



# Advanced Test Equipment Rentals

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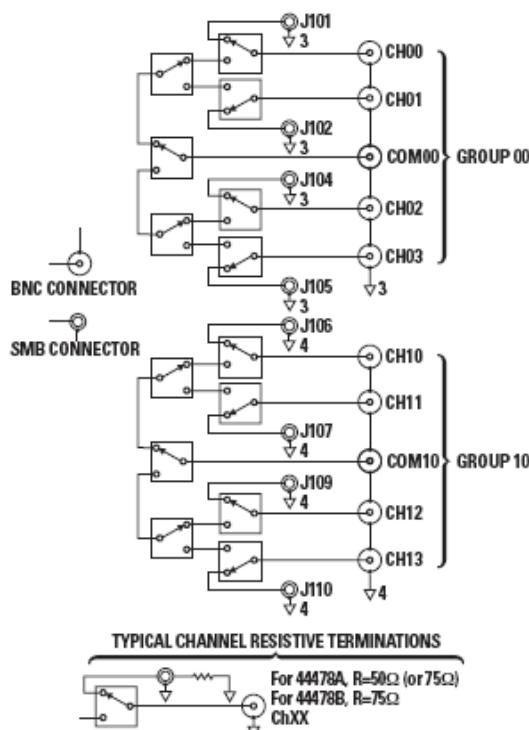
## Agilent 44478A/B Dual 1x4 RF Multiplexer Module (1.3GHz, 50 Ohm)

### Data Sheet

- Switching up to 1 A, 24 W or 24 VA
- Insertion loss less than 1.9dB at 1.3GHz

The 44478A/B multiplexer module is an ideal choice for broadband switching of high-frequency or fast pulse signals. Dual 1-to-4 multiplexers provide bi-directional switching of signals from DC to 1.3 GHz. High channel isolation (>55 dB at 1 GHz) assures quality dynamic-range measurements using spectrum, network, or distortion analyzers.

Each 1-to-4 multiplexer consists of seven relays in a "tree" structure, which provides high isolation and low VSWR (voltage standing wave ratio). All the connectors on the module's edge are female BNC for ease of wiring. Off-channels can be terminated in resistors to maintain proper operation of DUT circuitry. Simply plug a 50/75Ω SMB-type resistive termination onto the on-board male SMB connectors provided for each channel.



### Specifications

#### Input Characteristics

|                                 |                       |
|---------------------------------|-----------------------|
| Maximum Scan Rate:              | 43 Chans./sec         |
| Maximum Voltage:                | 42 V, DC + AC peak    |
| Maximum Current:                | 1 A                   |
| Maximum Power:<br>(Per channel) | 24 W, 24 VA or 44 dBm |
| Characteristic Impedance:       |                       |

|         |      |
|---------|------|
| 44478A: | 50 Ω |
| 44478B: | 75 Ω |

#### DC Performance

|  |                     |
|--|---------------------|
| Thermal Offset:                            | <6 µV (<2 µV, Typ.) |
| Initial Closed Channel Resistance:         | <1 Ω                |
| Insulation Resistance (between terminals): |                     |
| <(25 °C, 40% RH)                           | >10 <sup>10</sup> Ω |

#### Capacitance:

|                |           |
|----------------|-----------|
| Center-Center: | <0.006 pF |
| Center-Shield: | <60 pF    |
| Rise Time:     | <300 psec |
| Signal Delay:  | <3 nsec   |

#### AC Performance

##### Insertion Loss

| ≤(40 °C, 95% RH) | 10 MHz  | <0.3 dB |
|------------------|---------|---------|
|                  | 100 MHz | <0.7 dB |
|                  | 500 MHz | <1.5 dB |
|                  | 1.3 GHz | <3.0 dB |
| ≤(25 °C, 40% RH) | 10 MHz  | <0.2 dB |
|                  | 100 MHz | <0.5 dB |
|                  | 500 MHz | <1.1 dB |
|                  | 1.3 GHz | <1.9 dB |

##### Crosstalk

###### Channel-Channel, Channel-Common

|         |         |
|---------|---------|
| 10 MHz  | <-90 dB |
| 100 MHz | <-80 dB |
| 500 MHz | <-65 dB |
| 1.3 GHz | <-55 dB |

###### Group-Group, Module-Module

|         |         |
|---------|---------|
| 10 MHz  | <-90 dB |
| 100 MHz | <-80 dB |
| 500 MHz | <-70 dB |
| 1.3 GHz | <-60 dB |

##### VSWR

|         |       |
|---------|-------|
| 10 MHz  | <1.20 |
| 100 MHz | <1.25 |
| 500 MHz | <1.35 |
| 1.3 GHz | <1.55 |



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