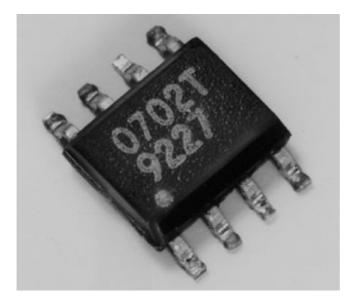
Data sheet



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 Ω 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 μ 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 Ω output terminations

Electrical Performance

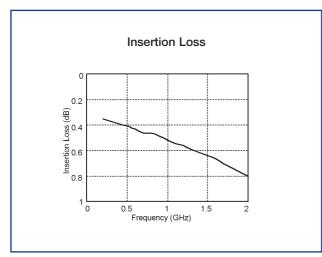
Ambient temperature = 22 ± 3 °C , Zo = 50 ohms, Control voltages = 0V/-5V unless otherwise stated

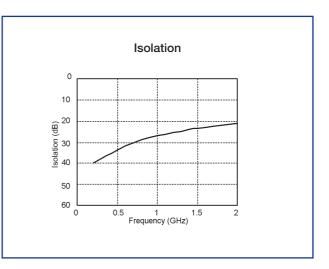
Parameter	Conditions	Min	Тур	Max	Units
Insertion Loss	DC - 0.5GHz	-	0.4	0.6	dB
	0.5GHz - 2GHz	-	0.9	1.0	dB
Isolation	DC - 0.5GHz	30	33	-	dB
	0.5GHz - 2GHz	20	22	-	dB
Input Return Loss ¹	DC - 0.5GHz	25	30	-	dB
	0.5GHz - 2GHz	20	25	-	dB
Output Return Loss ¹	DC - 0.5GHz	25	30	-	dB
	0.5GHz - 2GHz	20	25	-	dB
1dB power compression point ²	0/-5V Control; 50MHz	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 ³ 500MHz		-	46	-	dBm

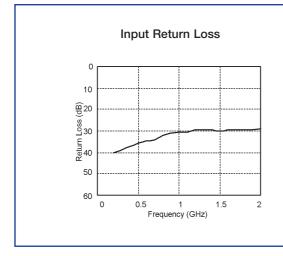
Notes

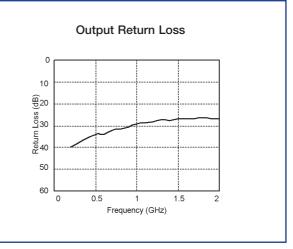
- 1. Return Loss measured in low loss switch state
- 2. Input power at which insertion loss compresses by 1dB
- 3. Input power 10dBm/tone

Typical Performance at 22° C

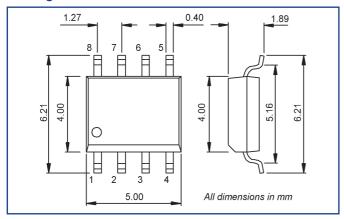




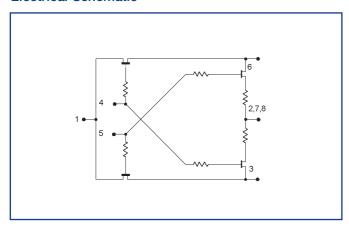




Package Outline



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

Α	В	RF IN-RF1	RF IN-RF2
0V	-5V	Low Loss	Isolated
-5V	0V	Isolated	Low Loss



Thinking RF solutions

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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.



P35-0702T

Ordering Information