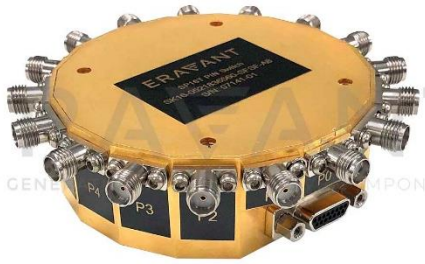
# SK16-0524035010-KFKF-A8

## SP16T PIN Switch with TTL Driver, Absorptive, 0.5 to 40 GHz

**SK16-0524035010-KFKF-A8** is an absorptive PIN diode based, single pole, sixteen throw switch with a TTL driver that operates between 0.5 and 40 GHz. The switch requires a separate -5 V and +5 V biasing in addition to the 4-Bit TTL control. This model offers in-line 16 output ports, typical 10 dB insertion loss, and 45 dB minimum isolation with a typical switching speed of 50 nanoseconds. The switch has female 2.92 mm connectors for all RF ports and Micro-D15 female connector for bias and TTL control.



### Electrical Specifications:

| Parameter | Minimum | Typical | Maximum |
|---|---|---|---|
| Frequency Range | 0.5 GHz | | 40 GHz |
| Insertion Loss | | 10 dB | 14 dB |
| Isolation | 45 dB | 55 dB | |
| Return Loss | 7 dB | 8.5 dB | |
| Input RF Power | | | +23 dBm |
| Bias Current (Vcc = ±5 V) | | 650/50 mA | |
| Control | | TTL | |
| Switching Speed | | 50 ns | |
| Switch Type | | Absorptive | |
| Specification Temperature | | +25°C | |
| Operating Temperature | 0°C | | +50°C |

### Mechanical Specifications:

| Item | Specification |
|---|---|
| RF Ports | 2.92 mm (F) |
| Bias and Control Port | Micro D-15 Female Connector |
| Case Material | Aluminum |
| Finish | Gold Plated |
| Weight | 7.1 Oz |
| Outline | K16-AC-Z3 |

