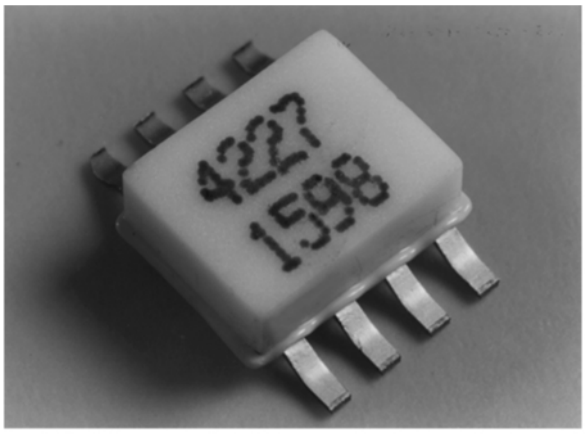
Data sheet

Bookham TECHNOLOGY

GaAs MMIC SPDT Terminated Switch, DC - 6GHz

The **P35-4227-C06-300** 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 50 Ω 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 (F14) and is fully protected using BCB passivation for excellent performance and reliability. This device is packaged in a SO8 sized surface mount ceramic package.



Features

- Broadband performance
- High isolation; 32dB typ at 3GHz
- Low insertion loss; 1.0dB typ at 3GHz
- Ultra low DC power consumption
- Fast switching speed; 3ns typical
- SO8 surface mount ceramic package

Electrical Performance

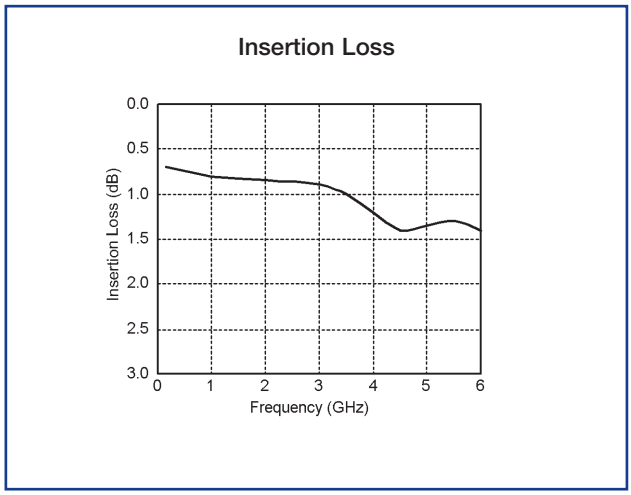
Ambient temperature = 22 ±3 °C , Zo = 50 Ω, Control voltages = 0V/-5V unless otherwise stated

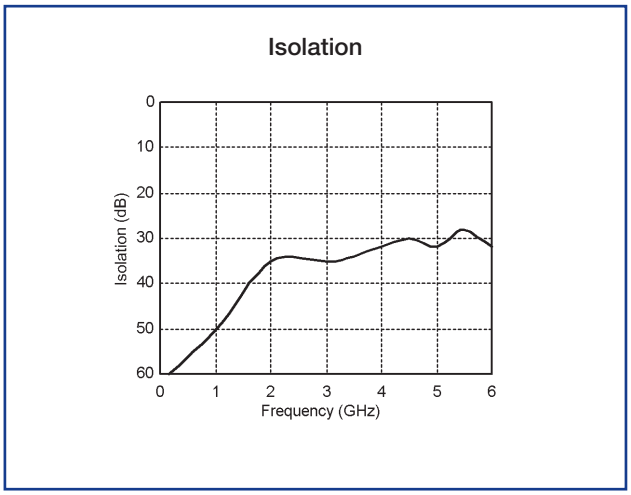
Parameter	Conditions	Min	Typ	Max	Units
Insertion Loss	DC - 3GHz	-	1.0	1.5	dB
	3 - 6GHz	-	1.5	2.0	dB
Isolation	DC - 3GHz	30	33	-	dB
	3 - 6GHz	25	28	-	dB
Input Return Loss [1]	DC - 6GHz	10	12	-	dB
Output Return Loss [1]	DC - 6GHz	10	12	-	dB
1dB power compression point [2]	0/-5V Control; 50MHz	-	20	-	dBm
	0/-5V Control; 2GHz	-	26	-	dBm
Switching Speed	50% Control to 10%90%RF	-	3	8	ns

