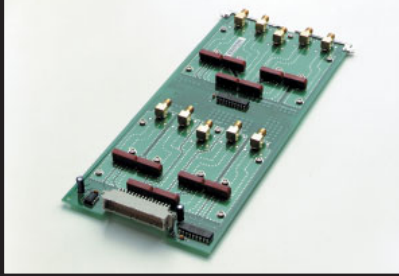


# 7017

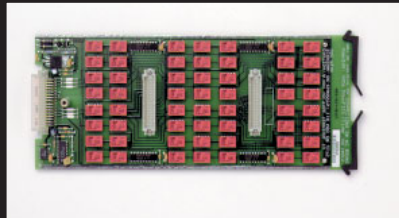


- DC to 800MHz, 50Ω, signal switching
- <10mΩ contact resistance variation

## Ordering Information

**7017** Dual 1×4, 800MHz, 50Ω Multiplexer with SMA Connectors

# 7018-C 7018-S



- Dual 1×14 (28-channel) multiplexer for 3- or 6-pole operation
- Connects to 7001/7002 backplane for easy expandability

## Ordering Information

**7018-C** Quad 1×10 Multiplexer with 96-pin Mass Terminated Connector Board

**7018-S** Dual 1×14 Multiplexer with Screw Terminal Connector Board

# 800MHz RF Switch Card

## Dual 1×4 Configuration, 50Ω

The Model 7017 800MHz Multiplexer Card combines the stability, durability, and bandwidth that high-volume production testing applications demand. Its reed relay design ensures extremely repeatable contact resistance, even when operating at high speeds continuously. With an 800MHz bandwidth, the 7017 is suitable for switching a wide range of signals, making it a good choice for testing a variety of electronic components and assemblies, from diodes and capacitors to disk drive heads and other electronic subassemblies.

**MULTIPLEXERS PER CARD:** 2 (with isolated ground).  
**CHARACTERISTIC IMPEDANCE:** 50Ω nominal.  
**CHANNELS PER MULTIPLEXER:** 4.  
**CONTACT CONFIGURATION:** 1 pole Form A, common shield.  
**RELAY DRIVE CURRENT:** 26mA per channel.  
**CONNECTOR TYPE:** SMA.  
**RECOMMENDED CABLE:** RG-223/U.  
**ACTUATION TIME:** 1ms.  
**MAXIMUM VOLTAGE:** Any terminal (center or shield) to any other terminal or chassis: 42V peak.  
**MAXIMUM CURRENT:** 1A carry/0.5A switched.

**MAXIMUM POWER:** 10VA.  
**ISOLATION: Multiplexer to Multiplexer:** >10°Ω. **Center to Shield:** >10°Ω, <60pF. **Channel to Channel:** >10°Ω.  
**CONTACT POTENTIAL:** <25μV.  
**CONTACT RESISTANCE:** <0.5Ω initial, 1Ω at end of contact life.  
**CONTACT LIFE:** 1V, 10mA: 10<sup>8</sup> closures. 20V, 0.5A: 5×10<sup>4</sup> closures.

### AC Performance:

| For $Z_L = Z_S = 50\Omega$        | ≤10 MHz | ≤100 MHz | ≤500 MHz | ≤800 MHz |
|-----------------------------------|---------|----------|----------|----------|
| <b>Insertion Loss (dB):</b>       | <0.35   | <1.0     | <2.0     | <3.0     |
| <b>Crosstalk (dB)<sup>1</sup></b> |         |          |          |          |
| Channel-channel                   | <-60    | <-40     | <-35     | <-30     |
| Mux. to Mux.                      | <-80    | <-60     | <-60     | <-55     |

**VSWR:** <1.2 @ 100MHz.

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

**EMC:** Conforms to European Union Directive 89/336/EEC.  
**SAFETY:** Conforms to European Union Directive 73/23/EEC (meets EN61010-1/IEC 1010).  
**ENVIRONMENT: Operating:** 0° to 50°C, up to 35°C at <80% R.H. **Storage:** -25°C to 65°C.

### SERVICES AVAILABLE

7017-3Y-EW 1-year factory warranty extended to 3 years from date of shipment

# 28-channel 3-Pole Multiplexer

The Model 7018 28-channel multiplexer has two independent banks of 1×14 switching. Each channel is 3-pole. The two banks can be combined for a variety of different switching configurations. Used separately, they provide a dual 1×14 3-pole configuration. Onboard jumpers can connect the outputs together for a single 1×28 3-pole arrangement. Both the 7001 and 7002 switch systems can use the two banks in parallel for 6-pole operation in a 1×14 configuration.

**MULTIPLEX CONFIGURATION:** 2 independent 1×14 3-pole multiplex banks or one 1×14 6-pole multiplexer. Jumpers can be removed to isolate any bank from the backplane.

**CONTACT CONFIGURATION:** 3-pole Form A.

**CONNECTOR TYPE:** 7018-C: 96-pin male DIN connector. 7018-S: Screw terminal, #16AWG maximum wire size, with 0.092 inch O.D. 28 conductors per card maximum. #22AWG typical wire size with 0.062 inch O.D. 90 conductors per card maximum.

**MAXIMUM SIGNAL LEVEL: DC Signals:** 110V DC between any two pins, 1A switched, 30VA (resistive load).  
**AC Signals:** 125V rms or 175V AC peak, between any two pins, 1A switched, 60VA (resistive load).

**COMMON MODE VOLTAGE:** 175V peak, any pin to chassis.

**CONTACT LIFE: Cold Switching:** 10<sup>8</sup> closures.  
 At Maximum Signal Levels: 10<sup>5</sup> closures.

**CHANNEL RESISTANCE (per conductor):** <1.5Ω.

**CONTACT POTENTIAL:** <5μV per single contact.

**OFFSET CURRENT:** <100pA.

**ACTUATION TIME:** 3ms.

**CROSS TALK (1MHz, 50Ω Load): Bank:** <-40dB.  
**Channel:** <-40dB.

**ISOLATION: Bank:** >10°Ω, <25pF.  
**Channel to Channel:** >10°Ω, <50pF.  
**Differential:** Configured as 1×14 >10°Ω, <100pF. Configured as 1×28 >10°Ω, <200pF.  
**Common Mode:** Configured as 1×14 >10°Ω, <400pF. Configured as 1×28 >10°Ω, <650pF.

**INSERTION LOSS (50Ω Source, 50Ω Load):** <0.2dB below 1MHz, <3dB below 2MHz.

**RELAY DRIVE CURRENT (per channel):** 59mA. (Maximum of 11 channels on at same time.)

**EMC:** Conforms to European Union Directive 89/336/EEC.

**SAFETY:** Conforms to European Union Directive 73/23/EEC (meets EN61010-1/IEC 1010).

**ENVIRONMENT: Operating:** 0°C to 50°C, up to 35°C at 80% RH. **Storage:** -25°C to 65°C.

### ACCESSORIES AVAILABLE

#### FOR 7018-C

7011-KIT-R 96-pin Female Connector Kit  
 7011-MTC-1 96-pin Mass Terminated Cable, Female to Female, 1m  
 7011-MTC-2 96-pin Mass Terminated Cable, Female to Female, 2m

#### FOR 7018-S

7018-ST Extra Screw Terminal Connection Board

### SERVICES AVAILABLE

7018-C-3Y-EW 1-year factory warranty extended to 3 years from date of shipment  
 7018-S-3Y-EW 1-year factory warranty extended to 3 years from date of shipment

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