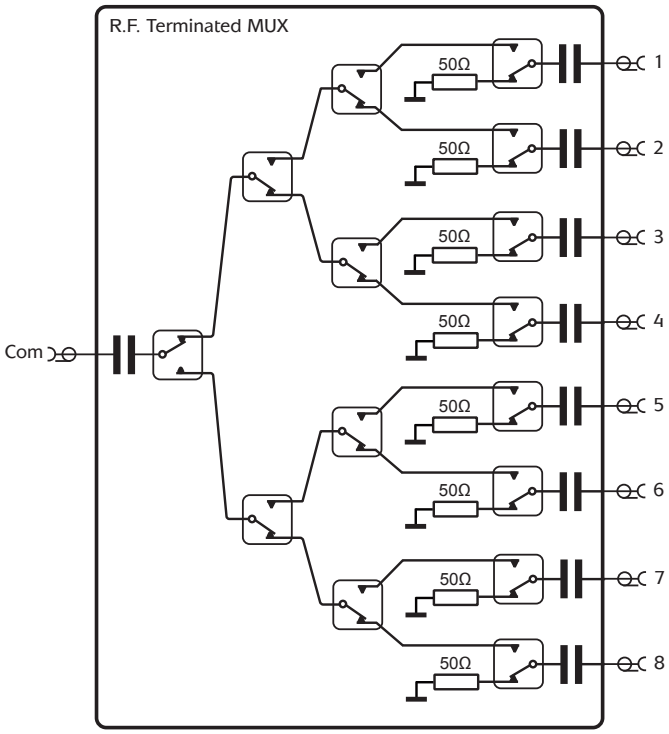
40-883
50Ω Terminated 6GHz Multiplexer

- Wide Frequency Range 10MHz to 6GHz
- High Performance Solid State Switch
- 8:1 or 16:1 Multiplexer Versions
- Automatic Termination of Unused MUX Channels
- +30dBm Input Power Handling
- SMA Coaxial Connectors
- VISA, IVI & Kernel Drivers Supplied for Windows XP/Vista/7/8
- Supported in PXI or LXI Chassis
- 3 Year Warranty



40-883-001 Single 8:1 Terminated 6GHz MUX
Switching Diagram
(Default Switch Positions Shown)

The 40-883 is a 50Ω 6GHz multiplexer available in 8:1 format in a two slot PXI module or 16:1 format in a three slot PXI module.

The 40-883 exhibits low VSWR over the full operating frequency range and consistent and flat insertion loss characteristics. The use of solid state switches ensure a long service life with no wear out mechanism, making the 40-883 ideal for ATE systems requiring frequent and fast operating RF switching. The 40-883 can handle RF input powers of up to +30dBm and is able to sustain frequent hot switching without performance degradation.

The module is fitted with SMA connectors, ensuring module compatibility with commonly used cables.

The 40-883 is supplied with drivers that allow users to support the module in all popular PXI software environments. In addition the 40-883 can be supported in Pickering Interfaces 60-100 series LXI Modular Switching chassis, permitting users to choose their switching platform with the same high performance characteristics and driver environment.

