

# 7711

## 2GHz 50Ω RF Module



- Outstanding signal routing performance to 2GHz
- Dual 1x4 configuration
- Rear panel SMA connections
- On-board switch closure counter
- On-board S-parameter storage
- Switch up to 60VDC

### Ordering Information

7711 2GHz, 50Ω, Dual 1x4 RF Module

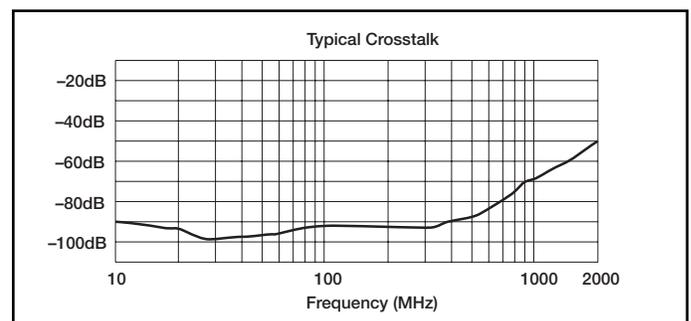
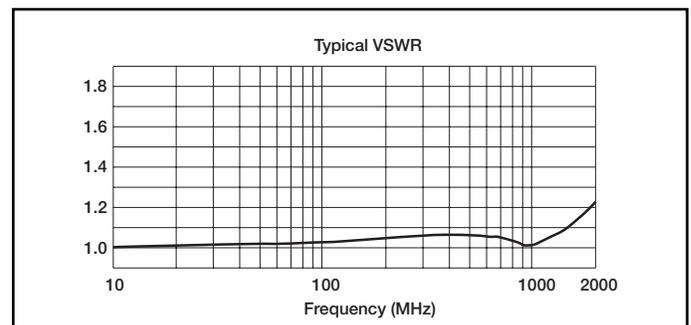
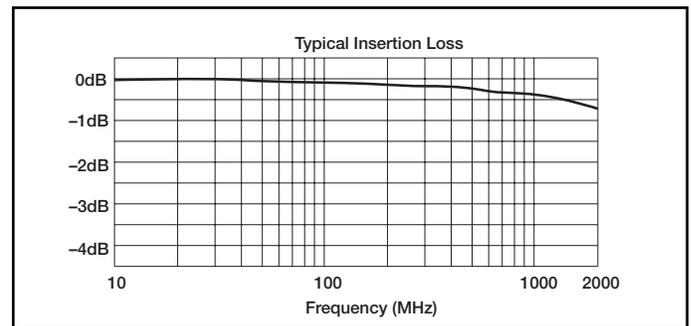
### APPLICATIONS

- General purpose RF signal routing to/from oscilloscopes, signal generators, frequency counters, etc.
- Switching power supply ripple test
- Wireless device testing
- High frequency component test

The Model 7711 2GHz RF module is part of Keithley's Integra Series of flexible measurement/control solutions. This new module is designed to plug into either the two-slot Model 2700 or five-slot Model 2750 mainframe, adding RF signal routing capability to the Integra Series' robust DC switch and measurement performance. This module's outstanding low frequency performance and low cost make it useful for a wide variety of applications, including switching power supply ripple testing.

The Model 7711's outstanding high frequency performance and on-board S-parameter storage make it ideal for routing RF signals to instrumentation and devices with bandwidths up to 2GHz. Its addition to the Integra Series allows users to build cost-effective, high performance hybrid DC/RF systems simply and economically. Like every Integra Series module, the Model 7711 has on-board switch closure counters that can be used to track relay life, simplifying preventative maintenance in production test applications.

For more information on other Integra Series products, including the Model 7712 3.5GHz RF Module, visit our web site at [www.keithley.com](http://www.keithley.com).



