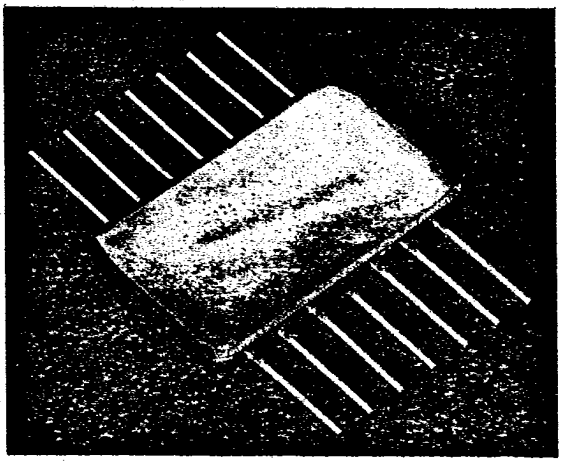
PLESSEY

T-51-11

Three Five Product Information

GaAs MMIC Switch
P35-4225

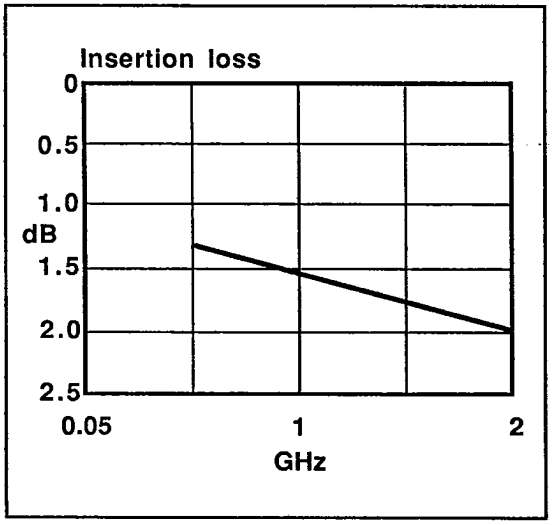
2GHz SPDT non-reflective switch with CMOS/TTL compatible driver

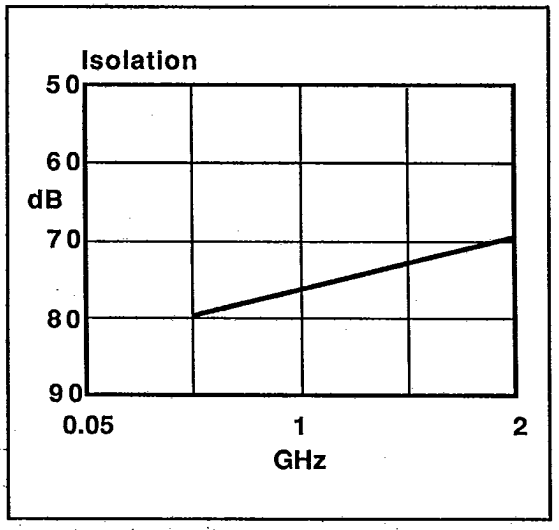


Features

- High Isolation 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





P35-4225

RF Specification (−55°C to +90°C)

Parameter	Conditions		Min.	Typ.	Max.	Units
Insertion Loss	Frequency (See Note 1)	500MHz	-	1.3	1.5	dB
		1GHz	-	1.6	1.8	
		2GHz	-	2.0	2.2	
Isolation	Frequency (See Note 1)	500MHz	70	80		dB
		1GHz	70	80		
		2GHz	65	70		
VSWR	Frequency (See Note 2)	500MHz		1.25	1.3	
		1GHz		1.25	1.3	
		2GHz		1.25	1.4	
VSWR	Frequency (See Note 3)	500MHz		1.25	1.2	
		1GHz		1.25	1.4	
		2GHz		1.35	1.5	
P_{1dB}	Frequency	500MHz	+20	+25		dBm
		2GHz	+20	+25		

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		5	mA
I−, Quiescent Current from −ve Supply		10.0	15		15	mA
Input Leakage Current (Control I/Ps)			0.1		1.0	µA
Rise and Fall Time (10%, 90% R.F.)		10	20		20	ns
Delay Time (50% Logic, 50% R.F.)		80	100	40	120	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					

T-51-11

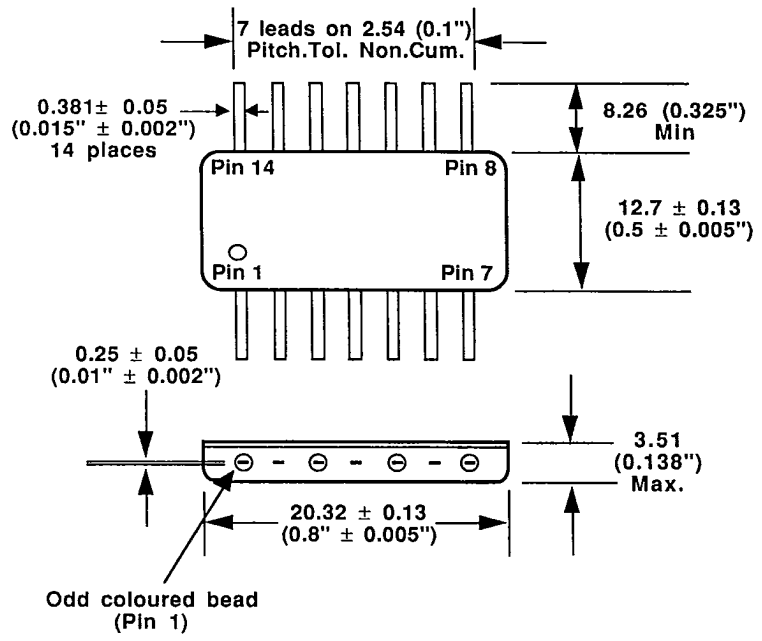
Switching Truth Table

CTL	R.F. COMM. to	
	R.F.1	R.F.2
LOW	ISOLATED	LOW LOSS
HIGH	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.

Package outline and pin designation



Pin	Function	Pin	Function
1	RF 1	8	GND
2	GND	9	GND
3	$V^+_{(+5V)}$	10	GND
4	$V^-_{(-12V)}$	11	RF. Comm
5	Control	12	GND
6	GND	13	GND
7	RF 2	14	GND

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