

W-Band Reflective FET Switch

75-110 GHz/SP8T/ WR-10

Model: TMSP8T-0750110-10

The TMSP8T-0750110-10 is a W-Band switch with a TTL driver that operates between 75 and 110 GHz. The SP8T switch offers 70 dB port-to-port isolation with a typical switching speed of 100 nanoseconds. The input and output connectors of the switch are WR-10.

Features:

- Frequency range: 75-110GHz
- Low Insertion Loss: 14dB
- Power Handling : 30 dBm
- High Isolation
- Switch Type: Reflective

Applications:

- Communication Systems
- Automatic Test Equipment
- Switching Network

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range		75-110		GHz
Insertion Loss		14		dB
Isolation		70		dB
Switch Speed		100		ns
Input VSWR		1.6		:1
Output VSWR		2.0		:1
P1dB Output P1dB		20		dBm
DC Voltage		+5		V DC
Control Voltage TTL		"0"=Low;"1"=High		V
DC Supply Current		800		mA
Switch type		Reflective		

Absolute Maximum Ratings :

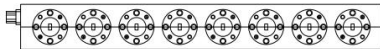
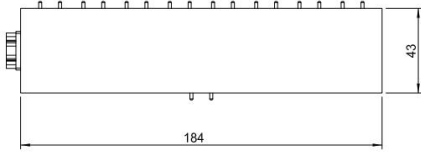
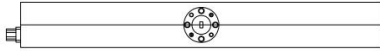
Description	Parameter	Units
Supply Bias Voltage	+5 (+5%)	V
RF Input Power	20	dBm
ESD sensitivity (HBm)	Class 0, passed 150V	

Mechanical Specifications:

Description	Parameter	Units
Input /Output Connector	WR-10/UG-387/U	
Control Bias	J30J-9ZKP	
Size	184*43*20	mm

Outline Drawing:

Unit:mm



Truth Table							
TTL Control Input							Signal Path State
Bit 1	Bit 2	Bit 3	Bit 4	Bit 5	Bit 6	Bit 7	
0	0	0	0	0	0	0	J0-J1
1	0	0	0	0	0	0	J0-J2
0	1	0	0	0	0	0	J0-J3
0	0	1	0	0	0	0	J0-J4
0	0	0	1	0	0	0	J0-J5
0	0	0	0	1	0	0	J0-J6
0	0	0	0	0	1	0	J0-J7
0	0	0	0	0	0	1	J0-J8

TTL Control Voltages &VDD	
Stage	Bias Condition
VDD	+5V (± 5%)
Low (0)	0 to 0.8Vdc
High (1)	+3.3 Vdc



ESD Protection: Strictly adhere to ESD precautions to prevent electrostatic damage.

Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature	-45		+85	°C
Non-operating Temperature	-55		+125	°C
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

Ordering Information:

Base Number	Description	Revision
TMSP8T-0750110-10	W-Band Reflective FET Switch 75-110 GHz,SP8T,WR-10	Rev.1.1