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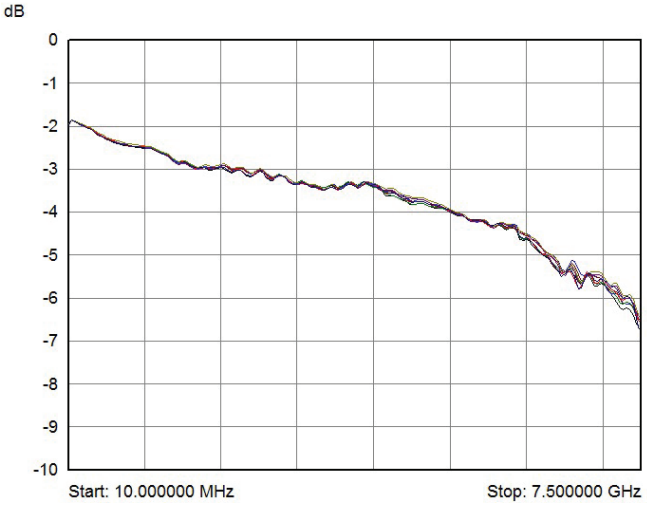
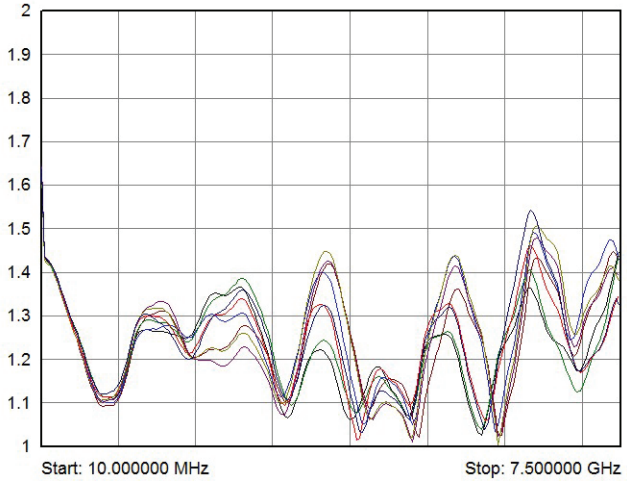
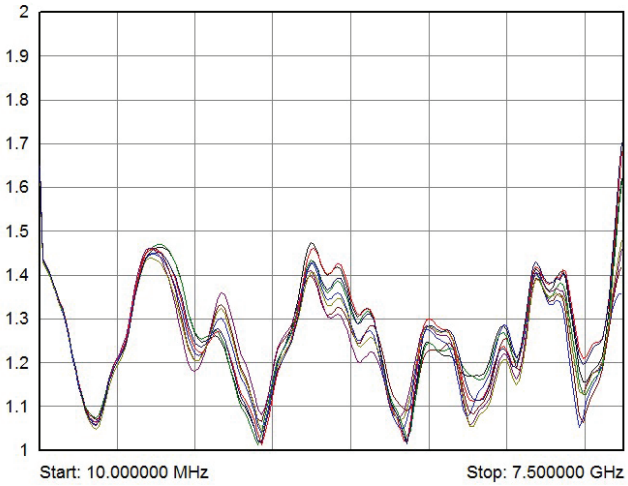
Typical RF Perfomance Plots For 8:1 Multiplexer



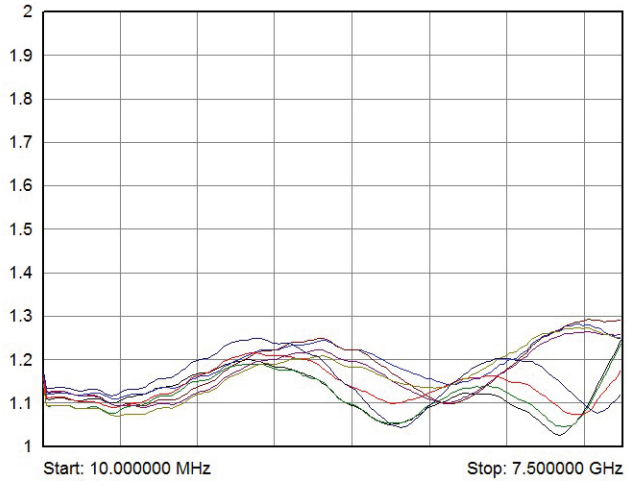
Insertion loss for 40-883-001
showing all paths up to 7.5GHz



