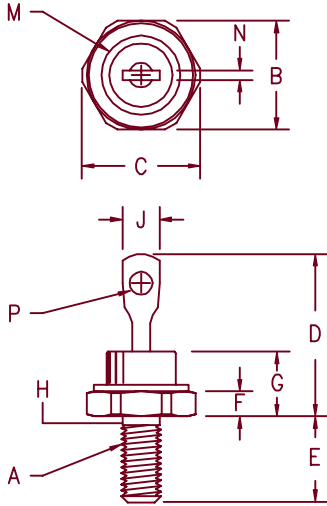


30 Amp Schottky Rectifier SD41, SD4145



- 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	$I_{F(AV)}$ 30 Amps	$T_C = 140^\circ\text{C}$, Square wave, $R_{\theta JC} = 1.6^\circ\text{C/W}$
Maximum surge current	I_{FSM} 600 Amps	8.3 ms, half sine $T_J = 175^\circ\text{C}$
Max repetitive peak reverse current	$I_{R(OV)}$ 2 Amps	$f = 1 \text{ KHz}$, 25°C , 1 μsec Square wave
Max peak forward voltage	V_{FM} .57 Volts	$I_{FM} = 30\text{A}$: $T_J = 175^\circ\text{C}^*$
Max peak forward voltage	V_{FM} .68 Volts	$I_{FM} = 30\text{A}$: $T_J = 25^\circ\text{C}^*$
Max peak reverse current	I_{RM} 25 mA	V_{RRM} , $T_J = 125^\circ\text{C}^*$
Max peak reverse current	I_{RM} 1.5 mA	V_{RRM} , $T_J = 25^\circ\text{C}$
Typical junction capacitance	C_J 1350 pF	$V_R = 5.0\text{V}$, $T_J = 25^\circ\text{C}$

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

Thermal and Mechanical Characteristics

Storage temp range	TSTG	-55°C to 175°C
Operating junction temp range	T_J	-55°C to 175°C
Max thermal resistance	$R_{\theta JC}$	1.6°C/W Junction to case
Typical thermal resistance (greased)	$R_{\theta CS}$	0.5°C/W Case to sink
Mounting torque		12-15 inch pounds
Weight		0.2 ounces (6.0 grams) typical

