

USB & Ethernet Controlled Mechanical Switch System (6 x SP6T)

ZTM-6SP6T-26

50Ω DC to 26.5 GHz



Window	Model Name	Frequency	Connectors	Description
1	MSP6TA-26+ (B81-47+)	DC to 26.5 GHz	SMA (f)	SP6T Switch (Absorptive)
2	MSP6TA-26+ (B81-47+)	DC to 26.5 GHz	SMA (f)	SP6T Switch (Absorptive)
3	MSP6TA-26+ (B81-47+)	DC to 26.5 GHz	SMA (f)	SP6T Switch (Absorptive)
4	MSP6TA-26+ (B81-47+)	DC to 26.5 GHz	SMA (f)	SP6T Switch (Absorptive)
5	MSP6TA-26+ (B81-47+)	DC to 26.5 GHz	SMA (f)	SP6T Switch (Absorptive)
6	MSP6TA-26+ (B81-47+)	DC to 26.5 GHz	SMA (f)	SP6T Switch (Absorptive)

Electrical Specifications @ 25°C (per Switch)

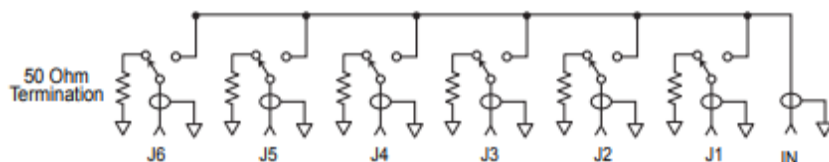
Parameter	Conditions	Min	Typ	Max	Units
Frequency Range		DC		26.5	GHz
Insertion Loss	DC – 8 GHz		0.10	0.30	dB
	8 – 18 GHz		0.25	0.50	
	18 – 26.5 GHz		0.40	0.70	
Isolation	DC – 8 GHz	70	90		dB
	8 – 18 GHz	60	90		
	18 – 26.5 GHz	55	80		
VSWR	DC – 8 GHz		1.20		:1
	8 – 18 GHz		1.35		
	18 – 26.5 GHz		1.50		
Switching Time			25		ms
RF Input Power (Cold Switching)¹	DC – 8 GHz			20	W
	8 – 18 GHz			10	
	18 – 26.5 GHz			5	
Switch Lifetime	100 mW hot switching ²	2			million cycles
	1W hot switching		1		

Notes:

- Maximum power for any connected through path as stated; maximum power into any internal termination is 1W per port, 3W total per switch
- Hot switching powers above this level will degrade the switch lifetime

Switch Configuration:

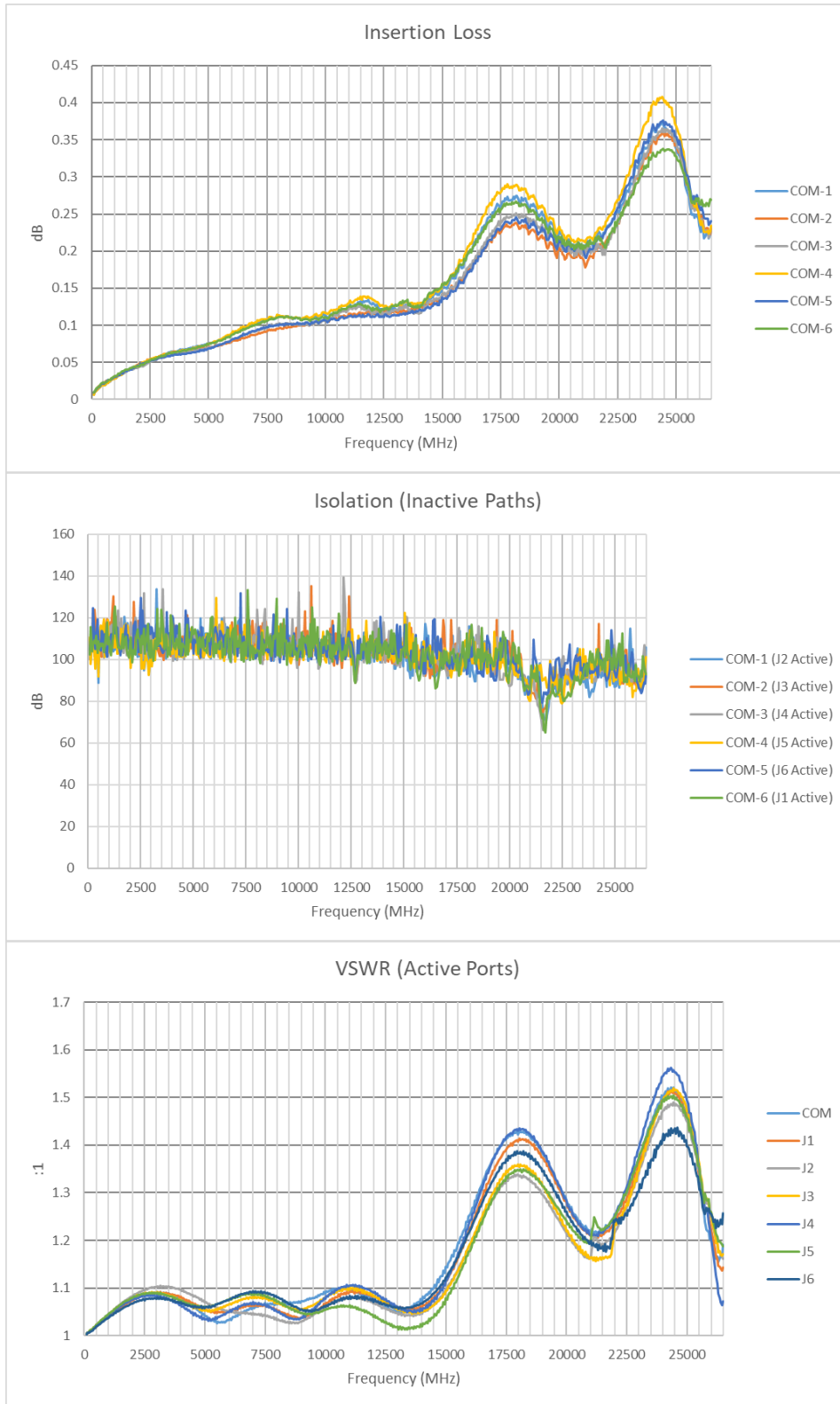
- Normally open (all ports disconnected)
- Absorptive (internal terminations on ports J1-J6)