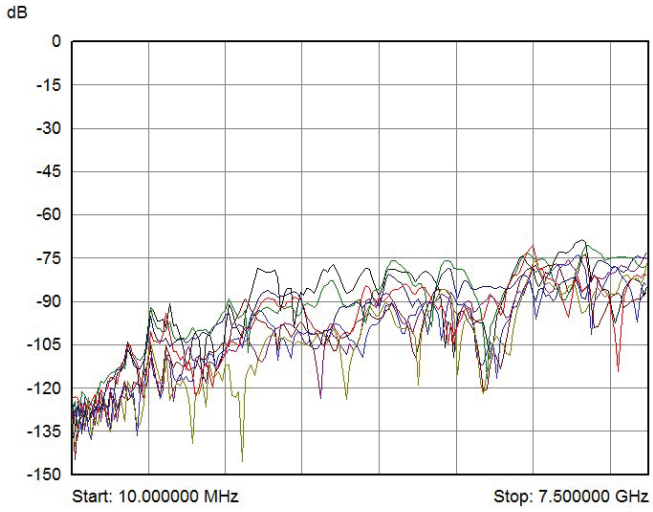
VSWR Channel to COM for 40-883-001
showing all paths up to 7.5GHz



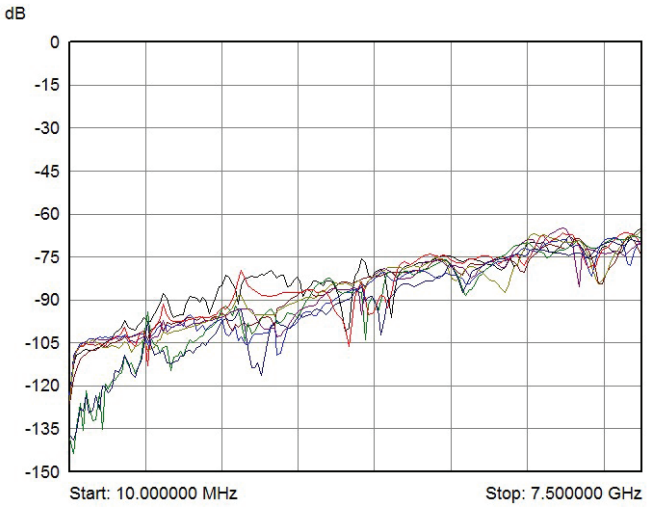
VSWR COM to Channel for 40-883-001
showing all paths up to 7.5GHz



VSWR internal termination on channel
for 40-883-001 showing all paths up to 7.5GHz

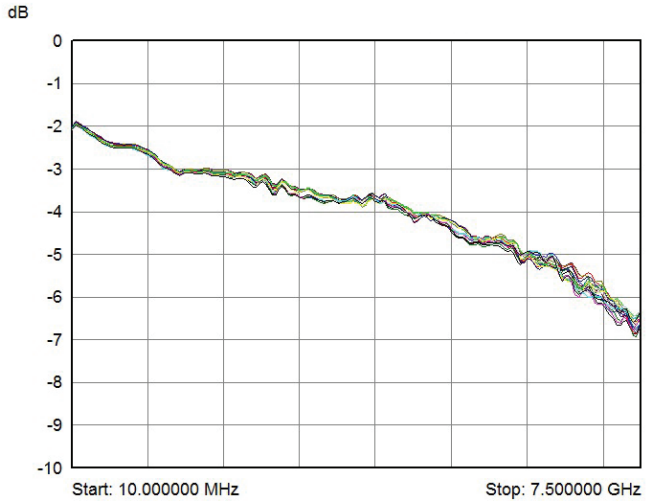


Max isolation for each channel with distant path
selected for 40-883-001 up to 7.5GHz

