SW-255-PIN

GaAs SP4T Switch, 5 - 2000 MHz

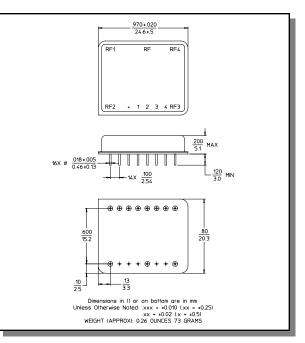


Rev. V4

Features

- Low Insertion Loss, 1.0 dB Typical
- Fast Switching Speed, 20 nS Typical
- Ultra Low DC Power Consumption, 0.3 mA Typical
- Integral TTL Driver
- 50 Ohm Nominal Impedance
- MIL-STD-883 screening available

Functional Block Diagram



Ordering Information

Part Number	Package
SW-255-PIN	DI-5

Note: Reference Application Note M513 for reel size information. Note: Die quantity varies.

Truth Table

Control Input			Condition of Switch				
"1" = Logic High			RF Common to Each RF Port				
CTL 1	CTL 2	CTL 3	CTL 4	RF1	RF2	RF3	RF4
1	0	0	0	ON	OFF	OFF	OFF
0	1	0	0	OFF	ON	OFF	OFF
0	0	1	0	OFF	OFF	ON	OFF
0	0	0	1	OFF	OFF	OFF	ON

* Restrictions on Hazardous Substances, European Union Directive 2002/95/EC.

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SW-255-PIN

Technology Solutions

GaAs SP4T Switch, 5 - 2000 MHz

Rev. V4

Electrical Specifications: $T_A = -55^{\circ}C$ to $+85^{\circ}C^{-1}$

Parameter	Test Conditions	Frequency	Units	Min	Тур	Max
Insertion Loss	_	5 - 2000 MHz 5 - 1000 MHz 5 - 500 MHz	dB dB dB	2.1 1.6 1.4		
VSWR	_	5 - 2000 MHz 5 - 1000 MHz 5 - 500 MHz	Ratio Ratio Ratio			2.3:1 1.8:1 1.4:1
Isolation		5 - 2000 MHz 5 - 1000 MHz 5 - 500 MHz	dB dB dB	35 36 42		
Trise, Tfall Ton, Toff Transients	50% CTL to 90/10% RF In-band		nS nS mV		7 20 80	
1 dB Compression	Input Power	500 - 2000 MHz 50 MHz	dBm dBm		+27 +21	
IP ₂	For two tone input power up to +13 dBm	500 - 2000 MHz 50 MHz	dBm dBm		+68 +60	
Bias Power	+5 VDC @ 0.30 mA Typ		mA	_	_	1

1. All specifications apply when operated with bias voltages of +5 VDC and 50 ohm impedance at all RF Ports.

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SW-255-PIN

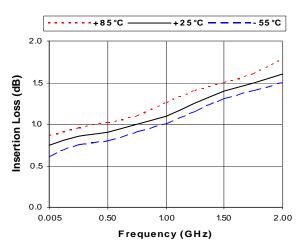
GaAs SP4T Switch, 5 - 2000 MHz



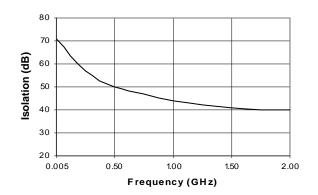
Rev. V4

Typical Performance Curves

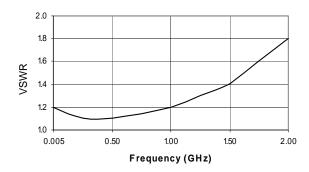
Insertion Loss



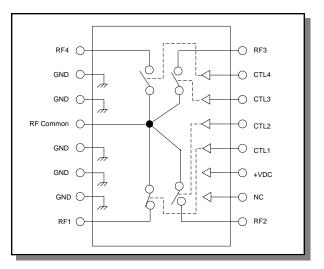
Isolation



VSWR



Schematic



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