

MICRO-S

DC - 10 GHz SPDT SWITCH (WITH DRIVER)

TQ9151

FEATURES

Broad Bandwidth	DC - 10 GHz
"On" Insertion Loss	< 1.5 dB
"Off" Isolation	> 25 dB
Input/Output VSWR	< 2 : 1
Switching Speed	< 3 ns

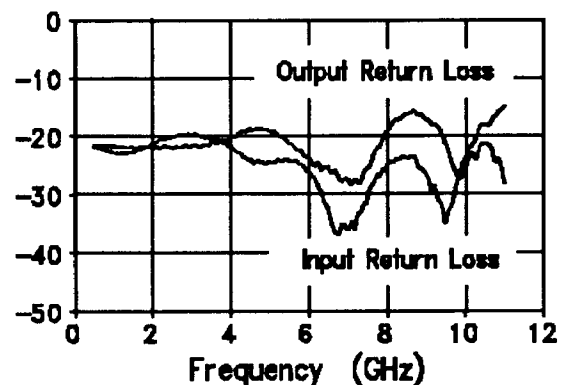
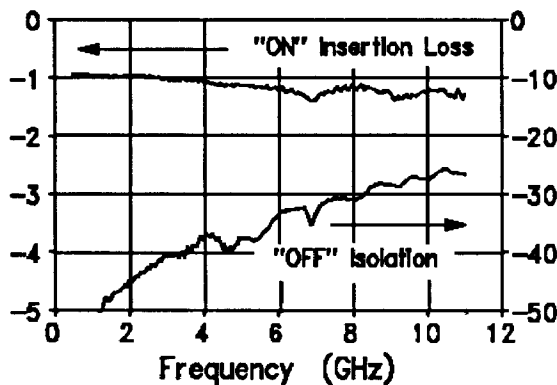
FUNCTIONAL DESCRIPTION

The TQ9151 is a fast, broadband microwave SPDT switch (reflective) with an on-chip TTL level driver. Several switches can be cascaded together to implement multi-port configurations. The TQ9151 is available mounted in a hermetic, surface mount package or in die form. The die size is 43 x 54 mils.

SWITCH LOGIC

TTL CTRL	RF SW _A	RF SW _B
Low	ON	OFF
High	OFF	ON

TYPICAL TQ9151 PACKAGED PERFORMANCE



APPLICATION NOTES

- AN-002 Recommendations for Handling and Packaging TriQuint Die
- AN-004 Mounting TriQuint's Micro-S Package to a Circuit Board

ELECTRICAL CHARACTERISTICS

Absolute Maximum Ratings

	MIN	MAX	UNIT
DC Power Supply		± 7	V
Operating Temp	-55	+85	°C
Storage Temp	-55	+150	°C
Power Dissipation		1.0	W

DC Characteristics at 20°C (T_C)

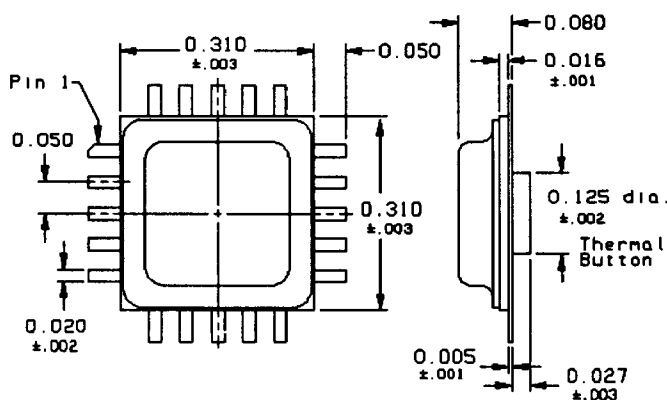
	MIN	TYP	MAX	UNIT
DC Power Supply (+V _{DD} , -V _{SS})	± 4.5	± 5	± 5.5	V
DC Supply Current		15	20	mA
Power Dissipation		150	250	mW
Switch Control Levels		Standard TTL		

RF Characteristics at 20°C (T_C)

	MIN	TYP	MAX	UNIT
Frequency of Operation	1		10	GHz
"On" Insertion Loss		1.5	2.5	dB
"Off" Isolation - 1 GHz	40	45		dB
- 10 GHz	20	25		dB
Input/Output VSWR		1.7:1	2:1	
Switching Speed		< 3		ns
Maximum RF Input Power ¹		> +20		dBm
Third Order Intercept ¹		+35		dBm

Note 1: P1dB and 3rd OIP decrease below 1 GHz

PACKAGE OUTLINE



Pin Function

2	SW Control (TTL)
4	RF SW _{COM}
7	-V _{SS}
9	RF SW _A
12	-
14	-
17	RF SW _B
19	+V _{DD}

Pins 1, 3, 5, 6, 8,
10, 11, 13, 15, 16,
18, 20 are Ground.

For further information, please contact:

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