**ECCN**

EAR99

**FEATURES**

- 4-bit TTL Control
- High Isolation
- Absorptive

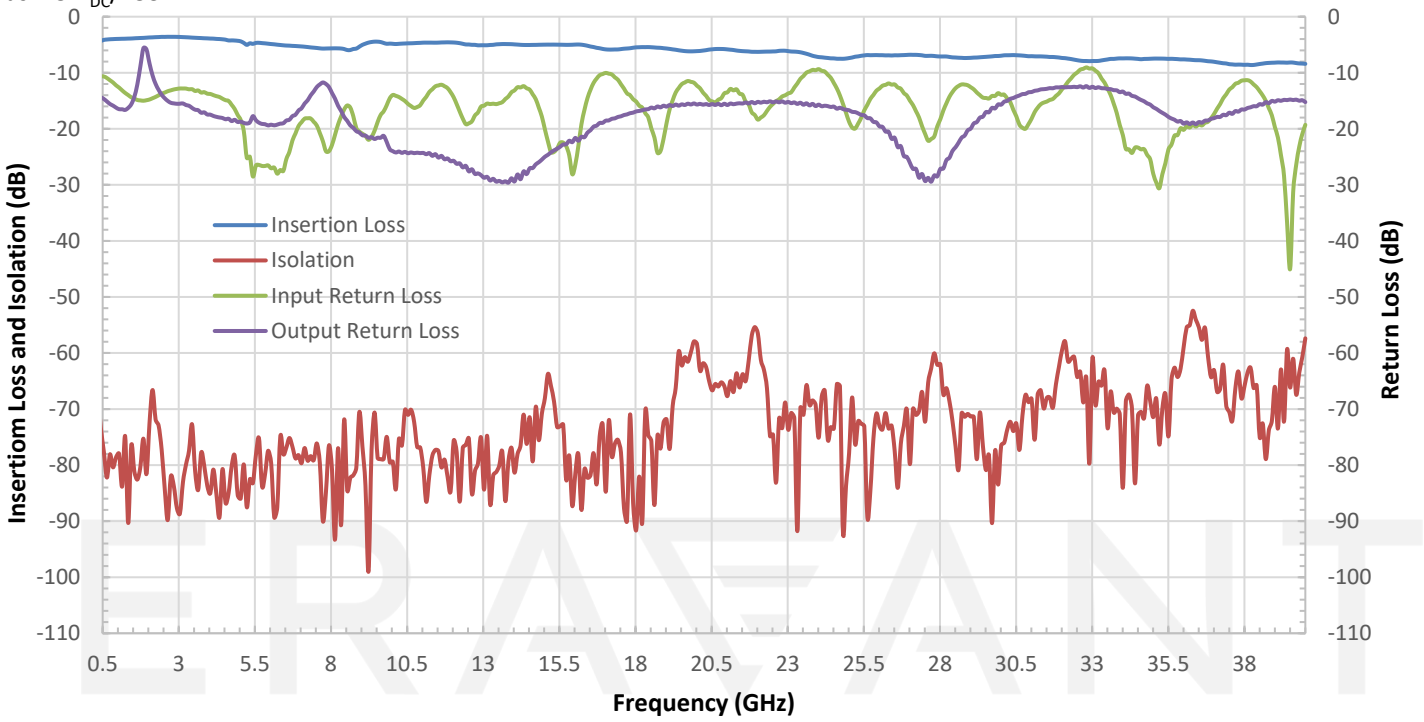
**APPLICATIONS**

- Automatic Test Equipment
- Switching Network

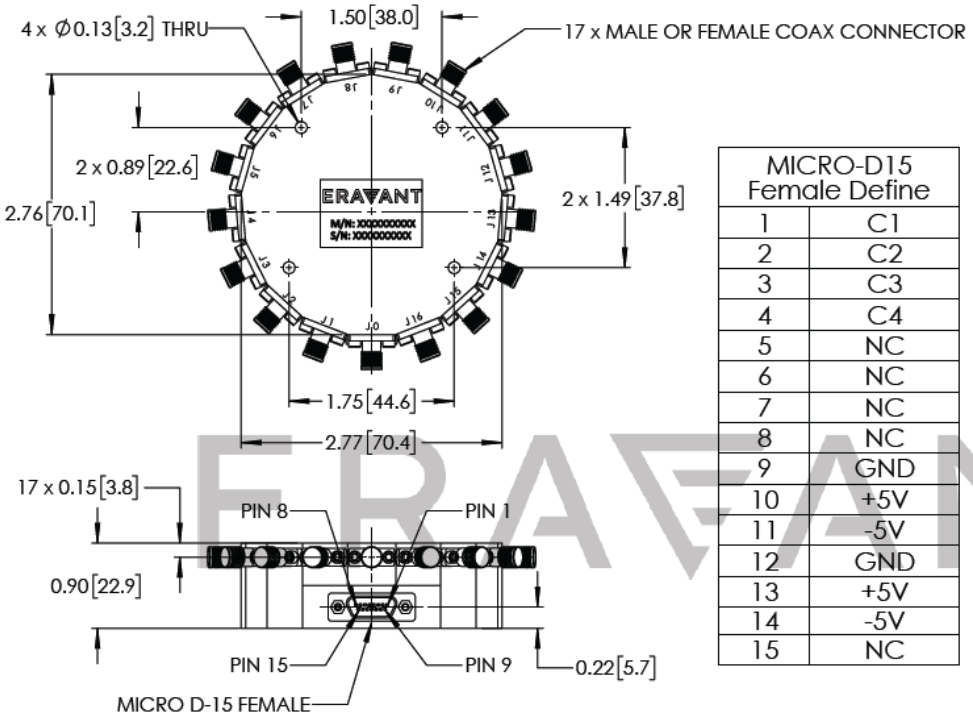
**SUPPLEMENTAL DETAILS**

## Typical Insertion Loss and Return Loss vs Frequency

Bias: +5 $V_{DC}$/753 mA




**Mechanical Outline:** (Unless otherwise specified, all dimensions are in inches [millimeters])




| MICRO-D15 Female Define | |
|---|---|
| 1 | C1 |
| 2 | C2 |
| 3 | C3 |
| 4 | C4 |
| 5 | NC |
| 6 | NC |
| 7 | NC |
| 8 | NC |
| 9 | GND |
| 10 | +5V |
| 11 | -5V |
| 12 | GND |
| 13 | +5V |
| 14 | -5V |
| 15 | NC |

| Truth Table | | | | |
|---|---|---|---|---|
| Control Input TTL | | | | Signal Path State |
| C4 | C3 | C2 | C1 | |
| 0 | 0 | 0 | 0 | J0-J1 |
| 0 | 0 | 0 | 1 | J0-J2 |
| 0 | 0 | 1 | 0 | J0-J3 |
| 0 | 0 | 1 | 1 | J0-J4 |
| 0 | 1 | 0 | 0 | J0-J5 |
| 0 | 1 | 0 | 1 | J0-J6 |
| 0 | 1 | 1 | 0 | J0-J7 |
| 0 | 1 | 1 | 1 | J0-J8 |
| 1 | 0 | 0 | 0 | J0-J9 |
| 1 | 0 | 0 | 1 | J0-J10 |
| 1 | 0 | 1 | 0 | J0-J11 |
| 1 | 0 | 1 | 1 | J0-J12 |
| 1 | 1 | 0 | 0 | J0-J13 |
| 1 | 1 | 0 | 1 | J0-J14 |
| 1 | 1 | 1 | 0 | J0-J15 |
| 1 | 1 | 1 | 1 | J0-J16 |

**NOTE:**

- On condition that test data is provided it is collected from a sample lot. Actual data may vary slightly from unit to unit. All testing is performed under +25 °C room temperature.
- Eravant reserves the right to change the information presented without notice.

**CAUTION:**

- Exceeding absolute maximum ratings shown will damage the device.
- The device is static sensitive. Always follow ESD rules when working with the device.
- Reversing polarity will destroy the device.
- For 1.35 mm, 1.85 mm, 2.4 mm, 2.92 mm, and SMA connectors proper torque should be applied: 8.0 ± 0.15 inch-pounds (0.90 ± 0.02 Nm). Torque wrench model SCH-08008-S1 is highly recommended.



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