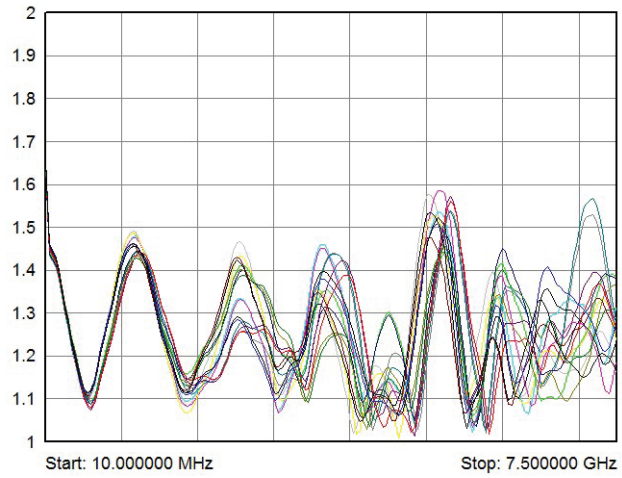


Crosstalk for 40-883-001 between adjacent channels
showing all paths up to 7.5GHz

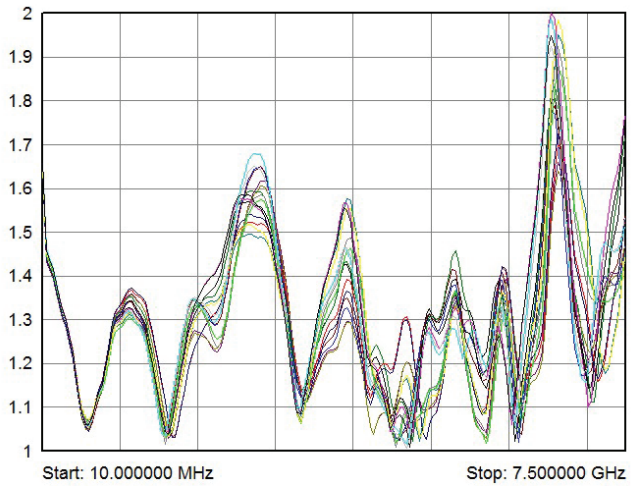
Typical RF Perfomance Plots For 16:1 Multiplexer



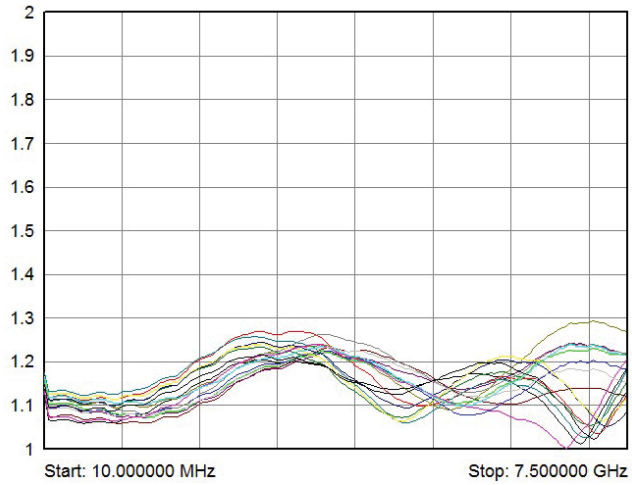
Insertion loss for 40-883-002
showing all paths up to 7.5GHz



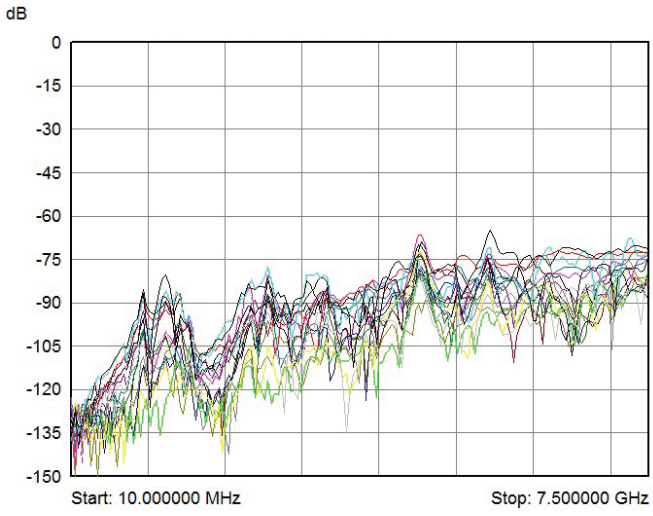
VSWR Channel to COM for 40-883-002
showing all paths up to 7.5GHz