SD41, SD4145

Figure 1
Typical Forward Characteristics

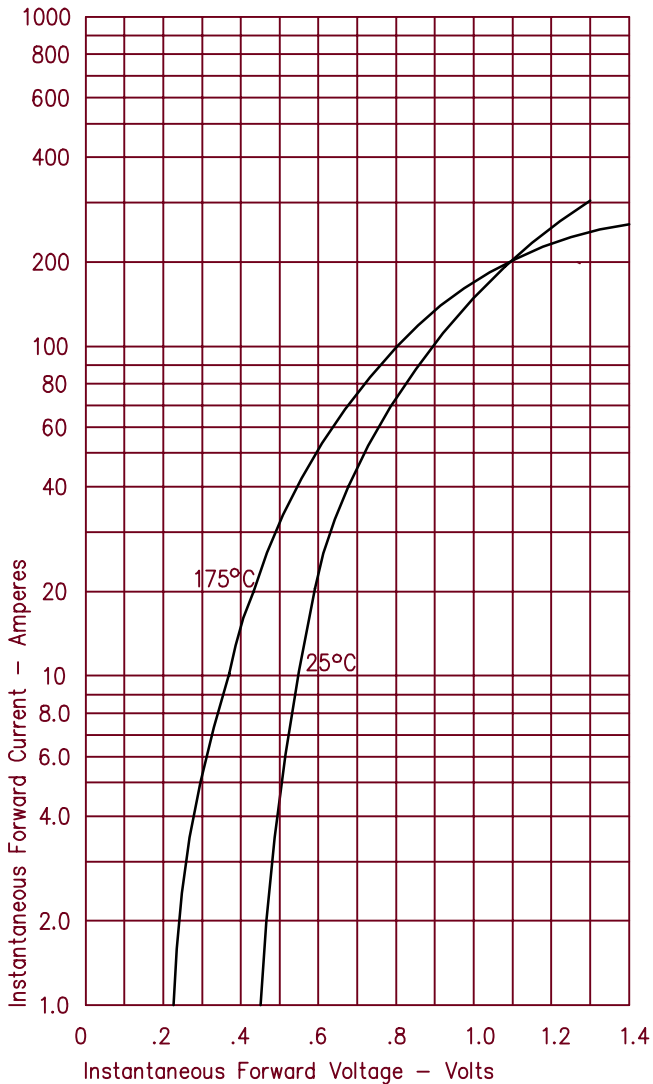


Figure 3
Typical Junction Capacitance

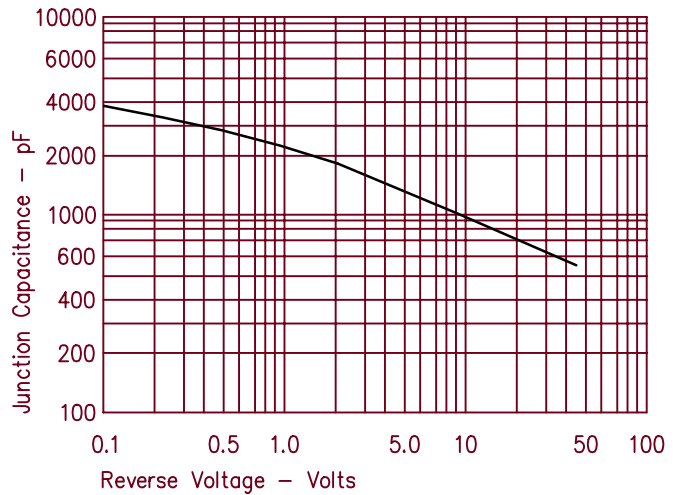


Figure 4
Forward Current Derating

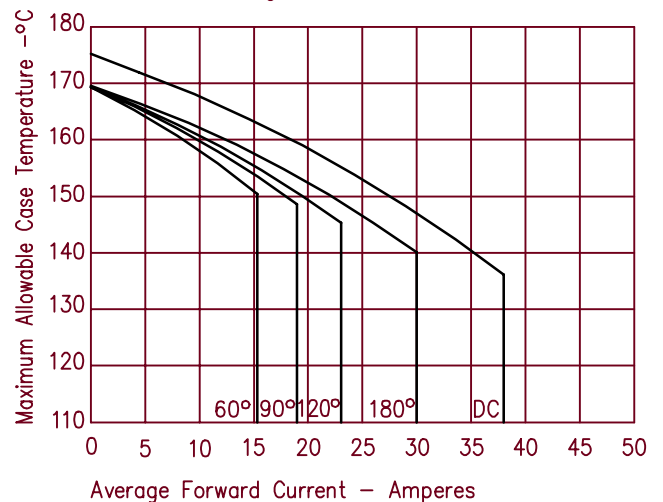


Figure 2
Typical Reverse Characteristics

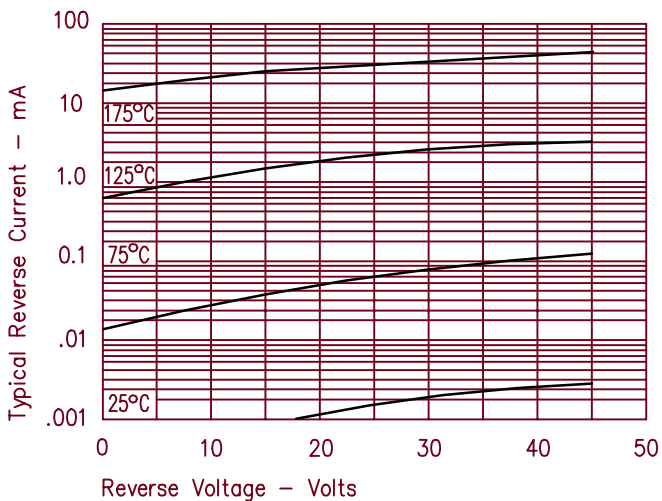


Figure 5
Maximum Forward Power Dissipation

