

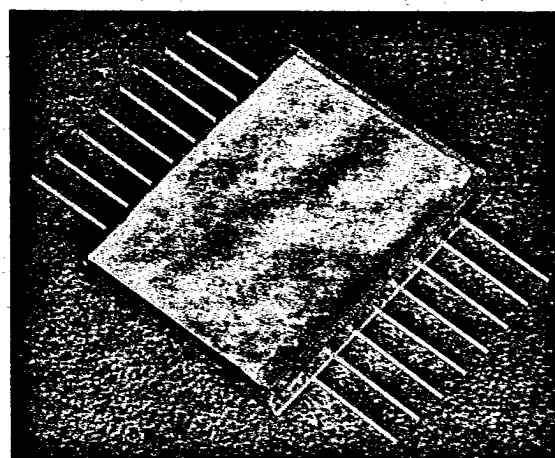


GaAs MMIC Switch P35-4253

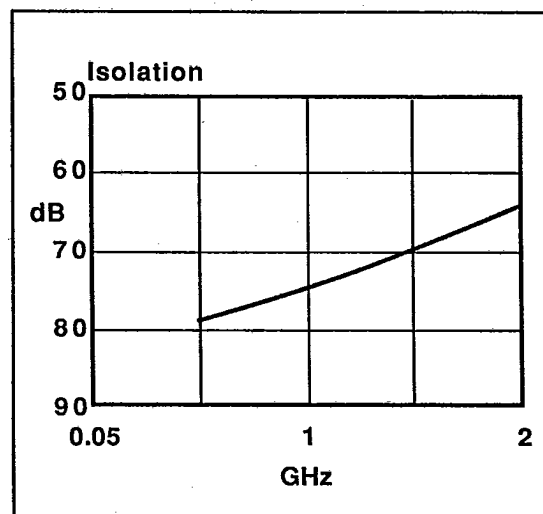
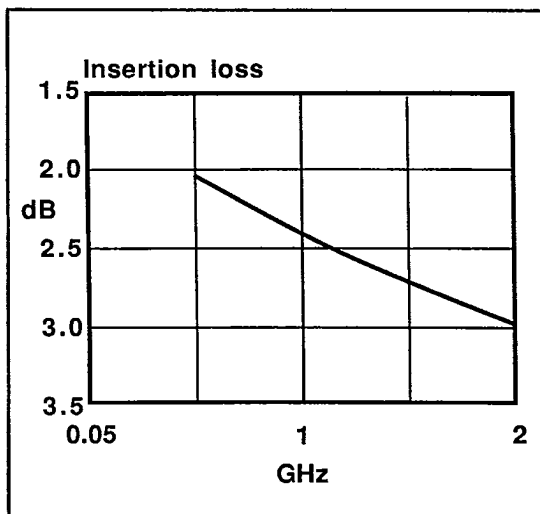
**2GHz SP3T non-reflective switch
with CMOS/TTL compatible driver**

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



P35-4253**RF Specification (-55°C to $+90^{\circ}\text{C}$)**

Parameter	Conditions	Min.	Typ.	Max.	Units
Insertion Loss	Frequency 500MHz	-	2.1	2.7	dB
	(See Note 1) 1GHz	-	2.3	3.0	
	2GHz	-	2.9	3.6	
Isolation	Frequency 500MHz	70	75	-	dB
	(See Note 1) 1GHz	70	75	-	
	2GHz	60	65	-	
VSWR	Frequency 500MHz	-	1.25	1.3	
	(See Note 2) 1GHz	-	1.25	1.3	
	2GHz	-	1.25	1.4	
VSWR	Frequency 500MHz	-	1.25	1.2	
	(See Note 3) 1GHz	-	1.25	1.4	
	2GHz	-	1.35	1.5	
P _{1dB}	Frequency 500MHz	+20	+24		dBm
	2GHz	+20	+24		

D.C. and Switching Specification

Parameter	at 25°C			-55°C to $+90^{\circ}\text{C}$		Units
	Min	Typ	Max	Min	Max	
I ⁺ , Quiescent Current from +ve Supply		5.5	8	-	8	mA
I ⁻ , Quiescent Current from -ve Supply		12	15	-	15	mA
Input Leakage Current (Control I/Ps)			0.1	-	1.0	μA
Rise and Fall Time (10%, 90% R.F.)		10	25		25	ns
Delay Time (50% Logic, 50% R.F.)	80	110	130	60	160	ns