USB & Ethernet Controlled
Mechanical Switch System (6 x SP6T)

ZTM-6SP6T-26

Typical Performance (per Switch)



USB & Ethernet Controlled

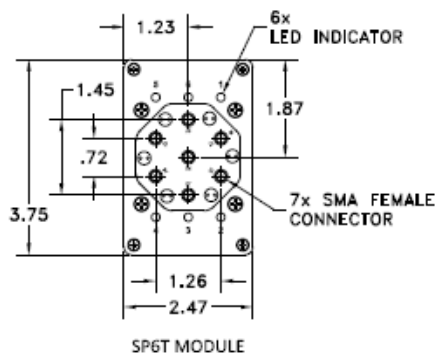
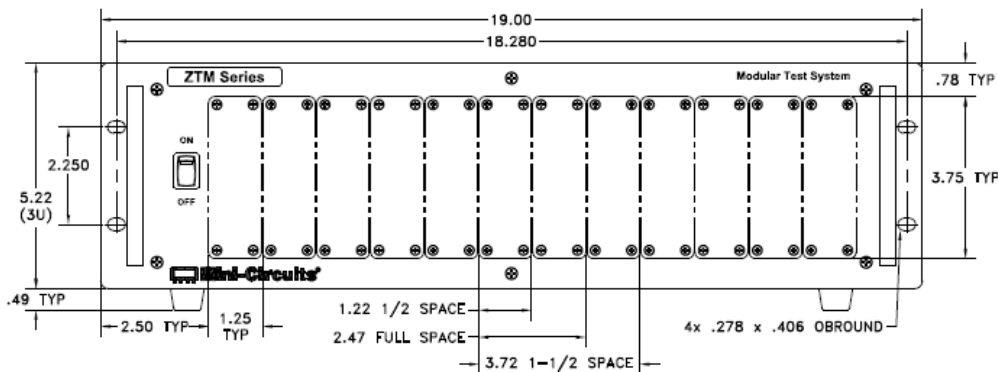
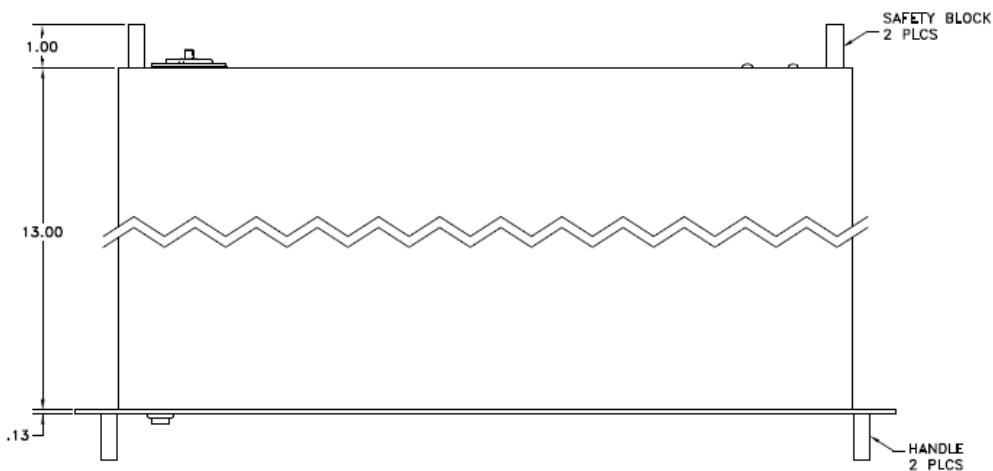
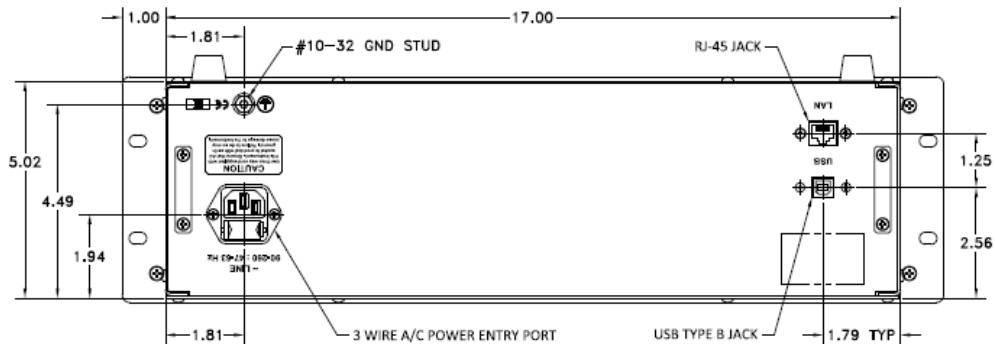
Mechanical Switch System (6 x SP6T)**ZTM-6SP6T-26****Mechanical / Environmental Specifications**