Plug-in RF switching module for Integra mainframes

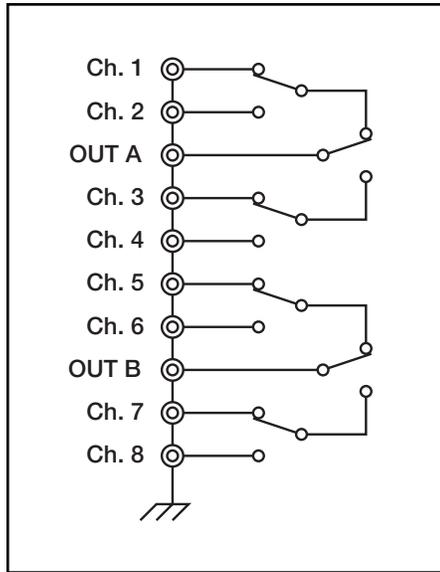
SWITCH/MEASURE SYSTEMS

1.888.KEITHLEY (U.S. only)

[www.keithley.com](http://www.keithley.com)

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### ACCESSORIES AVAILABLE

7051-2	BNC Cable, male to male, 0.6m (2 ft.)
7051-5	BNC Cable, male to male, 1.5m (5 ft.)
7051-10	BNC Cable, male to male, 3.0m (10 ft.)
7711-BNC-SMA	Male SMA to female BNC Cables (5), 0.15m (0.5 ft)
7712-SMA-1	SMA Cable, male to male, 1m (3.3 ft)
7712-SMA-N	Female SMA to male N-Type Adapter
S46-SMA-0.5	SMA Cable, male to male, 0.15m (0.5 ft.)
S46-SMA-1	SMA Cable, male to male, 0.3m (1 ft.)

### 7711 50Ω 2GHz Multiplexer Specifications

#### AC PERFORMANCE (END OF LIFE)

For  $Z_{load} = Z_{source} = 50\Omega$

	<100 MHz	500 MHz	1 GHz	1.5 GHz	2 GHz
Insertion Loss MAX	0.4 dB	0.6 dB	1.0 dB	1.2 dB	2.0 dB
VSWR MAX	1.1	1.2	1.2	1.3	1.7
Ch-Ch Crosstalk <sup>1</sup> MAX	-85 dB	-65 dB	-55 dB	-45 dB	-35 dB

<sup>1</sup> Specification assumes 50Ω termination.

#### INPUTS (CHANNELS 1-8)

**MAXIMUM SIGNAL LEVEL:** Any channel to any channel or chassis (1-8): 30Vrms (42V peak for AC waveforms) or 60VDC, 0.5A.

**MAXIMUM POWER:** 20W per module, 10W per channel (Refer to 7711/7712 Manual PA-818 for measurement considerations).

**SAFETY:** Conforms to European Union Directive 73/23/EEC EN61010-1, CAT I.

**EMC:** Conforms with European Union Directive 89/336/EEC; EN61326-1.

**ISOLATION:** Multiplexer to Multiplexer: >1GΩ.  
Center to Shield: >1GΩ, <25pF.  
Channel to Channel: >100MΩ.

**CONTACT LIFE:** 1×10<sup>6</sup> no load, 1×10<sup>5</sup> rated load (resistive load).

**CONTACT POTENTIAL:** <6μV

**CONTACT RESISTANCE:** <0.5Ω (initial), <1Ω (end of life).

**RISE TIME:** <300ps (guaranteed by design).

**SIGNAL DELAY:** <3ns.

#### GENERAL

**RELAY TYPE:** High frequency electromechanical.

**CONTACT CONFIGURATION:** Dual 1×4 multiplexer, single pole four throw, Channels 1 and 5 are normally closed.

**NOTES:** One channel in each multiplex bank is always closed to the corresponding OUT connector.

**CLOSE CHANNEL:** ROUTe:CLOSe allows a single channel in a multiplex bank to be closed.

ROUTe:MULTiple:CLOSe allows two channels (one in each bank) to be closed at one time.

**OPEN CHANNEL:** ROUTe:OPeN:ALL closes CH1 and CH5 to OUT A and OUT B respectively.

**ACTUATION TIME:** <10ms.

**FIRMWARE:** Specified for Model 2700 rev. B04 and Model 2750 rev. A03 or higher.

**CONNECTOR TYPE:** Ten external rear panel SMA connectors.

**MATING TORQUE:** 0.9 N·m (8 in-lb).

#### ENVIRONMENTAL

**OPERATING ENVIRONMENT:** Specified for 0°C to 50°C. Specified for 80% RH at 35°C.

**STORAGE ENVIRONMENT:** -25°C to 65°C.

**WEIGHT:** <0.5kg (1.1 lb).

\*Refer to 7711/7712 Manual (PA-818) for measurement considerations.

Specifications are subject to change without notice.

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