

E-Band Reflective FET Switch

60-90 GHz/SP8T/ WR-12

Model: TMSP8T-060090-12

The TMSP8T-060090-12 is a E-Band switch with a TTL driver that operates between 60 and 90 GHz. The SP8T switch offers 75 dB port-to-port isolation with a typical switching speed of 100 nanoseconds. The input and output connectors of the switch are WR-12.

Features:

- Frequency range: 60-90GHz
- Low Insertion Loss: 8.5dB
- Power Handling : 20 dBm
- High Isolation
- Switch Type: Reflective

Applications:

- Communication Systems
- Automatic Test Equipment
- Switching Network

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range		60-90		GHz
Insertion Loss		8.5		dB
Isolation		75		dB
Switch Speed		100		ns
Input VSWR		1.7		:1
Output VSWR		1.3		:1
P1dB Output P1dB		20		dBm
DC Voltage		+5		V DC
Control Voltage		+3.3		V
DC Supply Current		800		mA
Switch type		Reflective		

Absolute Maximum Ratings :

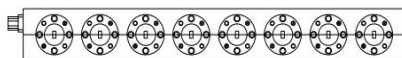
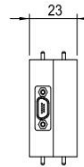
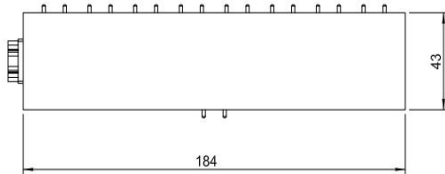
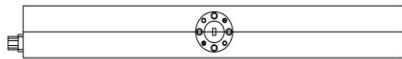
Description	Parameter	Units
Control Voltage	+3.3 (+5%)	V
RF Input Power	20	dBm
ESD sensitivity (HBm)	Class 0, passed 150V	

Mechanical Specifications:

Description	Parameter	Units
Input /Output Connector	WR-12/UG-387/U	
Control Bias	J30J-9ZKP	
Size	184*43*23	mm

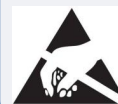
Outline Drawing:

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-060090-12	E-Band Reflective FET Switch 60-90 GHz,SP8T,WR-12	Rev.1.1