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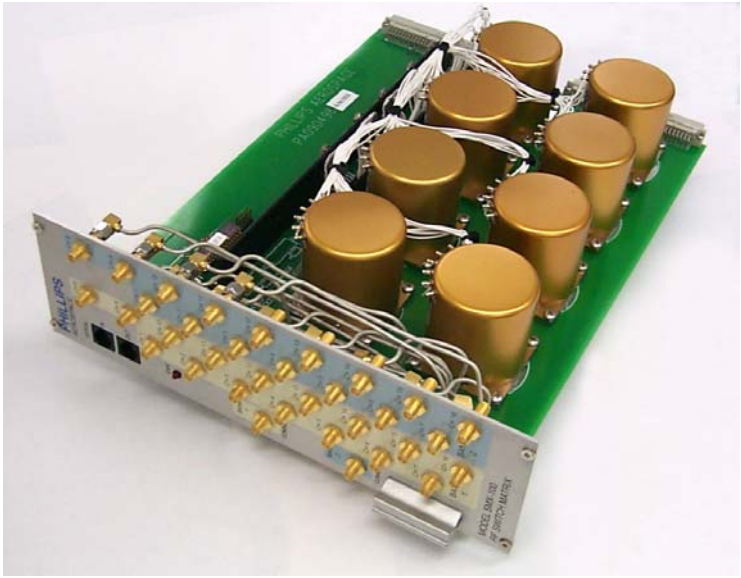
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PHILLIPS

PTE109

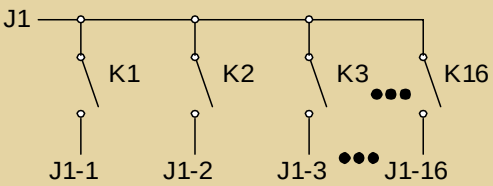


# PTE109
# D-C17 GHZ RF SWITCH MATRIX

## Features

- Universal Bank and Mux Configurations
- 50Ω Characteristic Impedance
- High Isolation (60dB @ 18GHz)
- Low Insertion Loss (2dB @ 17GHz)
- Windows compatible DLL
- Soft Front Panel

### Typical Mux Config




Phillips Aerospace
16125 East Gale Ave.
Industry Ca 91745
www.paero.com • info@paero.com
(626) 855-4600

## Summary

Phillips' PTE109 Multiplexer is a serial controlled RF switching card for the VME/VXI platform.

Up to 48 SPST switches are available on single C-depth 6U VME/VXI two slot card. Bank and mux channel configurations is user definable. For example, the card can be configured as two banks of 1:18, four banks of 1:10, three banks of 1:12, etc., for mux/de-mux or channel close/open SPST operation. Larger configurations can be achieved using external cables between multiple cards and boards are populated and cabled as necessary to meet customer's needs. Low insertion loss and high channel to channel isolation preserves signal integrity. SMA connectors are standard, other connectors or converters can be supplied if necessary.

Through the supplied soft front panel (SFP), the PTE113A can be software configured for automated operations by the user. Integrated scripting tools provide control for each channel, along with programmable delays: thus enabling the PTE113A to scan through channels at programmable intervals.

Each time the PTE113A is powered up, all channels are configured to an open circuit state, regardless of their last programmable state. If any channel failure occurs this is detected immediately by diagnostic feedback circuitry and the user if notified immediately through the SFP, or as a response through the software driver.

The PTE113A is capable of switching loads up to 3WCW at +85 deg C.

## Specifications

**Environmental:**

| | |
|---|---|
| Temperature: | Operating:0° to 50°C |
| | Non-Operating:-40° to 30°C |
| Humidity: | Operating: Up to 30°C: 95% Relative |
| | >30° to 50°C: 95% Relative |
| | Non-Operating: Up to 50°C: Up to 95% Relative |
| Altitude: | Operating:-1000 to 5,000 ft |
| | Non-Operating:-1000 to 45,000 ft |

**Characteristics:**

| | |
|---|---|
| Frequency: | DC-4 GHz |
| VSWR (max): | 1.25 |
| Insertion Loss (dB max.): | .6 |
| Isolation (dB min.): | 75 |
| Frequency: | 4-8 GHz |
| VSWR (max): | 1.30 |
| Insertion Loss (dB max.): | .7 |
| Isolation (dB min.): | 70 |
| Frequency: | 8-12 GHz |
| VSWR (max): | 1.40 |
| Insertion Loss (dB max.): | .8 |
| Isolation (dB min.): | 65 |
| Frequency: | 12-17 GHz |
| VSWR (max): | 1.60 |
| Insertion Loss (dB max.): | .2 |
| Isolation (dB min.): | 60 |

**Mechanical:**

Contacts: Gold-clad silver

Rated Switching Operations:
1,000,000 CYCLES

Initial Contact Resistance:
100m Ω by voltage drop 6V @ 1A

Connectors: Signal: SMA/B threaded or snap-on mini coaxial
Program: two RJ-11 (in/out)

Max Switching Time:
15ms

**Power Requirements:**

From P1 & P2 Connectors:
+5V @ 50mA maximum
+12V @ 14A maximum

*Power drawn depends upon configuration, absolute worst case power shown*

**Custom Configurations**

Consult the factory for integrated 50Ohm terminators, N type connector support, and other mechanical variations.

Consult the factory for self-contained rackmount unit or virtually any size and configuration.

Consult the factory for high power versions.

## Ordering Information

Part Number: PTE113A-N-C-F-T

-N configuration control number assigned by Phillips to support customer specified configuration

-C panel connector type:
-A (for SMA)
-B (for SMB)

-F frequency range:
-3 (for 3 GHz),
-17 (for 17 GHz)

-T operating temperature range:
-N (0° to 50° C)
-X (-30° to 60° C)

Cables: CXM-CB1-L: programming or daisy chain interface cable
-L: specify cable length in feet

Software: PTE113A-SW: Windows DLL and soft front panel

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