

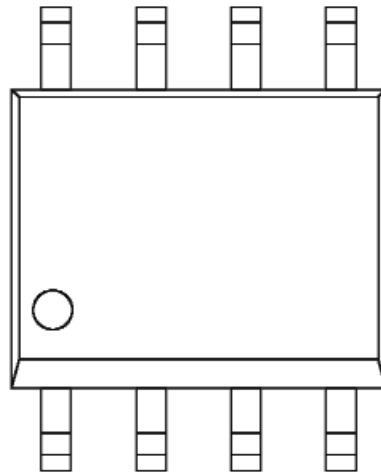
GaAs MMIC SPDT Reflective Switch, DC - 3GHz

The **P35-4227-3R** is a high performance Gallium Arsenide single pole double throw broadband RF switch. It is suitable for use in broadband communications and instrumentation applications. A short circuit reflective termination is presented at the isolated output of the switch. The switch is controlled by the application of complimentary 0V/-5V or 0/-8V signals to the control lines in accordance with the truth table below.

This 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. This device is packaged in a low-cost SO8 surface mount plastic package.

Features

- Broadband performance
- High Isolation; 40dB typ at 1GHz
- Ultra low DC power consumption
- Fast switching speed; 3ns typical
- SO8 surface mount plastic package



Electrical Performance

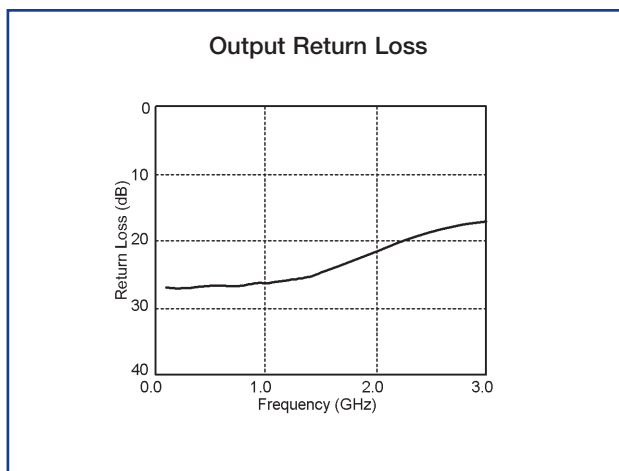
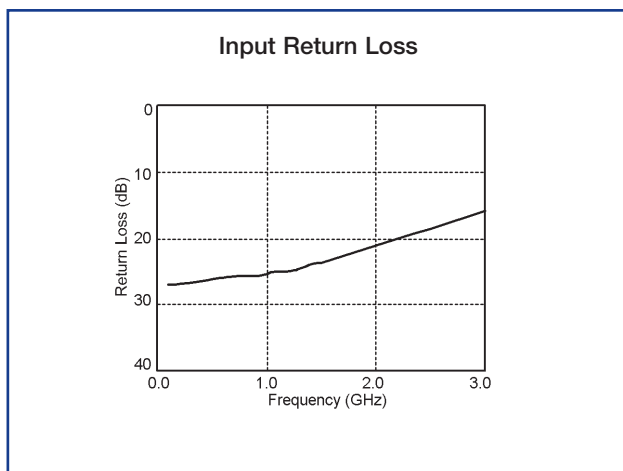
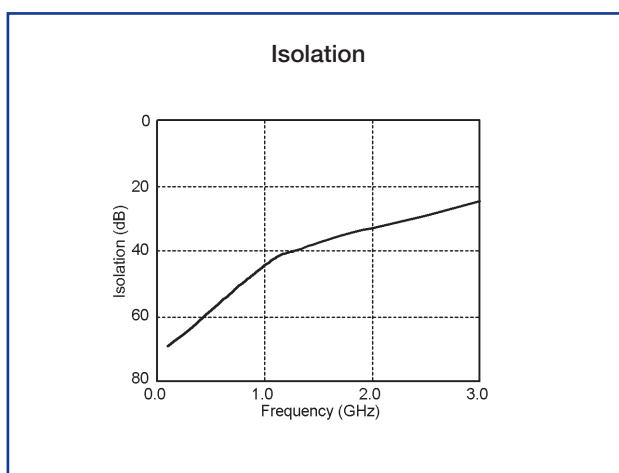
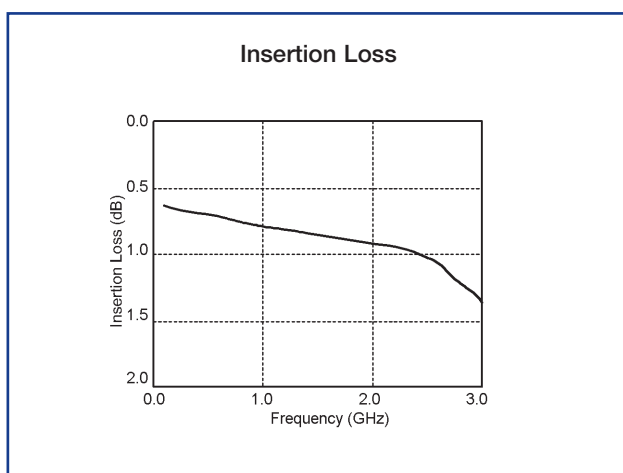
Ambient temperature = 22 ±3 °C , Zo = 50 Ω, Control voltages = 0V/-5V unless otherwise stated

