

Miniature Switch Matrix TLRS-2R1X-18NT-S-UL

2xSP6T, DC to 18 GHz, SMA, Terminated, USB&LAN Controlle

产品特点 Features:

- Wide Band Operation DC-40 GHz
- USB&LAN Controlled
- Low Insertion Loss and High Isolation
- Customization available upon request

典型应用 Typical Applications:

- Device testing
- Automated test equipment

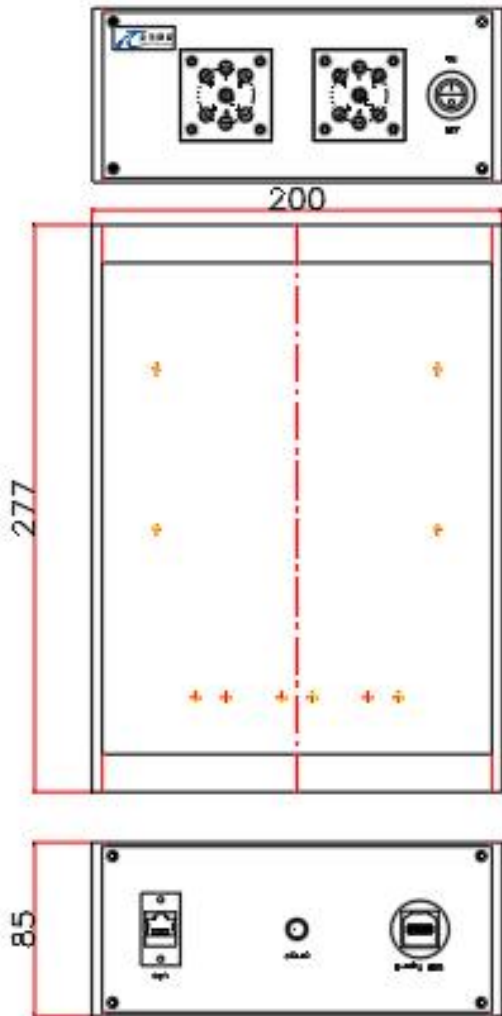
射频特性 RF Specifications:

频率范围 Frequency (GHz)	DC-6	6-12	12-18
插损 Insertion Loss (dB max.)	0.3	0.4	0.5
隔离 Isolation (dB min.)	70	60	60
驻波 VSWR (max.)	1.3:1	1.4:1	1.5:1
平均功率 RF Power CW (Watts max.)	80	50	45

环境和物理特性 Environmental And Physical Characteristics:

参数Parameter	指标 Value
操作温度 OperatingTemperature	-25°C to +65°C
震动 Vibration(operating)	10G RMS, 20-2000HZ
冲击 Shock(non operating)	50G, 1/2Sine, 12msec
射频接口Connector Type	SMA Female
控制接口 Control Connector	USB type-B & RJ45
供电电压 Rated Voltage	12V DC
直流端口 VDC Connector	center positive DC Socket
开关寿命 Standard Actuator Life	2 million Min
开关顺序 Switch Sequence	Break before make

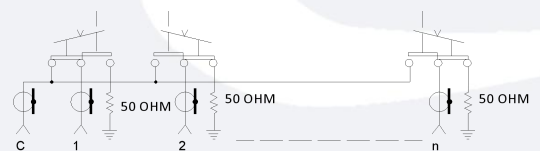
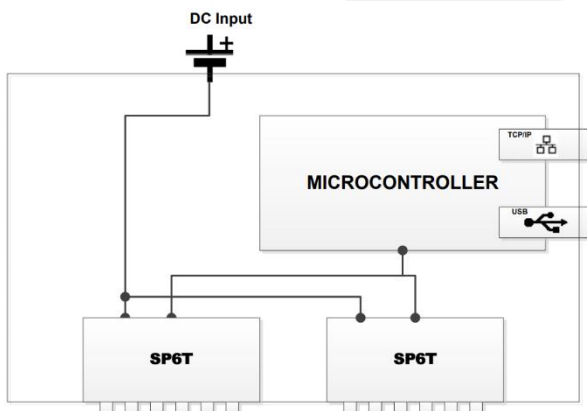
外形尺寸 Outline Drawing: Unit: mm



接口 Connections:

端口 Port Name	接头类型 Connector Type
射频 RF	SMA Female
USB	USB type-B
网口 LNA	RJ45
直流 VDC	center positive DC Socket

原理图 Schematic:



Normally open (all port disconnected)
Internal terminations on ports J1-J6)

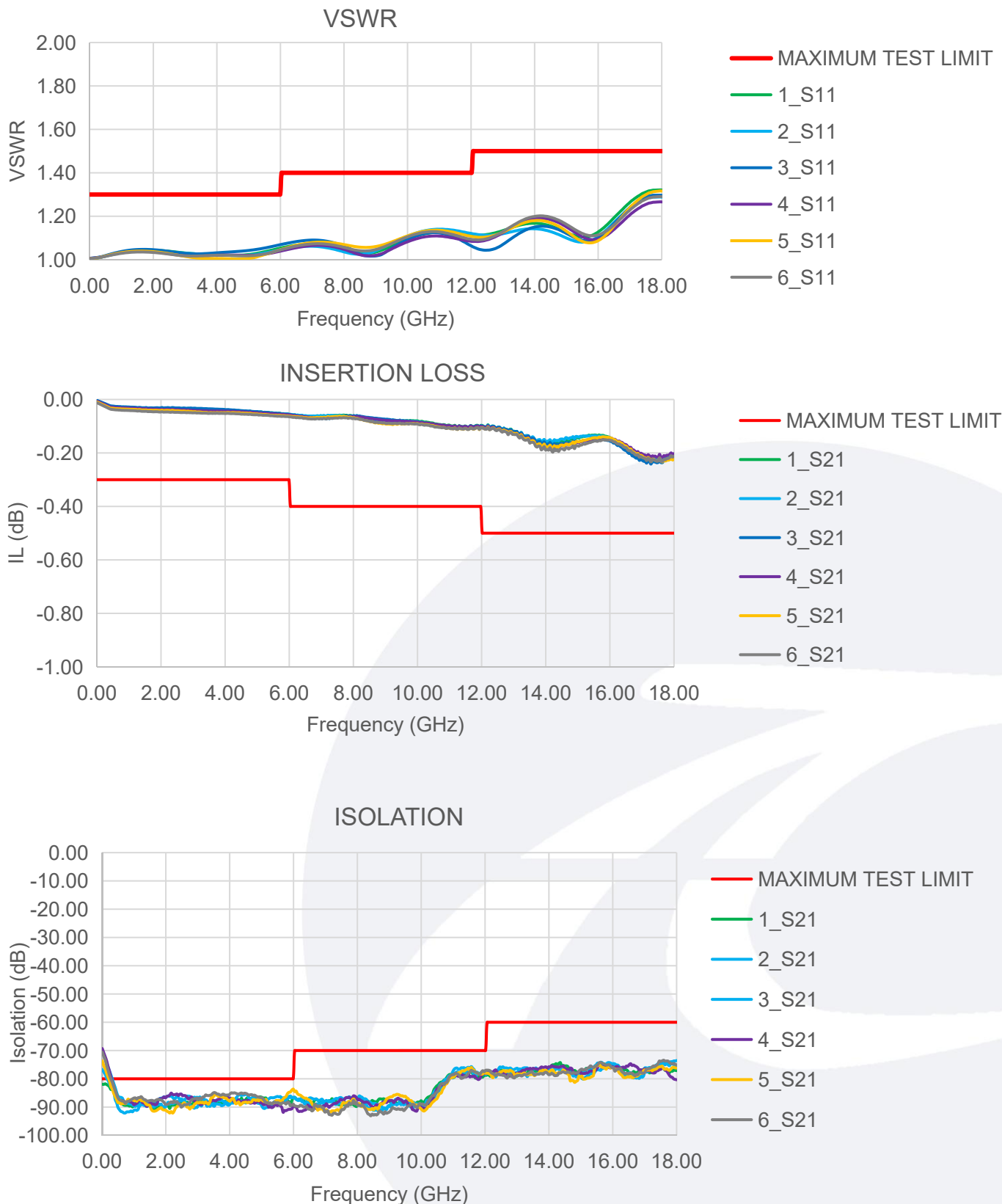
标准型号 Part Number:

标准型号 Part Number	
TLRS-2R13-18NT-S-UL	2xSP3T Switch Matrix ,DC to 18 GHz, SMA, Terminated,USB&LAN Controlled
TLRS-2R14-18NT-S-UL	2xSP4T Switch Matrix ,DC to 18 GHz, SMA, Terminated,USB&LAN Controlled
TLRS-2R15-18NT-S-UL	2xSP5T Switch Matrix ,DC to 18 GHz, SMA, Terminated,USB&LAN Controlled
TLRS-2R16-18NT-S-UL	2xSP6T Switch Matrix ,DC to 18 GHz, SMA, Terminated,USB&LAN Controlled

随货配件 Included Accessories:

随货配件 Included Accessories		
	AC/DC 12VDC Grounded Power Adaptor.	1 PCS
	Operation Manual	1PCS

典型曲线 Typical Performance Data:



Serial Terminal Commands:

1. System Description

The device operates as a TCP/IP server.
Default IP Address: 192.168.1.200
Default Port: 5000

Serial Port: 9600, 8 data bits, 1 stop bit, No parity.

2. Control Commands

2.1. Switch Query

Function Description	Query switch status
Command Format	ReadSW:01\n
Parameter Description	None
Command Direction	PC-->Switch
Success Response	SW:01,V1 , V2 ,END\n (V1 and V2 indicate switch 1 values 0–6)
Failure Response	Fail\n
Example	ReadSW:01\n

2.2 Switch Setting

Function Description	Set switch
Command Format	SetSW:01,K01,XX\n
Parameter Description	K01–K02 = switch number; XX = switch position (0–6)
Command Direction	Switch --> PC
Success Response	OK\n
Failure Response	Fail\n
Example	SetSW:01,K01,01\n SetSW:01,K02,06\n

3. Management Commands

3.1 Model Query Command

Function Description	Query device model
Command Format	*IDN?\n
Parameter Description	None
Command Direction	PC-->Switch
Successful Response	XXXXXX, RENEW, SN123456789, SV004\n
Failure Response	Fail\n
Example	

3.2 Model Setting Command (Administrator Command)

Function Description	Set device model
Command Format	SET IDN:Model\n
Parameter Description	无
Command Direction	Switch --> PC
Successful Response	OK\n
Failure Response	Fail\n
Example	SET IDN:XXXXXX, RENEW, SN123456789, SV004\n

3.3 Network Interface Setting Command

Command Name	Network interface configuration
Function Description	Simultaneously modify IP address, default gateway, subnet mask, and port number (takes effect after reboot)
Command Format	SetNETWORK:Address-Gateway-Mask-Port\n
Parameter Description	Must be entered completely; each address is connected by a half-width hyphen "-"
Command Direction	PC-->Switch
Successful Response	OK\n
Failure Response	Fail\n
Example	SetNETWORK:192.168.1.200-192.168.1.1- 255.255.255.0-7000\n

3.4 Network Interface Query

Command

Command Name	Network interface query
Function Description	Simultaneously query IP address, default gateway, subnet mask, and port number
Command Format	LstNETWORK\n
Parameter Description	None
Command Direction	PC-->Switch
Successful Response	IP:Address-NETGATE:Gateway-NETMASK:Mask- PORT:Port\n
Failure Response	Fail\n

3.5 IP Setting Command

Command Name	IP setting
Function Description	Modify the IP address of the switch control board (takes effect after reboot)
Command Format	SetIP: Address\n
Parameter Description	address: IP address
Command Direction	PC-->Switch
Successful Response	OK\n
Failure Response	Fail\n
Example	SetIP:192.168.1.200\n

3.6 IP Query Command

Command Name	IP query
Function Description	Query the IP address of the switch control board
Command Format	LstIP\n
Parameter Description	None
Command Direction	PC-->Switch
Successful Response	IP: Address\n
Failure Response	Fail\n
Example	IP:192.168.1.200\n

3.7 Subnet Mask Setting Command

Command Name	Subnet Mask Setting
Function Description	Modify the subnet mask of the switch control board (takes effect after reboot)
Command Format	SetNetMask:Parameter\n
Parameter Description	Parameter: Subnet mask, e.g., 255.255.255.0
Command Direction	PC-->Switch
Successful Response	OK\n
Failure Response	Fail\n
Example	SetNetMask:255.255.255.0\n

3.8 Subnet Mask Query Command

Command Name	Subnet Mask Query
Function Description	Query the subnet mask of the switch control board
Command Format	LstNetMask\n
Parameter Description	None
Command Direction	PC-->Switch
Successful Response	NetMask:SubnetMask\n
Failure Response	Fail\n
Example	NetMask:255.255.255.0\n

3.9 Default Gateway Setting

Command

Command Name	Default Gateway Setting
Function Description	Modify the default gateway of the switch control board (takes effect after reboot)
Command Format	SetNetGate:DefaultGateway\n
Parameter Description	
Command Direction	PC-->Switch
Successful Response	OK\n
Failure Response	Fail\n
Example	SetNetGate:192.168.1.1\n

3. 10 Default Gateway Query Command

Command Name	Default Gateway Query
Function Description	Query the default gateway of the switch control board
Command Format	LstNetGate\n
Parameter Description	None
Command Direction	PC-->Switch
Successful Response	NetGate:DefaultGateway\n
Failure Response	Fail\n
Example	

3. 11 Port Number Setting Command

Command Name	Port Number Setting
Function Description	Modify the port number of the switch control board
Command Format	SetPORT:Parameter1\n
Parameter Description	Parameter: Port number
Command Direction	PC-->Switch
Successful Response	Network connection disconnected
Failure Response	SetPORTFail
Example	> SetPORT 4001 Network connection disconnected

3. 12 Port Number Query Command

Command Name	Port Number Query
Function Description	Query the port number of the switch control board
Command Format	LstPORT\n
Parameter Description	None
Command Direction	PC-->Switch
Successful Response	The PORT address is [PortNumber]
Failure Response	None
Example	>LstPORT The NET PORT is 4001

4. Factory Default IP

Recovery:

Apply DC 3 V simultaneously to pins 4 and 11 of connector J15 (DB15) while powering on the unit. The IP address will be restored to the factory default. Network parameters may also be configured through the serial port using the same command format as the Ethernet interface.