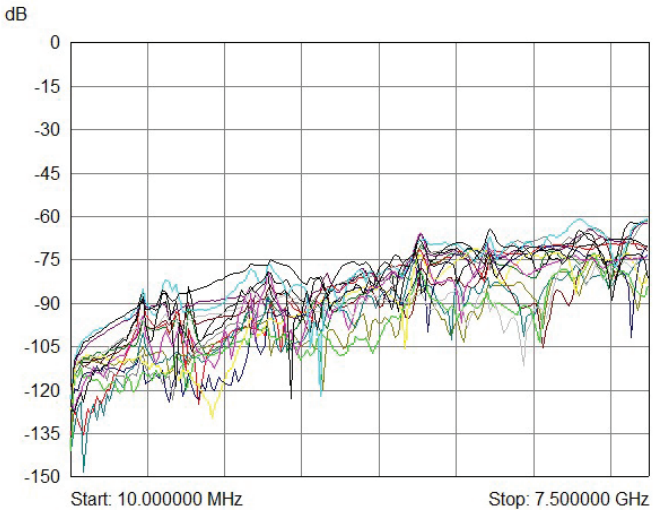
VSWR COM to Channel for 40-883-002
showing all paths up to 7.5GHz



VSWR internal termination on channel
for 40-883-002 showing all paths up to 7.5GHz



Max isolation for each channel with distant path
selected for 40-883-002 up to 7.5GHz



Crosstalk for 40-883-002 between adjacent channels
showing all paths up to 7.5GHz

General Specification

Characteristic Impedance:	50Ω
Maximum RF Power:	+30dBm (hot or cold switching)
Maximum DC Voltage:	16V (AC coupled)
Life Expectancy:	Indefinite when used within ratings
Operate Time:	50µs
RF Switching Time:	10µs typical rise and fall time
RF Connectors:	SMA

RF Specification - 8:1 MUX (40-883-001)

Bandwidth:	6GHz (useable to 7GHz)
Insertion Loss:	typically <2.1dB @ 10MHz typically <3.5dB to 3GHz typically <5dB to 6GHz
VSWR COM-CH CH-COM:	typically <1.5:1 to 6GHz
VSWR termination:	typically <1.4:1 to 6GHz
Isolation:	typically >70dB to 6GHz
Crosstalk	typically <-63dB to 6GHz

RF Specification - 16:1 MUX (40-883-002)

Bandwidth:	6GHz (useable to 7GHz)
Insertion Loss:	typically <2.2dB @ 10MHz typically <3.7dB to 3GHz typically <5.5dB to 6GHz
VSWR CH-COM:	typically <1.6:1 to 6GHz
VSWR COM-CH:	typically <1.7:1 to 6GHz
VSWR termination:	typically <1.4:1 to 6GHz
Isolation:	typically >63dB to 6GHz
Crosstalk	typically <-63dB to 6GHz

Power Requirements from PXI Power Supply

+3.3V	+5V	+12V	-12V
30mA	100mA	0	0

Mechanical Characteristics

Single 8:1 version: 2 slot 3U PXI module (40-883-001)
Single 16:1 version: 3 slot 3U PXI module (40-883-002)
3D models for all versions in a variety of popular file formats are available on request.

Product Order Codes

Single 8:1 6GHz MUX, SMA, terminated	**40-883-001**
Single 16:1 6GHz MUX, SMA, terminated	**40-883-002**

Mating Connectors & Cabling

For connection accessories for the 40-883 module please refer to the **90-011D** RF Cable Assemblies data sheet where a complete list and documentation can be found for accessories, or refer to the Connection Solutions catalog.

