ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

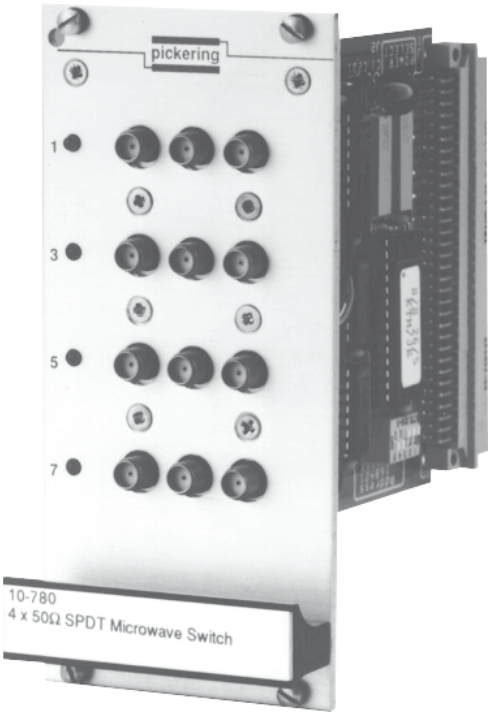
Expert team | Trust guarantee | 100% satisfaction

All trademarks, brand names, and brands appearing herein are the property of their respective owners.

Find the *Pickering 10-780* at our website: ***Click HERE***

10-780
Microwave Switch Module

- 2 or 4 Changeover Relays per Module
- 50Ω with 20GHz Bandwidth + Option for 26.5GHz
- 75Ω 5GHz Bandwidth
- High Performance Microwave Relays
- Switch Up to 30W Power at 20GHz (50Ω)
- Model 10-780-543 has 3 x SPDT Power Microwave Relays Using Type-N Connectors
- Front Panel Mounted SMA/SMZ Sockets with Indicator LEDs
- Tree networks may be constructed by inter-linking individual modules



Microwave switching modules offer a choice of 2 or 4 changeover switches (SPDT) per module with bandwidths to 20GHz (optionally 26.5GHz) in 50Ω and 5GHz in 75Ω. Connections are made via high performance front panel mounted connectors.

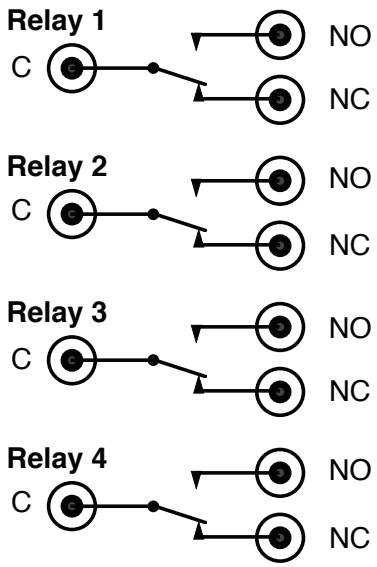
As these switches are electromechanical they cover the complete frequency range from d.c. to GHz. These modules give you the highest RF & Microwave switching performance available within a Pickering Switching System. Applications are mainly in the Microwave region, however there are many uses in the RF spectrum where extremely low insertion loss and ultra high isolation are critical.

They may also be used for applications requiring power switching to 100W (or 400W with module type 10-780-543).

Programming

The Microwave Switching Module is simple to program either by single relay or by pattern (4 relays simultaneously)

`ARESET a`	Open all switches on module `a`
`CLOSE a,b`	Close switch number `b` on module `a`
`OPEN a,b`	Open switch number `b` on module `a`
`RESET`	Open all switches on all modules
`VIEW? a[,b]`	View status of module `a`, can be viewed at any time either as a byte or by switch as a logical value (1 or 0)
`WRITE a,w`	Send byte `w` to module `a`

