

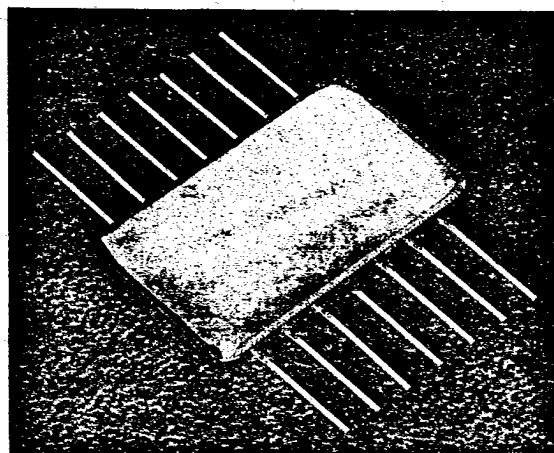


GaAs MMIC Switch **P35-4224**

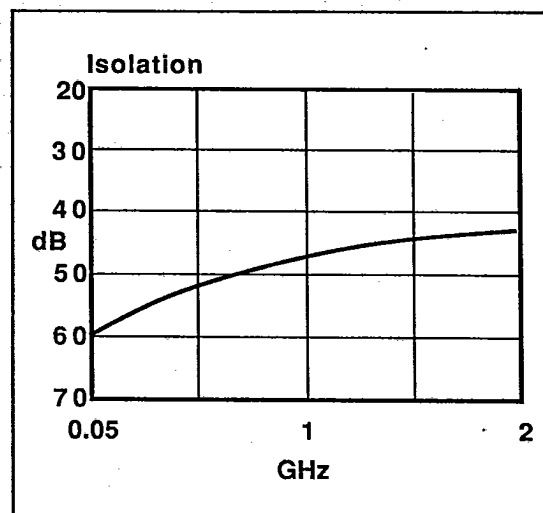
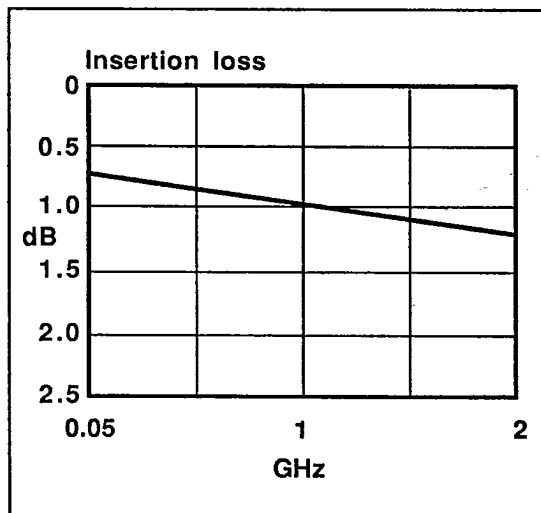
2GHz DPDT non-reflective switch
with CMOS/TTL compatible driver

Features

- Dual Channel Broadband GaAs switch with CMOS/TTL compatible interface.
- 10MHz to 2GHz frequency range.
- Low power consumption.
- Non-reflective outputs in off-state.
- Glass-metal seal package.



Typical Performance



P35-4224**RF Specification (–55°C to + 90°C)**

Parameter	Conditions	Min.	Typ.	Max.	Units
Insertion Loss	Frequency 50MHz		0.7	0.9	dB
	(See Note 1) 500MHz		0.8	1.0	
	1GHz		1.0	1.2	
	2GHz		1.2	1.4	
Isolation	Frequency 50MHz	55	60		dB
	(See Note 1) 500MHz	48	53		
	1GHz	42	47		
	2GHz	38	43		
VSWR	Frequency 50MHz		1.15	1.3	
	(See Note 2) 500MHz		1.2	1.3	
	1GHz		1.25	1.3	
	2GHz		1.25	1.3	
VSWR	Frequency 50MHz		1.05	1.1	
	(See Note 3) 500MHz		1.05	1.2	
	1GHz		1.10	1.2	
	2GHz		1.15	1.3	
P _{1dB}	Frequency 50MHz	+20			dBm
	2GHz	+24			

D.C. and Switching Specification

Parameter	at 25°C			–55°C to + 90°C		Units
	Min	Typ	Max	Min	Max	
I ⁺ , Quiescent Current from +ve Supply		2.7	5.0		5.0	mA
I [–] , Quiescent Current from –ve Supply		10.0	15.0		15.0	mA
Input Leakage Current (Control I/Ps)			0.1		1.0	μA
Rise and Fall Time (10%, 90% R.F.)		10			20	ns
Delay Time (50% Logic, 50% R.F.)		150			220	ns

