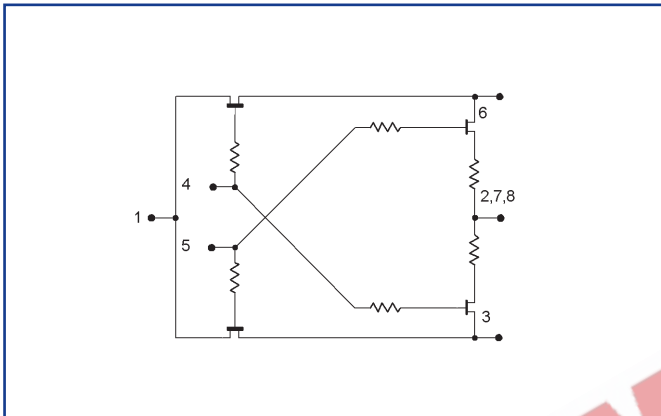
**Typical Performance at 22° C**



**Package Outline**



**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



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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.



**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-RF2
0V	-5V	Low Loss	Isolated
-5V	0V	Isolated	Low Loss

**Ordering Information**

P35-0702T