Programming

Pickering provide kernel, IVI and VISA (NI and Agilent) drivers which are compatible with 32/64-bit versions of Windows including XP, Vista, 7 and 8 operating systems. The VISA driver is also compatible with Real-Time Operating Systems such as LabVIEW RT. For other RTOS support contact Pickering.

These drivers may be used with a variety of programming environments and applications including:

- **National Instruments** products (LabVIEW, LabWindows/CVI, Switch Executive, MAX, TestStand, etc.)
- **Microsoft Visual Studio** products (Visual Basic, Visual C+)
- **Agilent** VEE
- **Mathworks** Matlab
- **Geotest** ATE Easy
- **MTQ Testsolutions** Tecap

Drivers for popular Linux distributions are available, other environments are also supported, please contact Pickering with specific enquiries.

Operating/Storage Conditions

Operating Conditions

Operating Temperature:	0°C to +55°C
Humidity:	Up to 90% non-condensing
Altitude:	5000m

Storage and Transport Conditions

Storage Temperature:	-20°C to +75°C
Humidity:	Up to 90% non-condensing
Altitude:	15000m

PXI & CompactPCI Compliance

The module is compliant with the PXI Specification 2.2. Local Bus, Trigger Bus and Star Trigger are not implemented.

Uses 33MHz 32-bit backplane interface.

Safety & CE Compliance

All modules are fully CE compliant and meet applicable EU directives: Low-voltage safety EN61010-1:2001, EMC Immunity EN61000-6-1:2001, Emissions EN55011:1998.

PXI & LXI Chassis Compatibility

Compatible with all chassis conforming to the 3U PXI and 3U cPCI specification. Compatible with Legacy and Hybrid peripheral slots in a 3U PXI Express chassis.

Compatible with Pickering Interfaces LXI Modular Chassis. For information on driving your switching solution in an LXI environment refer to the LXI Product Guide.

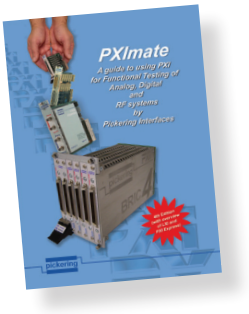
Latest Details

Please refer to our Web Site for Latest Product Details.

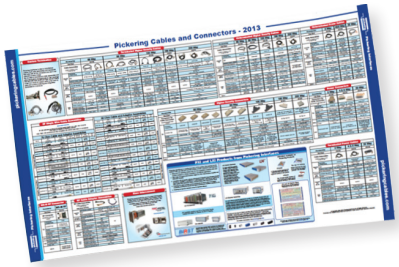
www.pickeringtest.com

Please refer to the Pickering Interfaces "**Connection Solutions**" catalog for the full list of connector/cabling options, including drawings, photos and specifications. This is available in either print or as a download. Alternatively our web site has dynamically linked connector/cabling options, including pricing, for all Pickering PXI modules.

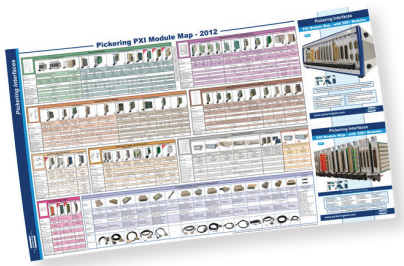
"**The Big PXI Catalog**" gives full details of Pickering's entire range of PXI switch modules, instrument modules and support products.
At over 500 pages, the Big PXI Catalog is available on request or can be downloaded from the Pickering website.



Ever wondered what PXI is all about?
Pickering Interfaces' "**PXImate**" explains the basics of PXI and provides useful data for engineers working on switch based test systems.
The PXImate is available free on request from the Pickering website.



The "**Cables & Connectors Map**" - outlines the cable and connector options available for all PXI Modules.



The "**PXI Module Map**" - a simple fold-out selection guide to all Pickering's 600+ PXI Modules.