Operating Requirements

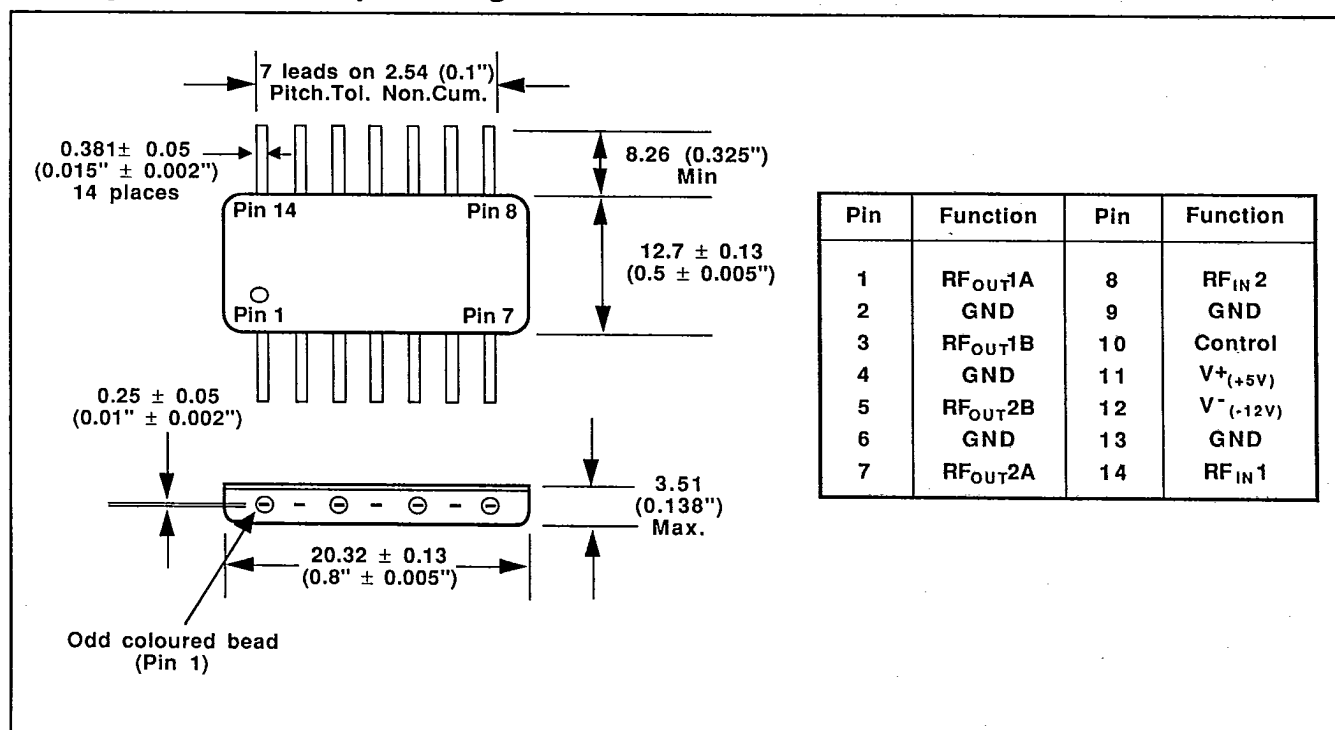
Parameter	Absolute Limits		For Guaranteed Operation			Units
	Min	Max	Min	Typ	Max	
V ⁺ , Positive supply voltage	–0.3	7.0	4.5	5.0	5.5	V
V [–] , Negative supply voltage	–14.0	0.3	–12.5	–12.0	–11.5	V
Control I/P voltage, Logic HIGH	-	V ⁺ +0.5	2.0		-	V
Control I/P voltage, Logic LOW	V [–] –0.5	-	-		0.8	V
R.F. I/P power, low loss state	+25dBm. –55°C to + 90°C					
R.F. I/P power, into isolated port	+24dBm. –55°C to + 70°C, derated linearly to zero at +125°C					

Switching Truth Table

CTL	R.F.IN 1 to		R.F.IN 2 to	
	R.F.OUT 1A	R.F.OUT 1B	R.F.OUT 2A	R.F.OUT 2B
LOW	ISOLATED	LOW LOSS	ISOLATED	LOW LOSS
HIGH	LOW LOSS	ISOLATED	LOW LOSS	ISOLATED

Notes:

1. See Switching Truth Table.
2. Measured at input or output in low loss state
3. Output measured in isolated state.
4. All r.f. specifications apply to either channel.

Package outline and pin designation

**PLESSEY**

Plessey Research & Technology
Caswell, Towcester,
Northamptonshire, NN12 8EQ, UK
Telephone: (0327) 50581 Telex: 31572
Facsimile: (0327) 53410

© The Plessey Company Limited 1990

® Registered Trade Mark of The Plessey Company Limited

North American Office
4350 La Jolla Village Drive, Suite 300,
San Diego, California 92122, USA
Telephone: 619 546 4457
Facsimile: 619 558 9221

Publication No. PRT-0020 Issue 1 1-90

This publication is issued to provide outline information only and (unless specifically agreed to the contrary by the Company in writing) is not to be copied or to form part of any order or contract or to be regarded as a representation to the products or services concerned. Any applications of products shown in this publication are for illustration purposes only and do not give or imply any licences or rights to use the information for any purposes whatsoever. It is the responsibility of any person who wishes to use the application information to obtain any necessary licence for such use. We reserve the right to alter without notice the specification, design, price or conditions of supply of any product or service.