

SK64-0520838055-SFSF-A2

SP64T PIN Switch with TTL Driver, Absorptive, 0.5 to 8 GHz, 6-Bit Control

SK64-0520838055-SFSF-A2 is an absorptive PIN diode based, single pole, sixty-four throw switch with a TTL driver that operates between 0.5 and 8 GHz. The switch requires a separate -5 V and +5 V biasing in addition to the 6-Bit TTL control. This model offers in-line 64 output ports, typical 8 dB insertion loss, and 55 dB typical isolation with a maximum switching speed of 100 nanoseconds. The switch has SMA female connectors for all RF ports and Micro-D15 Female connector for bias and TTL control.



Electrical Specifications:

| Parameter | Minimum | Typical | Maximum |
|---------------------------|-----------------------|--------------------------------|-----------------------|
| Frequency | 0.5 GHz | | 8 GHz |
| Insertion Loss | | 8 dB | |
| Isolation | | 55 dB | |
| Return Loss | | 9 dB | |
| RF Input Power | | | +27 dBm |
| Bias (Positive) | +4.75 V _{DC} | +5.00 V _{DC} /3000 mA | +5.25 V _{DC} |
| Bias (Negative) | -5.25 V _{DC} | -5.00 V _{DC} /60 mA | -4.75 V _{DC} |
| Control | | 6-Bit TTL | |
| TTL High | +2.0 V _{DC} | | +5.0 V _{DC} |
| TTL Low | 0 V _{DC} | | +0.8 V _{DC} |
| Switching Speed | | | 100 ns |
| Switch Type | | Absorptive | |
| Specification Temperature | | +25 °C | |
| Operating Temperature | -25 °C | | +85 °C |

Mechanical Specifications:

| Item | Specification |
|---------------------|------------------|
| RF Ports | SMA Female |
| Bias & Control Port | Micro-D15 Female |
| Case Material | Aluminum |
| Finish | Gold Plated |
| Outline | K64-AC-D15-Z1 |

ECCN

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FEATURES

- Low Insertion Loss
- High Isolation
- Absorptive
- TTL Controlled

APPLICATIONS

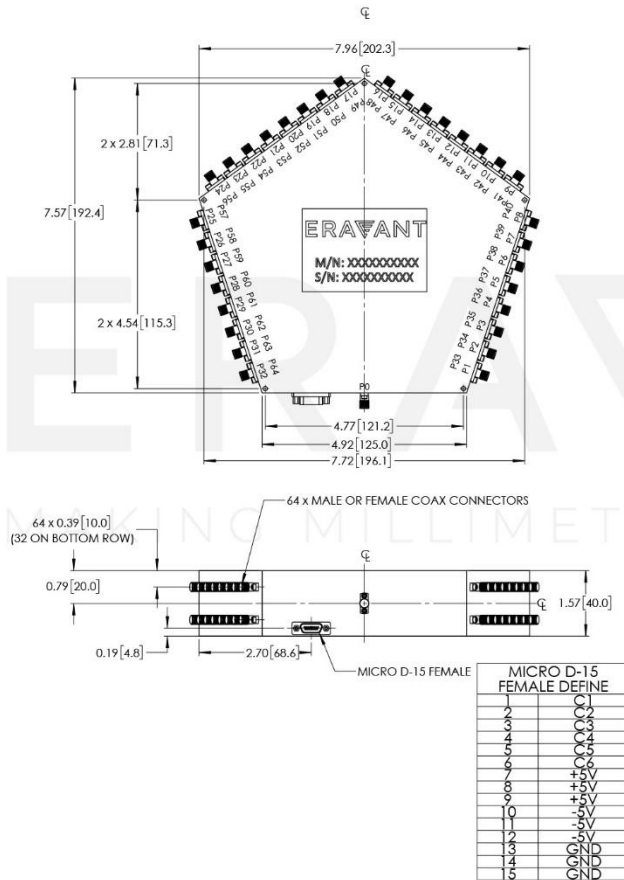
- Automatic Test Equipment
- Switching Network