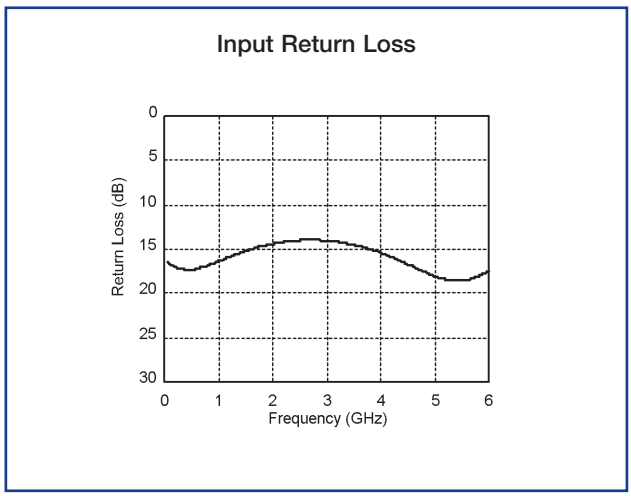
Notes

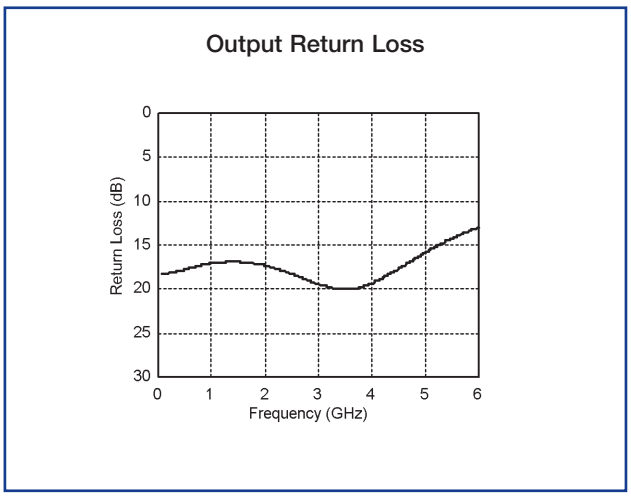
1. Return Loss measured in low loss switch state.
2. Input power at which insertion loss compresses by 1dB

Typical Performance at 22° C





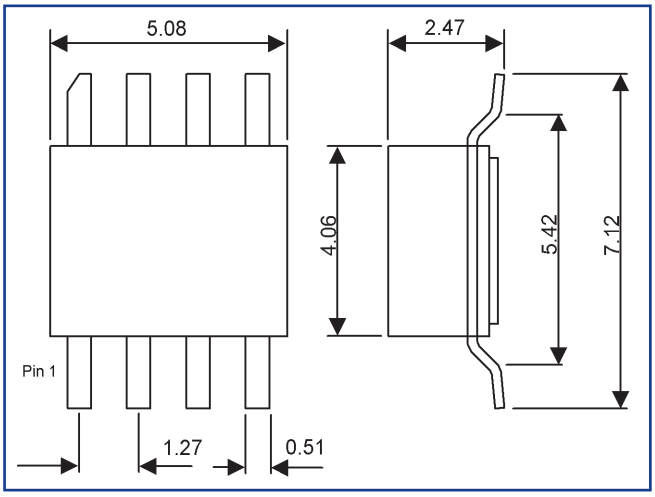




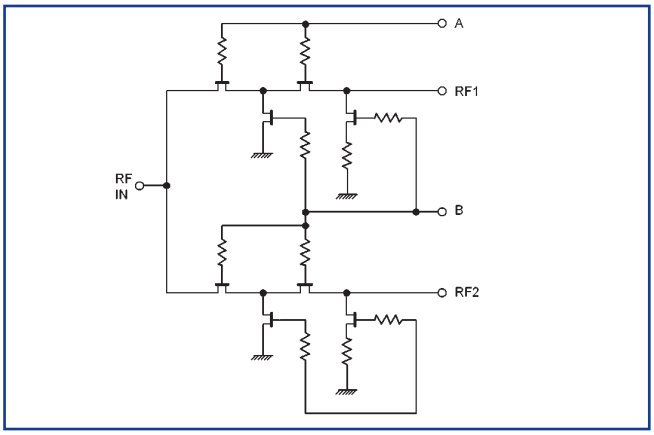
Absolute Maximum Ratings

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



Pin Description

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

Switching Truth Table

A	B	RFIN-RF1	RFIN-RF2
0V	-5V	Low loss	Isolated
-5V	0V	Isolated	Low loss

Ordering Information

P35-4227-C06-200

Bookham TECHNOLOGY
Thinking RF solutions

MMICS

Bookham Technology plc
Caswell
Towcester
Northamptonshire
NN12 8EQ
UK

- **Tel: +44 (0) 1327 356 789**
- **Fax: +44 (0) 1327 356 698**

rfsales@bookham.com

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.

BSI REGISTERED
22735

463/SM/00128/200 Issue 3