Operating Requirements

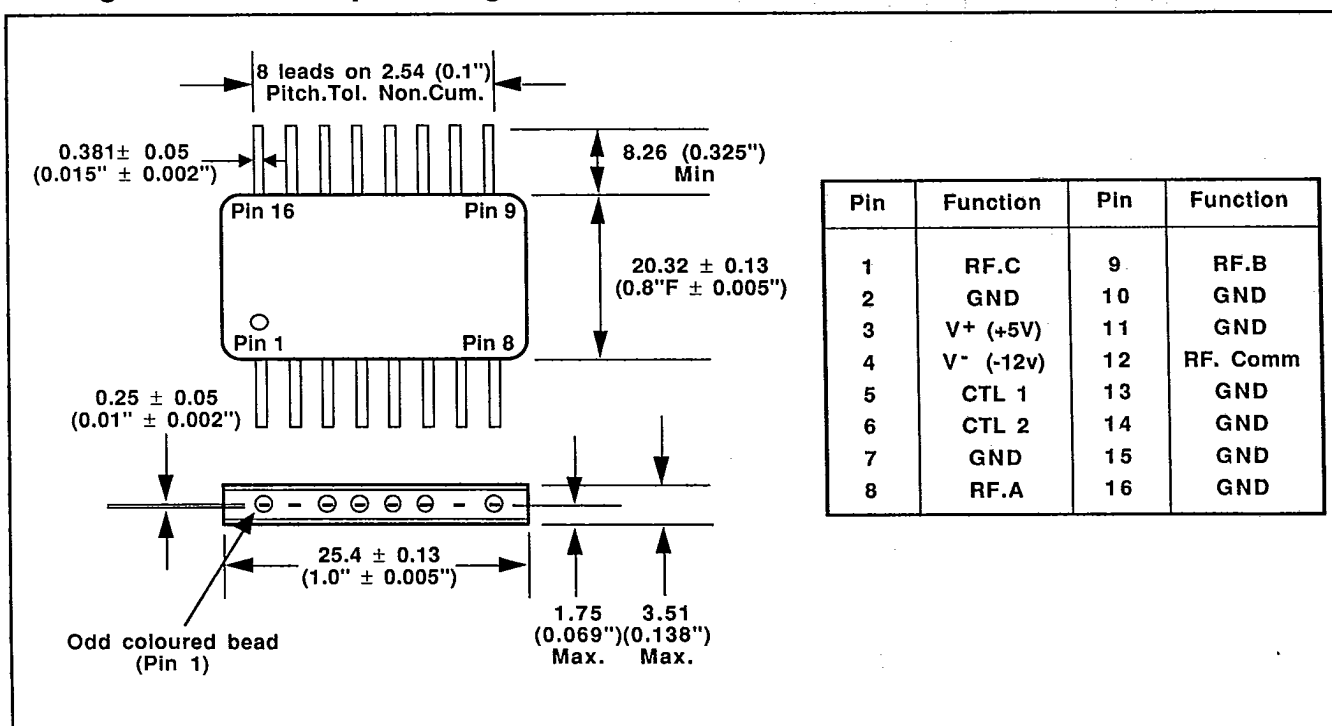
Parameter	Absolute Limits		For Guaranteed Operation			Units
	Min	Max	Min	Typ	Max	
V ⁺ , Positive supply voltage	-0.3	7.0	4.5	5.0	5.5	V
V ⁻ , Negative supply voltage	-14.0	0.3	-12.5	-12.0	-11.5	V
Control I/P voltage, Logic HIGH	-	V ⁺ +0.5	2.0		-	V
Control I/P voltage, Logic LOW	V ⁻ -0.5	-	-		0.8	V
R.F.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

Switching Truth Table

CTL1	CTL2	R.F. COMM TO		
		R.F. A	R.F. B	R.F. C
LOW	LOW	LOW LOSS	ISOLATED	ISOLATED
LOW	HIGH	ISOLATED	ISOLATED	ISOLATED
HIGH	LOW	ISOLATED	LOW LOSS	ISOLATED
HIGH	HIGH	ISOLATED	ISOLATED	LOW LOSS

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

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