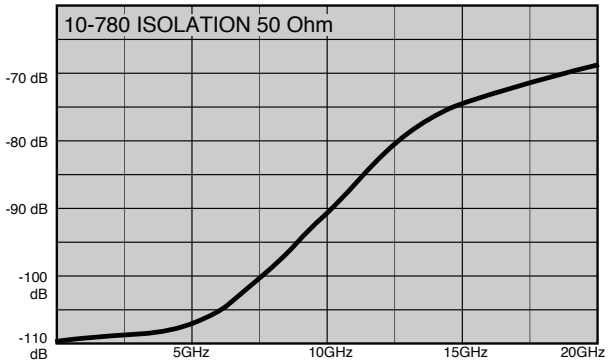


Switching Diagram for the 20-780 Microwave Switch Module with 4 Relays

ISSUE 3, JUL 2006







Microwave Performance Plots for the 10-780-524 Changeover Relay Module (50Ω)

General Specification (All Versions)

Maximum Voltage:	100V DC
Max Switch Current:	1A
On Path Resistance:	<200mΩ
Off Path Resistance:	$>10^{10}\Omega$
Differential Thermal Offset:	<20µV
Switching Time:	>20ms
Expected Life:	$>1x10^6$ operations

Operating/Storage Conditions

Operating Conditions

Operating Temperature:	0°C to 55°C
Humidity:	Up to 95% non-condensing
Altitude:	5000m

Storage and Transport Conditions

Storage Temperature:	-20°C to +75°C
Humidity:	Up to 95% non-condensing
Altitude:	15000m

Microwave Specification (50Ω Version)

Frequency/GHz:	<2	<6	<12	<18	<26.5
Loss:	<0.2	<0.2	<0.4	<0.5	<0.7
VSWR:	<1.2	1.25	1.4	1.5	1.7
Isolation/dB:	>80	>70	>60	>60	>50

Switching Power (average):
100W at <3GHz
60W at <12GHz
30W at <18GHz
15W at <26.5GHz

NB. Peak power switching can be well in excess of the above values but this will affect the switch life.

Microwave Specification (75Ω Version)

Frequency/GHz:	<2	<6	<12
Loss:	<0.2	<0.2	<0.4
VSWR:	<1.2	1.25	1.4
Isolation/dB:	>80	>70	>60
Switching Power (average):	100W at <3GHz		

Power Microwave Module - Additional Specification

Model 10-780-543 is suitable for switching Power Microwave Signals:

Frequency/GHz:	<1	<3	<8	<12.4
Loss:	<0.1	<0.2	<0.3	<0.5
VSWR:	<1.1	1.2	1.35	1.5
Isolation/dB:	>80	>80	>70	>60
Switching Pwr (average)/W:	400	250	175	125

Width and Dimensions

3U height (128mm), 160mm deep, panel width is 2.4 inches. Model 10-780-543 is 3.6 Inches Wide.

Connectors

The 10-780A Microwave Switch Module is available with 50Ω or 75Ω BNC front panel connectors.

Product Order Codes

2 x SPDT Microwave Switch, 20GHz, 50Ω	**10-780-522**
4 x SPDT Microwave Switch, 20GHz, 50Ω	**10-780-524**
Replacement 20GHz, 50Ω Microwave Relay	**10-780-922**
2 x SPDT Microwave Switch, 26.5GHz, 50Ω	**10-780-532**
4 x SPDT Microwave Switch, 26.5GHz, 50Ω	**10-780-534**
Replacement 26.5GHz, 50Ω Microwave Relay	**10-780-932**
2 x SPDT Microwave Switch, 5GHz, 75Ω	**10-780-712**
4 x SPDT Microwave Switch, 5GHz, 75Ω	**10-780-714**
Replacement 5GHz, 75Ω Microwave Relay	**10-780-912**
3 x SPDT Microwave Power Switch, 12.4GHz, 50Ω	**10-780-543**
Replacement 12.4GHz, 50Ω Microwave Relay	**10-780-941**

Mating Connectors & Cabling

Examples of cabling available for the 10-780 are:

BNC to BNC Lead, 1 metre, 50Ω	**10-980-510**
BNC to BNC Lead, 1 metre, 75Ω	**10-980-710**

Latest Details

Please refer to our Web Site for Latest Product Details.
www.pickeringtest.com

© Copyright (2006) Pickering Interfaces. All Rights Reserved
Pickering Interfaces maintains a commitment to continuous product development, consequently we reserve the right to vary from the description given in this data sheet.

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP