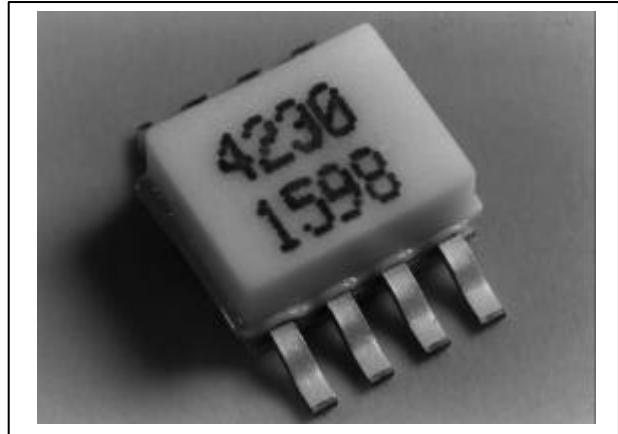


GaAs MMIC SPST TERMINATED SWITCH, DC - 4GHz

Features

- Broadband performance
- Low insertion loss; 1.8dB typ at 2GHz
- Ultra low DC power consumption
- Fast switching speed; 3ns typical
- SO8 surface mount ceramic package



Description

The P35-4230-C06-200 is a high performance Gallium Arsenide single pole single throw broadband RF switch. It is suitable for use in broadband communications and instrumentation applications. A 50Ω 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.

This die is fabricated using MCL's 0.5μm gate length MESFET process (S20) and is fully protected using Silicon Nitride passivation for excellent performance and reliability. This device is packaged in a ceramic package.

Electrical Performance

Ambient temperature = 22±3°C, $Z_0 = 50\ \Omega$, Control voltages = 0V/-5V unless otherwise stated

Parameter	Conditions	Min	Typ	Max	Units
Insertion Loss	DC - 2GHz	-	1.8	2.0	dB
	2 - 4GHz	-	2.2	3.0	dB
Isolation	DC - 2GHz	30	35	-	dB
	2 - 4GHz	25	30	-	dB
Input Return Loss ¹	DC - 2GHz	10	11	-	dB
	2 - 4GHz	8	10	-	dB
Output Return Loss ¹	DC - 2GHz	10	11	-	dB
	2 - 4GHz	8	10	-	dB
1dB power compression point ²	0/-5V Control; 2GHz	-	23	-	dBm
	0/-8V Control; 2GHz	-	30	-	dBm
Switching Speed	50% Control to 10%90%RF	-	3	-	ns

