## 7017



- DC to $800 \mathrm{MHz}, 50 \Omega$, signal switching
- <10m $\Omega$ contact resistance variation


## Ordering Information

7017 Dual $1 \times 4,800 \mathrm{MHz}$, $50 \Omega$ Multiplexer with SMA Connectors


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


## Ordering Information

7018-C Quad $1 \times 10$ Multiplexer with 96-pin Mass Terminated Connector Board
7018-S Dual $1 \times 14$ Multiplexer with Screw Terminal Connector Board
1.888.KEITHLEY (u.s. only) www.keithley.com

# 800MHz RF Switch Card <br> Dual 1×4 Configuration, $50 \Omega$ 

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 800 MHz 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: $50 \Omega$ nominal. Channels per multiplexer: 4.
CONTACT CONFIGURATION: 1 pole Form A, common shield. relay drive current: 26 mA per channel.
CONNECTOR TYPE: SMA.
recommended cable: Rg-223/U.
actuation tine: 1 ms .
MAXIMUM VOLTAGE: Any terminal (center or shield) to any other terminal or chassis: 42 V peak. MAXIMUM CURRENT: 1A carry/0.5A switched.

MAXIMUM POWER: 10VA.
ISOLATION: Multiplexer to Multiplexer: $>10^{9} \Omega$. Center to
Shield: $>10^{\circ} \Omega,<60 \mathrm{pF}$. Channel to Channel: $>10^{\circ} \Omega$. CONTACT POTENTIAL: $<25 \mu \mathrm{~V}$.
CONTACT RESISTANCE: $<0.5 \Omega$ initial, $1 \Omega$ at end of contact life. CONTACT LIFE: $1 \mathrm{~V}, 10 \mathrm{~mA}: 10^{8}$ closures. $20 \mathrm{~V}, 0.5 \mathrm{~A}: 5 \times 10^{4}$ closures.

AC Performance:

|  | $\leq \mathbf{1 0}$ <br> For $\mathbf{Z}_{\mathrm{L}}=\mathbf{Z}_{\mathbf{S}}=\mathbf{5 0} \Omega$ <br> $\mathbf{M H z}$ | $\mathbf{1 0 0}$ <br> $\mathbf{M H z}$ | $\mathbf{\leq 5 0 0}$ | $\leq \mathbf{8 0 0}$ |
| :--- | :---: | :---: | :---: | :---: |
| MHz | $\mathbf{M H z}$ |  |  |  |
| Insertion Loss (dB): | $<0.35$ | $<1.0$ | $<2.0$ | $<3.0$ |
| Crosstalk (dB) $^{\mathbf{1}}$ |  |  |  |  |
| $\quad$ Channel-channel | $<-60$ | $<-40$ | $<-35$ | $<-30$ |
| Mux. to Mux. | $<-80$ | $<-60$ | $<-60$ | $<-55$ |

VSWR: <1.2 @ 100MHz.
${ }^{1}$ Specification assumes $50 \Omega$ 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: $0^{\circ}$ to $50^{\circ} \mathrm{C}$, up to $35^{\circ} \mathrm{C}$ at $<80 \%$ R.H. Storage: $-25^{\circ} \mathrm{C}$ to $65^{\circ} \mathrm{C}$.

## SERVICES AVAILABLE

7017-3Y-EW $\quad$ 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 $1 \times 14$ 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 $1 \times 143$-pole configuration. Onboard jumpers can connect the outputs together for a single $1 \times 283$-pole arrangement. Both the 7001 and 7002 switch systems can use the two banks in parallel for 6 -pole operation in a $1 \times 14$ configuration.

MULTIPLEX CONFIGURATION: 2 independent $1 \times 143$-pole multiplex banks or one $1 \times 146$-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, 1 A switched, 30 VA (resistive load)
AC Signals: 125 V rms or 175 V AC peak, between any two pins, 1 A switched, 60 VA (resistive load).
COMMON MODE VOLTAGE: 175 V peak, any pin to chassis
CONTACT LIFE: Cold Switching: $10^{8}$ closures
At Maximum Signal Levels: $10^{5}$ closures.
CHANNEL RESISTANCE (per conductor): $<1.5 \Omega$.
CONTACT POTENTIAL: $<5 \mu \mathrm{~V}$ per single contact.
OFFSET CURRENT: <100pA.
ACTUATION TIME: 3 ms

Distribido Por:
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Tijuana B.C. Mexico
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CROSS TALK ( $1 \mathrm{MHz}, 50 \Omega$ Load): Bank: <-40dB Channel: <-40dB.
ISOLATION: Bank: $>10^{\circ} \Omega,<25 \mathrm{pF}$
Channel to Channel: $>10^{\circ} \Omega,<50 \mathrm{pF}$
Differential: Configured as $1 \times 14>10^{\circ} \Omega,<100 \mathrm{pF}$. Configured as $1 \times 28>10^{\circ} \Omega,<200 \mathrm{pF}$
Common Mode: Configured as $1 \times 14>10^{\circ} \Omega,<400 \mathrm{pF}$ Configured as $1 \times 28>10^{9} \Omega,<650 \mathrm{pF}$.
INSERTION LOSS ( $50 \Omega$ Source, $50 \Omega$ Load): $<0.2 \mathrm{~dB}$ below 1 MHz , $<3 \mathrm{~dB}$ below 2MHz.
RELAY DRIVE CURRENT (per channel): 59 mA . (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: $0^{\circ} \mathrm{C}$ to $50^{\circ} \mathrm{C}$, up to $35^{\circ} \mathrm{C}$ at $80 \% \mathrm{RH}$. Storage: $-25^{\circ} \mathrm{C}$ to $65^{\circ} \mathrm{C}$.

## ACCESSORIES AVAILABLE

## FOR 7018-C

7011-KIT-R $\quad 96$-pin Female Connector Kit
7011-MTC-1 $\quad 96$-pin Mass Terminated Cable, Female to Female, 1m
7011-MTC-2 96 -pin Mass Terminated Cable, Female to Female, 2m
7011-MTR $\quad 96$-pin Male Connector Kit
FOR 7018-S
7018-ST Extra Screw Terminal Connection Board

## SERVICES AVAILABLE

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

