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Find the *Pickering 20-745-521* at our website: ***Click HERE***

20-745
2GHz RF Multiplexer Module



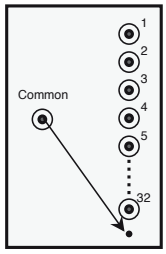
- R.F. Multiplexer with up to 2GHz Bandwidth
- Configurable as 32 to 1, Dual 16 to 1 or Quad 8 to 1 Multiplexer
- Wide Choice of Connectors: SMB, BNC, BT Type 43/SMZ, SMA or 1.0/2.3
- Built-In Self Test
- Front Panel LED Indicators
- Suitable for Building Larger Switching Networks
- 75Ω Version Suitable for Telecoms and High Quality Video Switching

The 20-745 series are a range high density 2000MHz Multiplexers arranged as a Quad 8 to 1, Dual 16 to 1 or Single 32 to 1 configuration, all with excellent Insertion Loss, VSWR & Isolation, available in a choice of 50Ω or 75Ω versions with SMA, SMB, Type 43/SMZ, BNC or 1.0/2.3 Connectors.

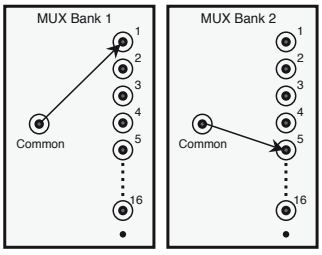
This module may also be easily configured as a Single 32 to 1, Dual 16 to 1 or Quad 8 to 1 multiplexer, to ease the construction of large RF switching systems.

This module is a higher density version of type 20-740 with the automatic termination function removed, the RF performance specification is similar. It is an equivalent to the 20-730-902 balanced 120Ω multiplexer.

Applications for the 20-745 include routing high frequency signals to and from oscilloscopes, analysers, signal generators and synthesizers, telecoms tributary switching, video/audio switching and switching high frequency logic signals.



Single 32 Channel Mode



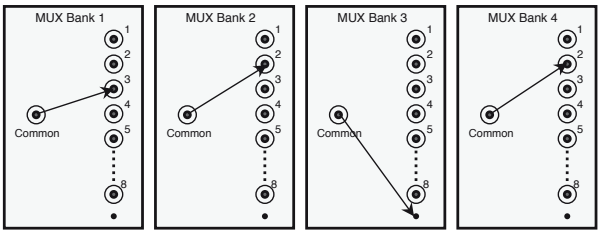
Dual 16 Channel Mode

Programming

The Multiplexer module is simple to program:-

`ARESET a`	Open all channels on device `a`
`DELAY t`	Force a minimum delay of `t` milliseconds between two instructions
`DIAGNOSTIC?`	Report any Self Test errors
`RESET`	Open all switches on all modules
`VIEW? a`	View status of device `a`

`CHAN a,b,c` Select channel `c` on multiplexer `a`, bank `b`



Quad 8 Channel Mode

Self Test

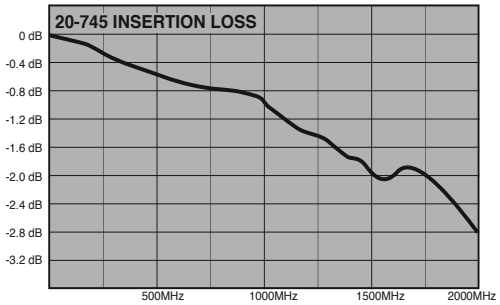
Self-Test is invoked at power on and may also be operated under software (*TST?) or via a recessed push button. Self-Test pass is indicated on a front panel LED with a full pass/fail description available using the DIAGNOSTIC? command. Self-Test comprises 2 levels:-

1. **Logic Test**
2. **Relay Coil Test**

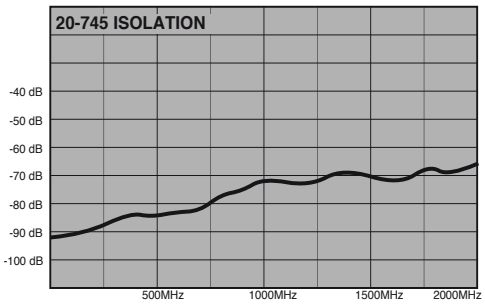
These two levels of testing will find the majority of failures, however please note that the relay contacts themselves are not tested.