Notes

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

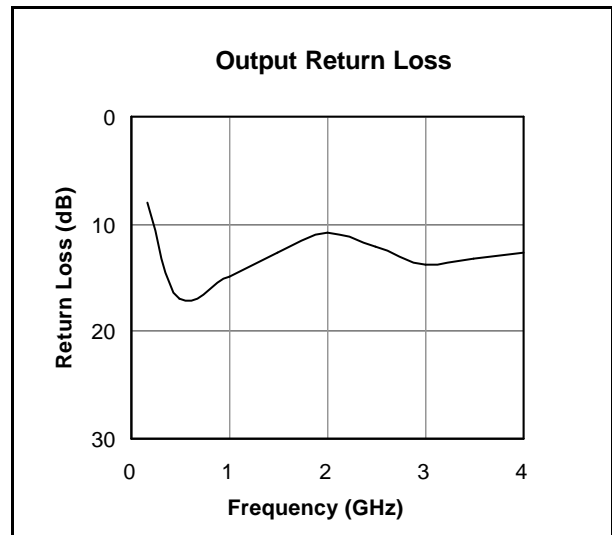
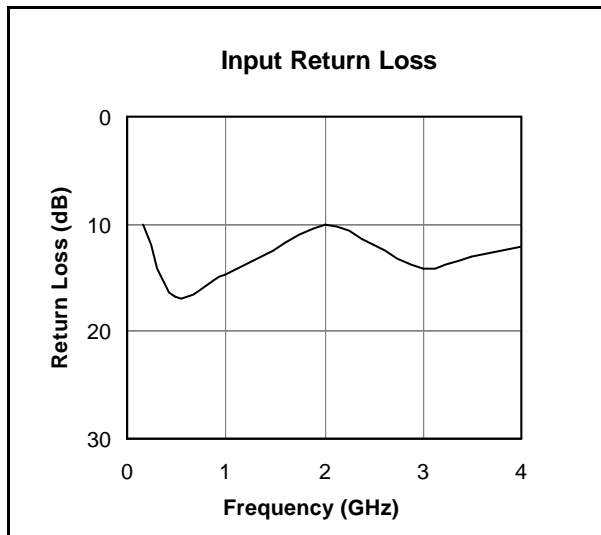
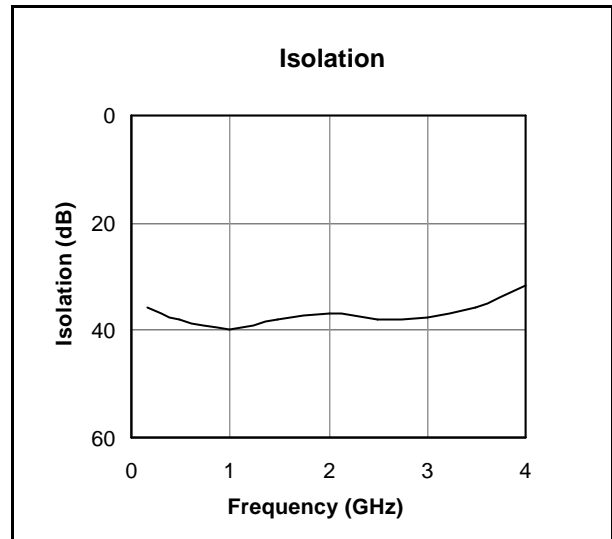
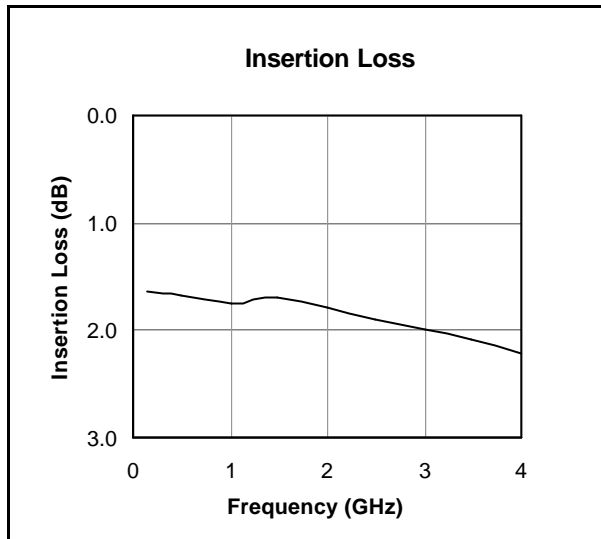
Marconi Caswell Limited, Caswell, Towcester, Northamptonshire, NN12 8EQ

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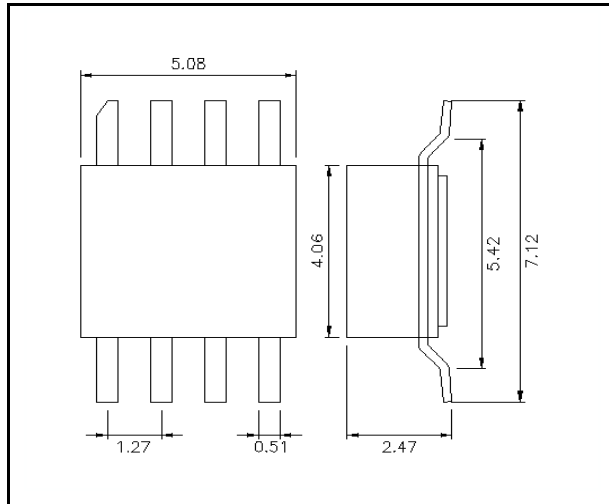
Typical Performance at 22° C



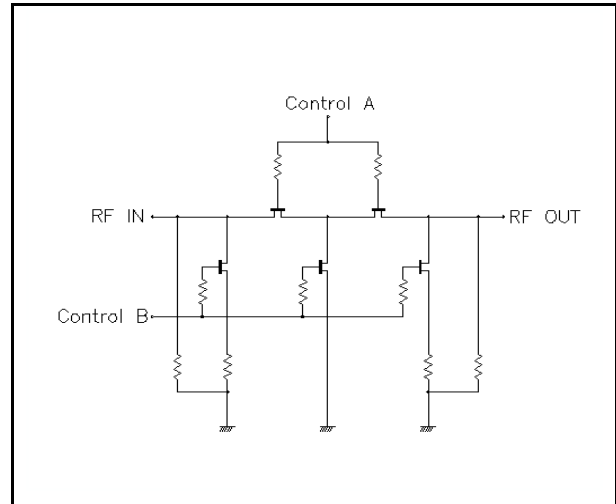
Absolute Maximum Ratings

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

Package Outline



Electrical Schematic



Pin Description

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

Switching Diagram

A	B	RF IN-RF OUT
0V	-5V	Low loss
-5V	0V	Isolated

Ordering Information

P35-4230-C06-200

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