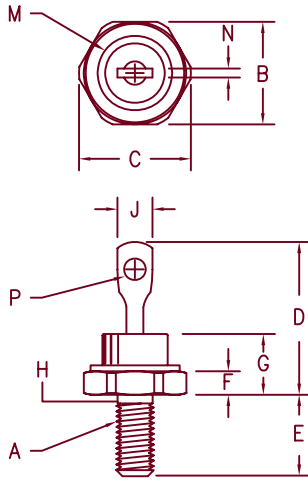


# 30 Amp Schottky Rectifier SD41, SD4145



**Notes:**

1. 10-32 UNF3A threads
2. Full threads within 2 1/2 threads
3. Standard Polarity:  
Stud is Cathode. Reverse Polarity Stud is Anode

Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
A	---	---	---	---	1
B	.424	.437	10.77	11.10	
C	---	.505	---	12.82	
D	.600	.800	15.24	20.32	
E	.422	.453	10.72	11.50	
F	.075	.175	1.91	4.44	
G	---	.405	---	10.29	
H	.163	.189	4.15	4.80	2
J	---	.310	---	7.87	
M	---	.350	---	8.89	Dia.
N	.020	.065	.510	1.65	
P	.060	.100	1.53	2.54	Dia.

## D0203AA (D04)

Microsemi Catalog Number	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
SD41*	35V	35V
SD4145*	45V	45V

\*Add Suffix R For Reverse Polarity

- Schottky Barrier Rectifier
- Guard Ring Protection
- Low Forward Voltage
- VRRM - 35 & 45 Volts
- 30 Amperes
- Reverse Energy Tested

### Electrical Characteristics

Average forward current	I <sub>F(AV)</sub> 30 Amps	T <sub>C</sub> = 140°C, Square wave, R <sub>θJC</sub> = 1.6°C/W 8.3 ms, half sine T <sub>J</sub> = 175°C f = 1 KHz, 25°C, 1 μsec Square wave
Maximum surge current	I <sub>FSM</sub> 600 Amps	
Max repetitive peak reverse current	I <sub>R(OV)</sub> 2 Amps	
Max peak forward voltage	V <sub>FM</sub> .57 Volts	I <sub>FM</sub> = 30A: T <sub>J</sub> = 175°C*
Max peak forward voltage	V <sub>FM</sub> .68 Volts	I <sub>FM</sub> = 30A: T <sub>J</sub> = 25°C*
Max peak reverse current	I <sub>RM</sub> 25 mA	V <sub>RRM</sub> , T <sub>J</sub> = 125°C*
Max peak reverse current	I <sub>RM</sub> 1.5 mA	V <sub>RRM</sub> , T <sub>J</sub> = 25°C
Typical junction capacitance	C <sub>J</sub> 1350 pF	V <sub>R</sub> = 5.0V, T <sub>J</sub> = 25°C

\*Pulse test: Pulse width 300 μsec, Duty cycle 2%

### Thermal and Mechanical Characteristics

Storage temp range	T <sub>STG</sub>	-55°C to 175°C
Operating junction temp range	T <sub>J</sub>	-55°C to 175°C
Max thermal resistance	R <sub>θJC</sub>	1.6°C/W Junction to case
Typical thermal resistance (greased)	R <sub>θCS</sub>	0.5°C/W Case to sink
Mounting torque		12-15 inch pounds
Weight		0.2 ounces (6.0 grams) typical



6 Lake Street  
Lawrence, MA 01841  
PH: (978) 620-2600  
FAX: (978) 689-0803  
www.microsemi.com

05-30-07 Rev. 2

# SD41, SD4145

Figure 1  
Typical Forward Characteristics

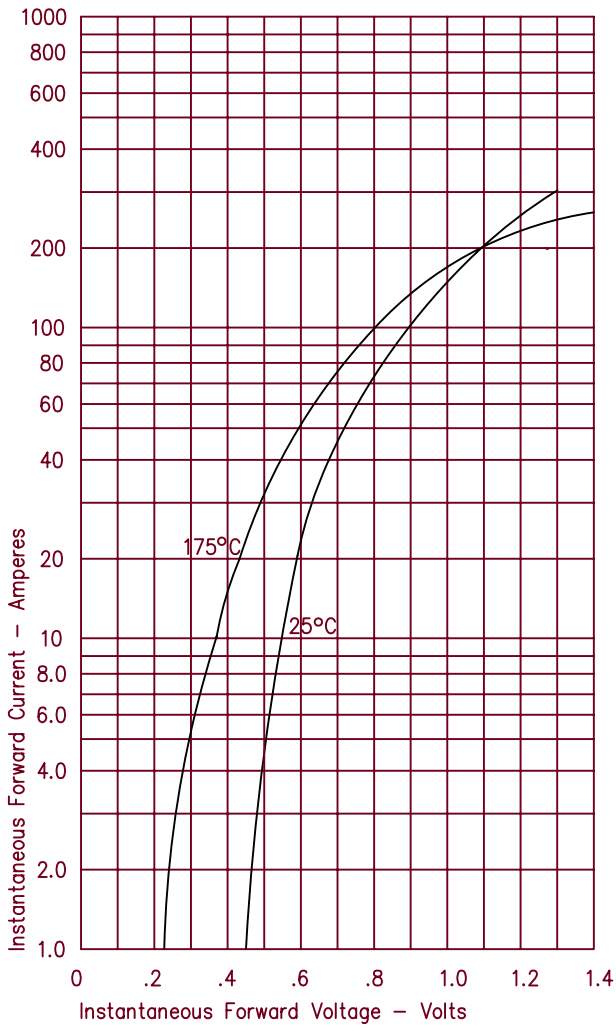


Figure 3  
Typical Junction Capacitance

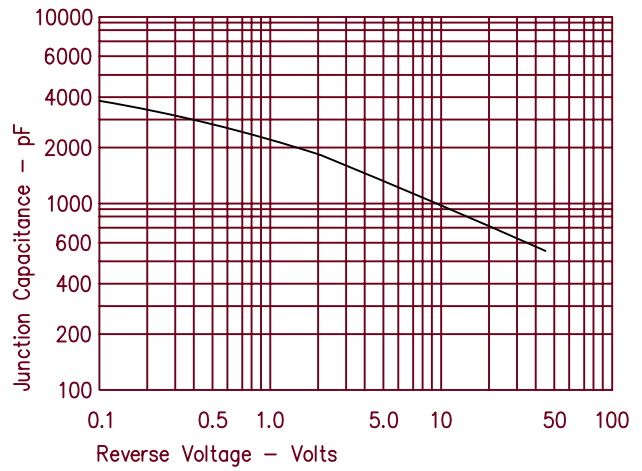


Figure 4  
Forward Current Derating

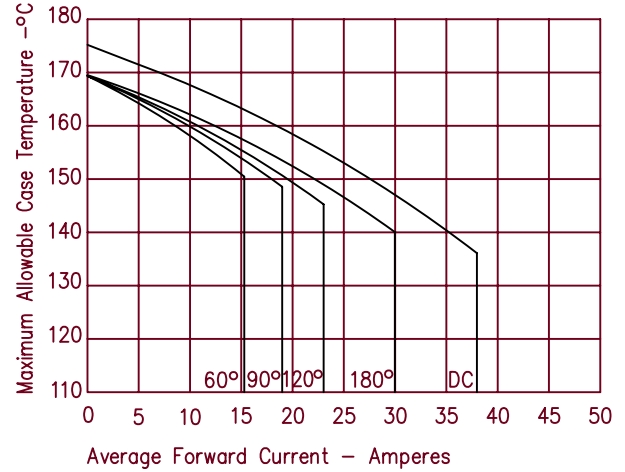


Figure 2  
Typical Reverse Characteristics

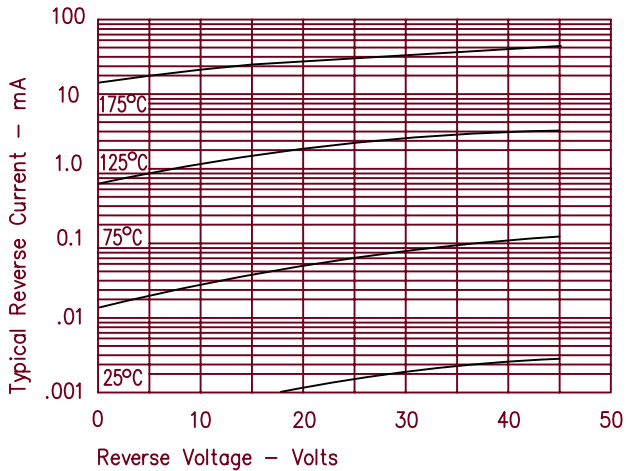


Figure 5  
Maximum Forward Power Dissipation

