SK4-0525035055-2F2F-A3

SP4T PIN Switch with TTL Driver, Absorptive, 0.5 to 50 GHz

SK4-0525035055-2F2F-A3 is an absorptive PIN diode based, single pole, four throw switch (SP4T) with a TTL driver that operates between 0.5 and 50 GHz. This model offers typical insertion loss 5 dB and 55 dB port-to-port isolation with a typical switching speed of 50 nanoseconds. The switch has 2.4 mm female connectors for all RF ports and solder pins for DC bias and TTL control.

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	0.5 GHz		50 GHz
Insertion Loss @0.5-30 GHz		4.0 dB	
Insertion Loss @30-50 GHz		5.0 dB	
Isolation @ 0.5-30 GHz	60 dB	65 dB	
Isolation @ 30-50 GHz	42 dB	55 dB	
Return Loss		8 dB	
RF Input Power			+20 dBm
Bias (Positive)	+4.75 V_{DC}	+5.00 V_{DC}/150 mA	+5.25 V_{DC}
Bias (Negative)	-5.25 V_{DC}	-5.00 V_{DC}/50 mA	-4.75 V_{DC}
Control		TTL	
TTL High	+2.0 V_{DC}		+5.0 V_{DC}
TTL Low	0 V_{DC}		+0.8 V_{DC}
Switching Speed		50 ns	100 ns
Switch Type		Absorptive	
Specification Temperature		+25 °C	
Operating Temperature	-25 °C		+85 °C

Mechanical Specifications:

Item	Specification
RF Ports	2.4 mm Female
Bias & Control Port	Solder Pins
Case Material	Aluminum
Finish	Gold Plated
Weight	1.8 Oz
Outline	K4-AC-Z2

ECCN

EAR99

FEATURES

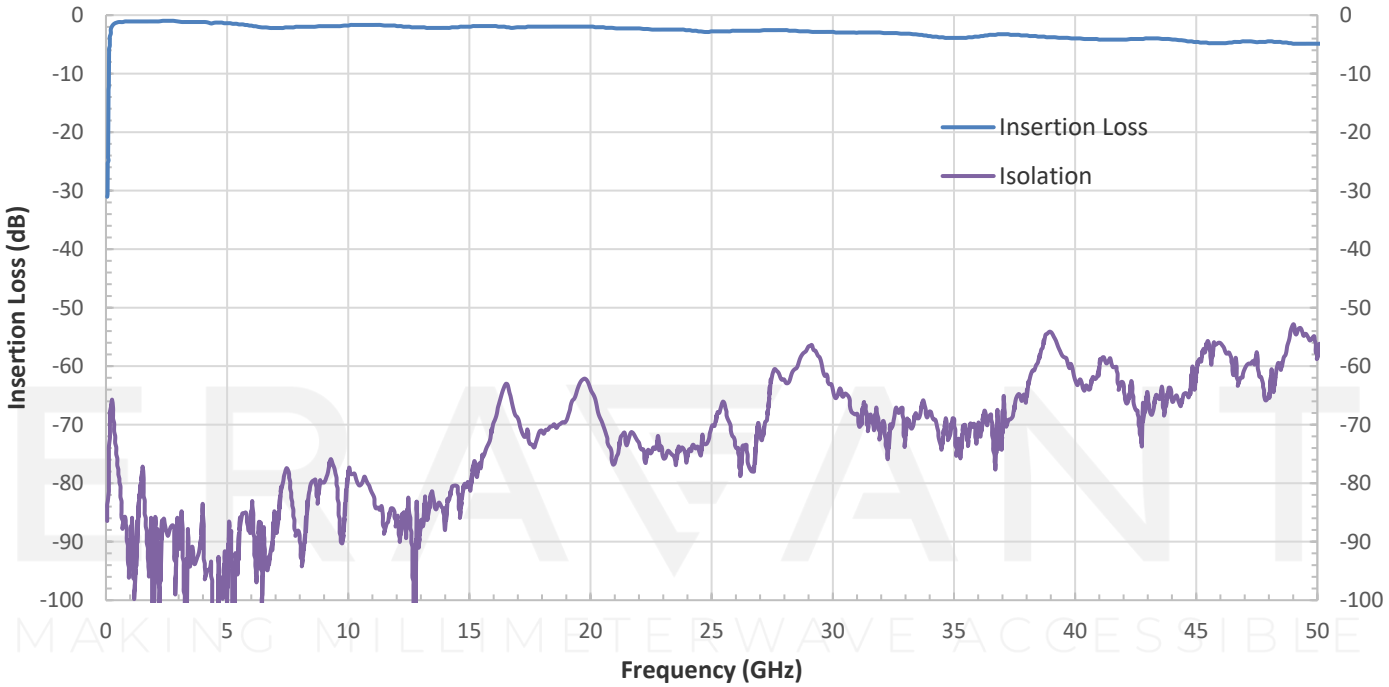
- Ultrabroad Bandwidth
- High Isolation
- Compact Size
- Fast Control Speed

APPLICATIONS

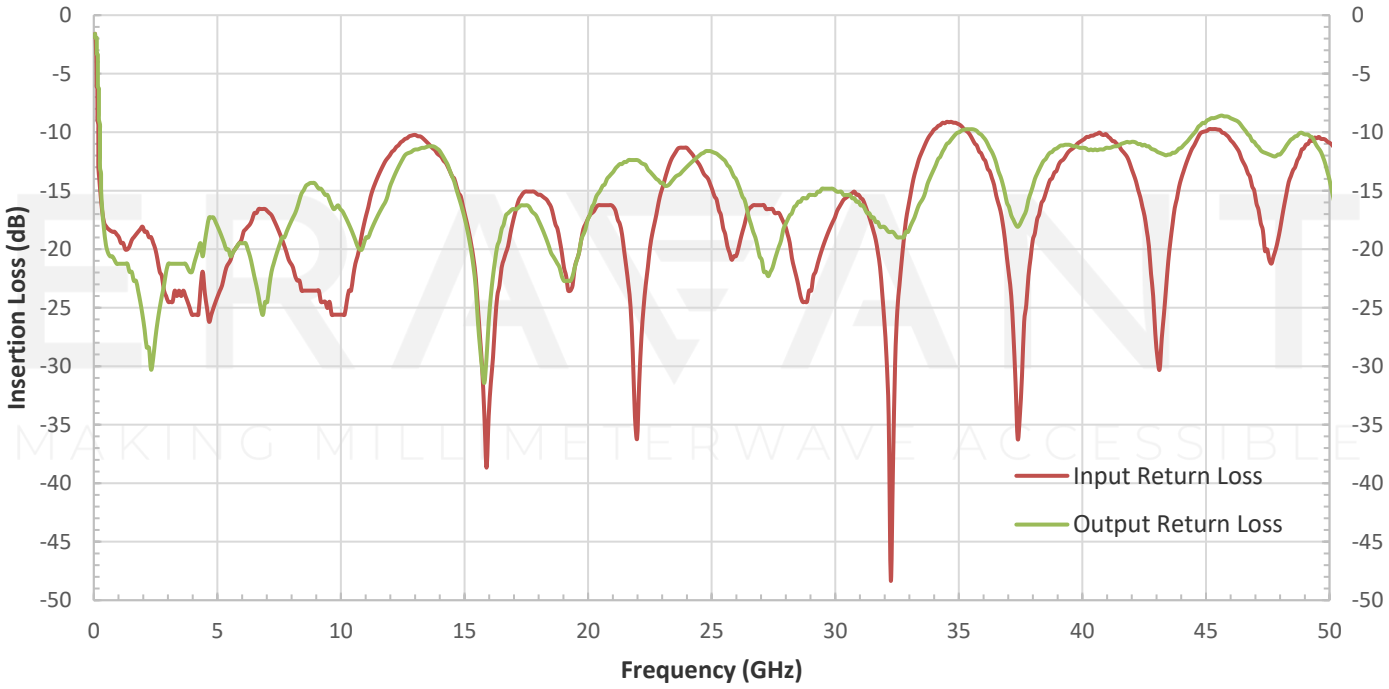
- 5G Systems
- Radar Systems
- Communication Systems
- Automatic Test Equipment
- Switching Network

SUPPLEMENTAL DETAILS

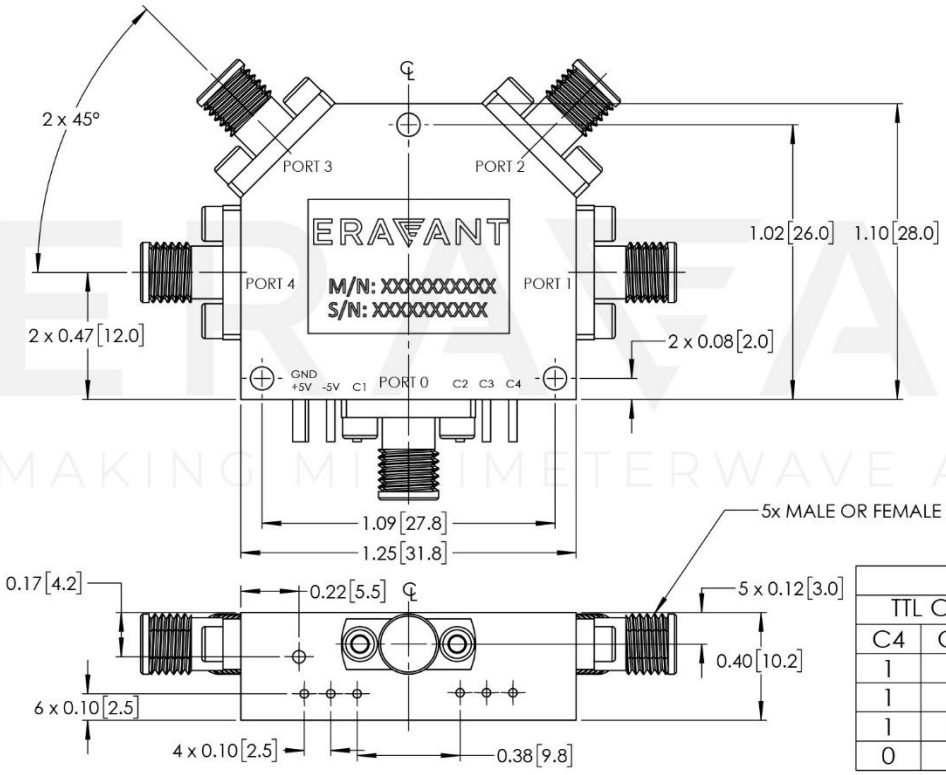
Typical Performance vs. Frequency



Typical Performance vs. Frequency



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



Truth Table				
TTL Control Input				Signal Path State
C4	C3	C2	C1	
1	1	1	0	Port 0 - Port 1
1	1	0	1	Port 0 - Port 2
1	0	1	1	Port 0 - Port 3
0	1	1	1	Port 0 - Port 4

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.