Parameter	Conditions	Min	Typ	Max	Units
Insertion Loss	DC - 1GHz	-	1.0	1.2	dB
	1 - 3GHz	-	1.4	1.5	dB
Isolation	DC - 1GHz	38	40	-	dB
	1 - 3GHz	22	23	-	dB
Input Return Loss ¹	DC - 1GHz	20	25	-	dB
	1 - 3GHz	12	16	-	dB
Output Return Loss ¹	DC - 1GHz	20	26	-	dB
	1 - 3GHz	12	17	-	dB
1dB power compression point ²	0/-5V Control; 50MHz	-	20	-	dBm
	0/-5V Control; 2GHz	-	27	-	dBm
	0/-8V Control; 50MHz	-	22	-	dBm
	0/-8V Control; 2GHz	-	30	-	dBm
Switching Speed	50% Control to 10%/90%RF	-	3	8	ns

Notes

1. Return Loss measured in low loss switch state.
2. Input power at which insertion loss compresses by 1dB.

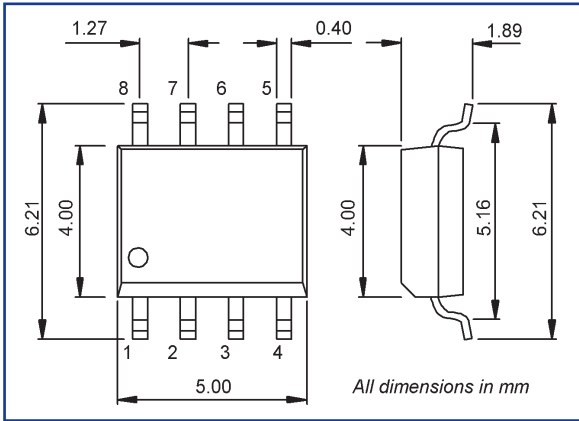
Typical Performance at 22° C



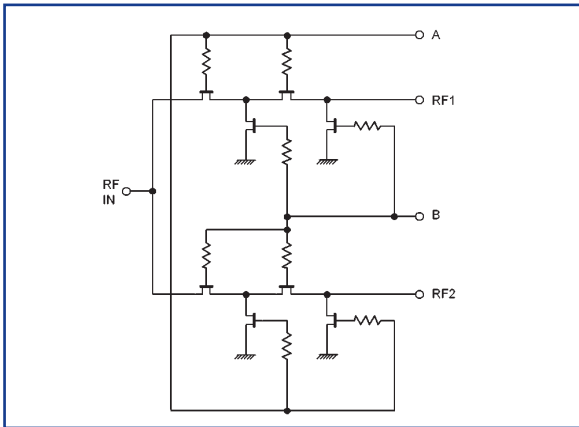
Absolute Maximum Ratings

- Max control voltage -8V
- Max I/P power +30 dBm
- Operating temperature -40 °C to +85 °C
- Storage temperature -65 °C to +150 °C

Package Outline



Electrical Schematic



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.



22735

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

P35-4227-3R