

Matched SP4T RF Switch, 20 - 1500 MHz

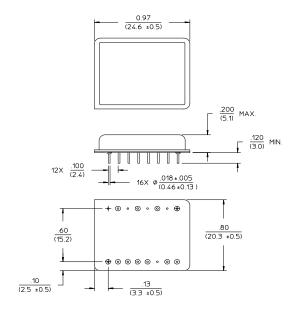
Rev. V3

Features

- Internally Terminated
- Integral TTL Driver
- Low Loss: 0.9 dB Typical
- 50 Ohm Nominal Impedance
- MIL-STD-883 Screening Available

Description

Functional Block Diagram



Dimensions in () are in mm Unless Otherwise Noted. XXX = ± 0.010 (XX = ± 0.25) XX = ± 0.02 (X = ± 0.5) WEIGHT (APPROX): 0.28 OUNCES 8 GRAMS

Ordering Information

Part Number	Package
SW-164-PIN	DI-2

Note: Reference Application Note M513 for reel size

information.

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Note: Die quantity varies.

Truth Table

TTL Control Inputs "1" = TTL Logic High			Condition of Switch RF Common to each RF Port				
1	2	3	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.

ADVANCED: Data Sheets contain information regarding a product M/A-COM Technology Solutions is considering for development. Performance is based on target specifications, simulated results, and/or prototype measurements. Commitment to develop is not guaranteed.

PRELIMINARY: Data Sheets contain information regarding a product M/A-COM Technology Solutions has under development. Performance is based on engineering tests. Specifications are typical. Mechanical outline has been fixed. Engineering samples and/or test data may be available. Commitment to produce in volume is not guaranteed.

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SW-164-PIN



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Electrical Specifications: $T_A = -55$ °C to +85°C ¹

Parameter	Test Conditions	Frequency	Units	Min	Тур	Max
Insertion Loss	_	20 - 1500 MHz 20 - 1000 MHz 30 - 500 MHz	dB dB dB	_ _ _	_ _ _	2.0 1.5 1.2
VSWR	_	20 - 1500 MHz 20 - 1000 MHz 30 - 500 MHz	Ratio Ratio Ratio			1.80:1 1.50:1 1.25:1
Isolation	_	20 - 1500 MHz 20 - 1000 MHz 20 - 500 MHz	dB dB dB	35 40 50		
Ton Toff Transients	In-band	_ _ _	μS μS mV		3.0 1.5 40	
1 dB Compression	Input Power	20 - 1500 MHz 50 - 1500 MHz	dBm dBm	_	+5 +15	_
IP ₂	For two tone input power up to +5 dBm	20 - 1500 MHz 50 - 1500 MHz	dBm dBm	_	+55 +70	_
IP ₃	For two tone input power up to +5 dBm	20 - 1500 MHz 50 - 1500 MHz	dBm dBm	_	+25 +40	_
Bias Power	+9 to +15 VDC @ 50 mA Max -5 VDC ± 5% @ 25 mA Max	_	mW	_	550	_

^{1.} All specifications apply when operated with bias voltages of +12 VDC and -5 VDC (± 5%) and 50 ohm impedance at all RF

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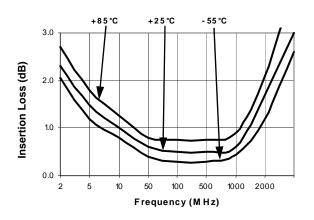


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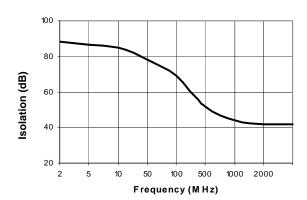
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Typical Performance Curves

Insertion Loss

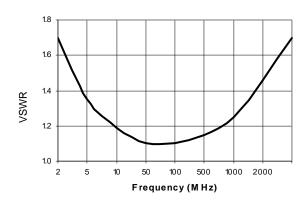


Isolation



VSWR

3



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