SUPPLEMENTAL DETAILS



SK64-0520838055-SFSF-A2

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



| TRUTH TABLE | | | | | | | | | | | | | |
|-------------------|----|----|----|----|----|-------------------|-------------------|----|----|----|----|----|-------------------|
| TTL CONTROL INPUT | | | | | | SIGNAL PATH STATE | TTL CONTROL INPUT | | | | | | SIGNAL PATH STATE |
| C6 | C5 | C4 | C3 | C2 | C1 | | C6 | C5 | C4 | C3 | C2 | C1 | |
| 0 | 0 | 0 | 0 | 0 | 0 | P0 - P1 | 1 | 0 | 0 | 0 | 0 | 0 | P0 - P33 |
| 0 | 0 | 0 | 0 | 0 | 1 | P0 - P2 | 1 | 0 | 0 | 0 | 0 | 1 | P0 - P34 |
| 0 | 0 | 0 | 0 | 1 | 0 | P0 - P3 | 1 | 0 | 0 | 0 | 1 | 0 | P0 - P35 |
| 0 | 0 | 0 | 0 | 1 | 1 | P0 - P4 | 1 | 0 | 0 | 0 | 1 | 1 | P0 - P36 |
| 0 | 0 | 0 | 1 | 0 | 0 | P0 - P5 | 1 | 0 | 0 | 1 | 0 | 0 | P0 - P37 |
| 0 | 0 | 0 | 1 | 0 | 1 | P0 - P6 | 1 | 0 | 0 | 1 | 0 | 1 | P0 - P38 |
| 0 | 0 | 0 | 1 | 1 | 0 | P0 - P7 | 1 | 0 | 0 | 1 | 1 | 0 | P0 - P39 |
| 0 | 0 | 0 | 1 | 1 | 1 | P0 - P8 | 1 | 0 | 0 | 1 | 1 | 1 | P0 - P40 |
| 0 | 0 | 1 | 0 | 0 | 0 | P0 - P9 | 1 | 0 | 1 | 0 | 0 | 0 | P0 - P41 |
| 0 | 0 | 1 | 0 | 0 | 1 | P0 - P10 | 1 | 0 | 1 | 0 | 0 | 1 | P0 - P42 |
| 0 | 0 | 1 | 0 | 1 | 0 | P0 - P11 | 1 | 0 | 1 | 0 | 1 | 0 | P0 - P43 |
| 0 | 0 | 1 | 0 | 1 | 1 | P0 - P12 | 1 | 0 | 1 | 0 | 1 | 1 | P0 - P44 |
| 0 | 0 | 1 | 1 | 0 | 0 | P0 - P13 | 1 | 0 | 1 | 1 | 0 | 0 | P0 - P45 |
| 0 | 0 | 1 | 1 | 0 | 1 | P0 - P14 | 1 | 0 | 1 | 1 | 0 | 1 | P0 - P46 |
| 0 | 0 | 1 | 1 | 1 | 0 | P0 - P15 | 1 | 0 | 1 | 1 | 1 | 0 | P0 - P47 |
| 0 | 0 | 1 | 1 | 1 | 1 | P0 - P16 | 1 | 0 | 1 | 1 | 1 | 1 | P0 - P48 |
| 0 | 1 | 0 | 0 | 0 | 0 | P0 - P17 | 1 | 1 | 0 | 0 | 0 | 0 | P0 - P49 |
| 0 | 1 | 0 | 0 | 0 | 1 | P0 - P18 | 1 | 1 | 0 | 0 | 0 | 1 | P0 - P50 |
| 0 | 1 | 0 | 0 | 1 | 0 | P0 - P19 | 1 | 1 | 0 | 0 | 1 | 0 | P0 - P51 |
| 0 | 1 | 0 | 0 | 1 | 1 | P0 - P20 | 1 | 1 | 0 | 0 | 1 | 1 | P0 - P52 |
| 0 | 1 | 0 | 1 | 0 | 0 | P0 - P21 | 1 | 1 | 0 | 1 | 0 | 0 | P0 - P53 |
| 0 | 1 | 0 | 1 | 0 | 1 | P0 - P22 | 1 | 1 | 0 | 1 | 0 | 1 | P0 - P54 |
| 0 | 1 | 0 | 1 | 1 | 0 | P0 - P23 | 1 | 1 | 0 | 1 | 1 | 0 | P0 - P55 |
| 0 | 1 | 0 | 1 | 1 | 1 | P0 - P24 | 1 | 1 | 0 | 1 | 1 | 1 | P0 - P56 |
| 0 | 1 | 1 | 0 | 0 | 0 | P0 - P25 | 1 | 1 | 1 | 0 | 0 | 0 | P0 - P57 |
| 0 | 1 | 1 | 0 | 0 | 1 | P0 - P26 | 1 | 1 | 1 | 0 | 0 | 1 | P0 - P58 |
| 0 | 1 | 1 | 0 | 1 | 0 | P0 - P27 | 1 | 1 | 1 | 0 | 1 | 0 | P0 - P59 |
| 0 | 1 | 1 | 0 | 1 | 1 | P0 - P28 | 1 | 1 | 1 | 0 | 1 | 1 | P0 - P60 |
| 0 | 1 | 1 | 1 | 0 | 0 | P0 - P29 | 1 | 1 | 1 | 1 | 0 | 0 | P0 - P61 |
| 0 | 1 | 1 | 1 | 0 | 1 | P0 - P30 | 1 | 1 | 1 | 1 | 0 | 1 | P0 - P62 |
| 0 | 1 | 1 | 1 | 1 | 0 | P0 - P31 | 1 | 1 | 1 | 1 | 1 | 0 | P0 - P63 |
| 0 | 1 | 1 | 1 | 1 | 1 | P0 - P32 | 1 | 1 | 1 | 1 | 1 | 1 | P0 - P64 |

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.
- On condition that simulated test data is provided, actual measured data may slightly vary.
- Other mechanical configurations are available under different model numbers.
- Eravant reserves the right to change the information presented without notice.

CAUTION:

- Exceeding absolute maximum ratings shown will damage the device.
- The switch is static sensitive device. Always follow ESD rules when working with the switch.
- 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.