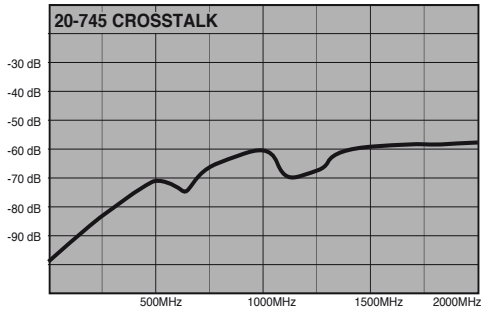
ISSUE 3, OCT 2006

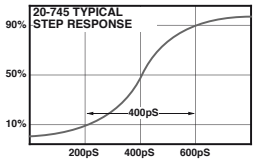
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Typical RF Performance Plots for 20-745 in Dual 16 to 1 Mode (SMB/Type 43 connector)

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

Latest Details

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

Specification (16 to 1 Mode)

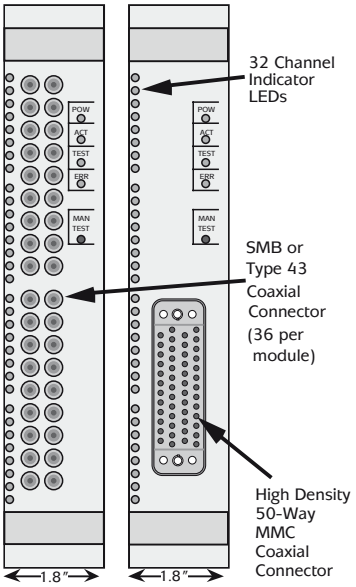
Characteristic Impedance:	50Ω or 75Ω
Maximum Frequency:	1500MHz
Rise Time:	<0.5ns
Maximum Insertion Loss:	<2dB
V.S.W.R. (at 1300MHz):	<1:1.6
Isolation (at 2000MHz):	>75dB
Crosstalk (at 2000MHz):	>55dB
Maximum Voltage:	100V DC
Maximum Power:	10W
Termination Resistor Max Power:	0.25W
Maximum Switch Current:	0.1A
On Path Resistance:	<250mΩ
Off Path Resistance:	$>10^8$Ω
Differential Thermal Offset:	<20µV
Switching Time:	10ms
Expected Life (Low power):	$>2x10^7$ operations
Expected Life (Full power):	$>3x10^5$ operations

Additional Specification (8 to 1 Mode)

Maximum Frequency:	2000MHz

Additional Specification (32 to 1 Mode)

Maximum Frequency:	1000MHz



Width and Dimensions

All modules conform to the 6U height (262mm) Eurocard standard and are 160mm deep, panel width is 1.8 Inches (45.7mm).

Connectors

The 20-745 RF Multiplexer Module is available with BNC, SMA, SMB, Type 43/SMZ or 1.0/2.3 connectors. Other connector types are available to order, please contact the sales office for details.

Product Order Codes

2000MHz RF Multiplexer, 50Ω, SMB	**20-745-501**
2000MHz RF Multiplexer, 50Ω, SMA	**20-745-521**
1300MHz RF Multiplexer, 50Ω, BNC	**20-745-531**
1500MHz RF Multiplexer, 75Ω, Type 43/SMZ	**20-745-701**
1000MHz RF Multiplexer, 75Ω, BNC	**20-745-731**
1500MHz RF Multiplexer, 75Ω, 1.0/2.3	**20-745-741**

The default configuration should be specified when ordering (Quad 1 to 8, Dual 16 to 1 or Single 32 to 1).

Mating Connectors & Cabling

50Ω SMB to SMB Lead, 1m length	**10-987-510**
50Ω SMA to SMA Lead, 1m length	**10-981-510**
50Ω BNC to BNC Lead, 1m length	**10-980-510**
75Ω 1.0/2.3 to 1.0/2.3 Lead, 1m length	**40-977-731**
75Ω SMZ to SMZ Lead, 0.5m length	**10-988-705**
MMC Co-ax crimp Pins, 50Ω	**10-986-005**
MMC Co-ax crimp Pins, 75Ω	**10-986-007**

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