Dimensions	19" (w) x 3U (h) x 13" (d); mounting feet add 0.5" height
Case Material	Aluminum (with protective coatings to prevent corrosion)
Case Drawing	99-01-2861
RF Connectors	SMA female
Front Panel	a) Power ON/OFF switch with indicator light b) All RF ports c) LED switch position indicators
Rear Panel	a) AC mains power input (IEC C14 inlet) b) USB & RJ45 control connections
Control Interface	USB and Ethernet TCP/IP supporting HTTP and TELNET protocols
Power Supply	AC mains power input (90-260 V, 47-63 Hz) with 2A, 250V fuse rating
Operating Temperature	0° to +50° C

USB & Ethernet Controlled Mechanical Switch System (6 x SP6T)

ZTM-6SP6T-26

Case Drawings



Software Specifications

Software & Documentation Download:

- Mini-Circuits' full software and support package including user guide, Windows GUI, DLL files, programming manual and examples can be downloaded free of charge from https://www.minicircuits.com/softwaredownload/ztm_rcm.html
- Please contact testsolutions@minicircuits.com for support

Minimum System Requirements:

Parameter	Requirements	
Interface	USB HID & Ethernet (HTTP & Telnet)	
System Requirements	GUI	Windows 98 or later
	USB API DLL	Windows 98 or later and programming environment with ActiveX or .NET support
	USB Direct Programming	Linux; Windows 98 or later
	Ethernet	Windows, Linux or Mac computer with a network port and Ethernet TCP / IP support
Hardware	Pentium II or later with 256 MB RAM	

Application Programming Interface (API)

Ethernet Support:

- Simple ASCII / SCPI command set for switch & attenuator control
- Communication via HTTP or Telnet
- Supported by most common programming environments

USB Support (Windows):

- ActiveX COM DLL file for creation of 32-bit programs
- .NET library DLL file for creation of 32 / 64-bit programs
- Supported by most common programming environments (refer to application note [AN-49-001](#) for summary of supported environments)

USB Support (Linux):

- Direct USB programming using a series of USB interrupt codes

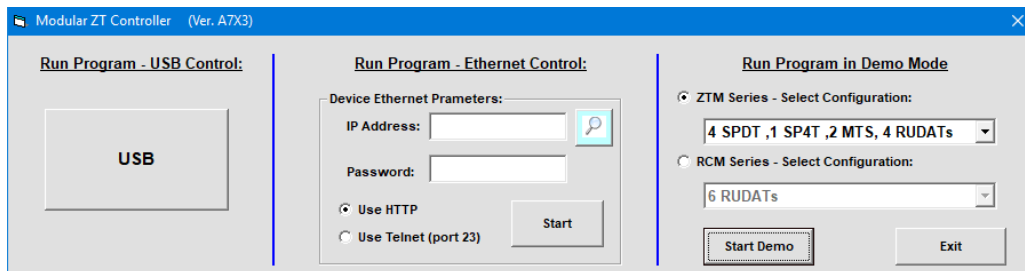
Full programming instructions and examples available for a wide range of programming environments / languages.

USB & Ethernet Controlled Mechanical Switch System (6 x SP6T)

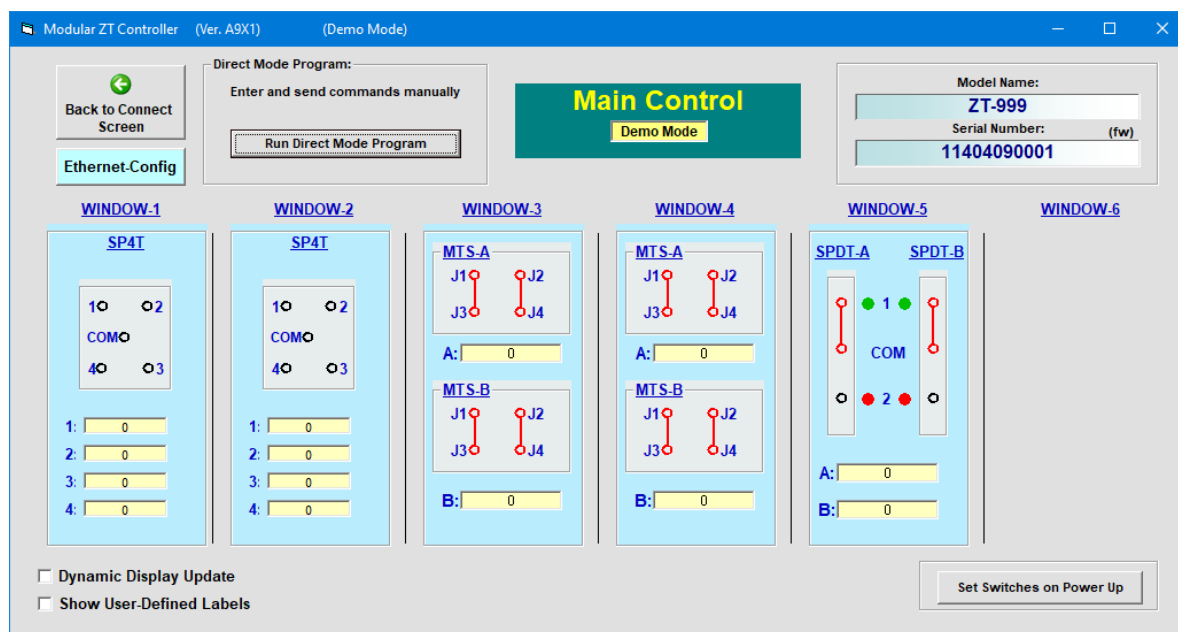
ZTM-6SP6T-26

Graphical User Interface (GUI) for Windows - Key Features

- Connect via USB or Ethernet
- Run GUI in “demo mode” to evaluate software without a hardware connection



- View and set switch / attenuator states at the click of a button
- Configure and run timed sequences
- Set start-up states
- View switch position counters
- Configure Ethernet IP settings



* GUI pictured for similar model

USB & Ethernet Controlled Mechanical Switch System (6 x SP6T)

ZTM-6SP6T-26

Ordering Information

Please contact Mini-Circuits' Test Solutions department for price and availability:

testsolutions@minicircuits.com

Included Accessories

Model Name	Quantity	Description
CBL-3W-xx*	1	AC power cord (IEC C13 connector to local plug)
USB-CBL-AB-7+	1	USB cable (6.8 ft)
CBL-RJ45-MM-5+	1	Ethernet cable (5 ft)
HT-4-SMA	1	SMA Cable Wrench (4 in)
B13-67-11+	2	Rear safety block
B18-DD-125+	4	Pan-head screw

Cable Model	Region
CBL-3W-US	USA
CBL-3W-EU	Europe
CBL-3W-IL	Israel
CBL-3W-UK	UK
CBL-3W-AU	Australia / China

*Please specify one option on the purchase order, at no charge

Additional Notes

- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp

