

# S3V5R Pin Diode Switch

## Single Pole, Three Throw

## Reflective



### Features:

- Incorporated TTL-compatible driver for convenient system integration and operates from +5V and -15V DC power supplies.
- DC blocks at all RF ports.
- Ruggedized construction.
- RoHS-compliant versions available.
- Hermetic versions available.



### Specifications:

Parameter	Specification	Units
Frequency Range	0.1 – 8	GHz
Insertion Loss (max)	3.4	dB
VSWR (max) 50 ohms	2.0	ratio
Isolation (min)	70	dB
Switching Speed (max)	250	nsec
CW RF Power, Operating (max)	0.5	W

### Notes:

DC Bias: (Standard)	+5V +/-0.5V @ 120 mA max	-15V +/-3V @ 50 mA max
DC Bias: (-5 option)	+5V +/-0.5V @ 150 mA max	-5V +/-0.5V @ 60 mA max
DC Bias: (-12 option)	+15V +/-3V @ 120 mA max	-15V +/-3V @ 50 mA max
Control:	TTL 0 = Low Loss	E1 controls J2 – J1
	TTL 1 = Isolation	E2 controls J3 – J1
		E3 controls J4 – J1

Switching speed is defined as 50% TTL to 90% RF (t-on) and 50% TTL to 10% RF (t-off).

### Environmental Specifications:

MIL-E-5400, MIL-STD-202, MIL-E-16400	
Operating Temp:	-55 °C to +85 °C
Storage Temp:	-65 °C to +125 °C
Humidity:	MIL-STD-202F, M103, Cond B
Shock:	MIL-STD-202F, M213, Cond B
Altitude:	MIL-STD-202F, M105, Cond B
Vibration:	MIL-STD-202F, M204, Cond B
Thermal Shock:	MIL-STD-202F, M107, Cond A
Temperature Cycle:	MIL-STD-202F, M105C, Cond D

### Mechanical Specifications:

Case Style:	S3 Outline
Finish:	Gold Plate per MIL-G-45204
	Chem film per MIL-C-5541
Bias & Control Pins:	ø0.02" x 0.15" long
Weight:	35 g max
Mounting:	ø0.10" through holes (4) places

### Screening:

Internal Visual per MIL-STD-883, Method 2017  
 Temperature Cycle: -65 °C to +100 °C, 10 cycles  
 Hermetically-sealed switches are fine and gross leak checked per MIL-STD-883, Method 1014.  
 Optional High-Rel screening available upon request. Contact the factory to discuss your screening requirements.



### Part Number Ordering Information:

- Add "-RC" suffix: RoHS-compliant
- Add "-H" suffix: Hermetic seal
- Add "-5" suffix: +/-5V DC supplies
- Add "-5-RC" suffix: +/-5V DC supplies, RoHS-compliant
- Add "-5-H" suffix: +/-5V DC supplies, Hermetic seal
- Add "-12" suffix: +/-15V DC supplies
- Add "-12-RC" suffix: +/-15V DC supplies, RoHS-compliant
- Add "-12-H" suffix: +/-15V DC supplies, Hermetic seal

**Aeroflex Control Components**  
Aeroflex Microelectronic Solutions  
40 Industrial Way East  
Eatontown, NJ 07724 [USA]  
Fax: (732) 460-0214

Sales  
Phone: (732) 460-0212  
ACC-sales@aeroflex.com

[www.aeroflex.com/Microwave](http://www.aeroflex.com/Microwave) [www.aeroflex.com/ACC](http://www.aeroflex.com/ACC)

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