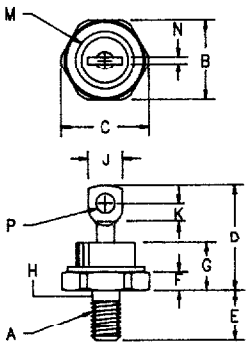
60 Amp Schottky Rectifier
SD 51



Notes:
1. Full threads within 2 1/2 threads
2. Standard Polarity: Stud is Cathode

Dim.	Inches		Millimeter		
	Minimum	Maximum	Minimum	Maximum	Notes
A	---	---	---	---	1/4-28
B	.669	.687	17.19	17.44	
C	---	.794	---	20.16	
D	---	1.000	---	25.40	
F	.422	.453	10.72	11.50	
F	.115	.200	2.93	5.08	
G	---	.450	---	11.43	
H	.220	.249	5.58	6.32	1
J	---	.375	---	9.52	
K	.156	---	3.96	---	
M	---	.515	---	13.08	Dia.
N	---	.080	---	2.03	
P	.140	.175	3.56	4.45	Dia.

D0203AB (D05)

Microsemi Catalog Number	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
SD51	35V	35V
SD5145	45V	45V

- Schottky Barrier Rectifier
- 150°C Junction Temperature
- Guard Ring Protection
- V_{RRM} – 35 to 45 Volts
- Reverse Energy Tested

Electrical Characteristics

Average forward current	$I_{F(AV)}$ 60 Amps	T_C = 135°C, Square wave, $R_{\theta JC}$ = 1.0°C/W
Maximum surge current	I_{FSM} 800 Amps	8.3 ms, half sine T_J = 175°C
Max repetitive peak reverse current	$I_{R(OV)}$ 2 Amps	f = 1 KHz, 25°C, 1 µsec Square wave
Max peak forward voltage	V_{FM} .70 Volts	I_{FM} = 60A; T_J = 25°C*
Max peak forward voltage	V_{FM} .60 Volts	I_{FM} = 60A; T_J = 125°C*
Max peak reverse current	I_{RM} 30 mA	V_{RRM}, T_J = 125°C*
Max peak reverse current	I_{RM} 2 mA	V_{RRM}, T_J = 25°C
Typical junction capacitance	C_J 2300 pF	V_R = 5.0V, T_J = 25°C

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

Thermal and Mechanical Characteristics

Storage temp range	T_{STG}	−55°C to 175°C
Operating junction temp range	T_J	−55°C to 175°C
Max thermal resistance	$R_{\theta JC}$	1.0°C/W Junction to case
Typical thermal resistance	$R_{\theta JC}$	0.9°C/W Junction to case
Max mounting torque		30.0 inch pounds maximum
Weight		0.54 ounce (15.3 grams) typical

Microsemi Corp.
Colorado

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SD 51

C

Figure 1
Typical Forward Characteristics

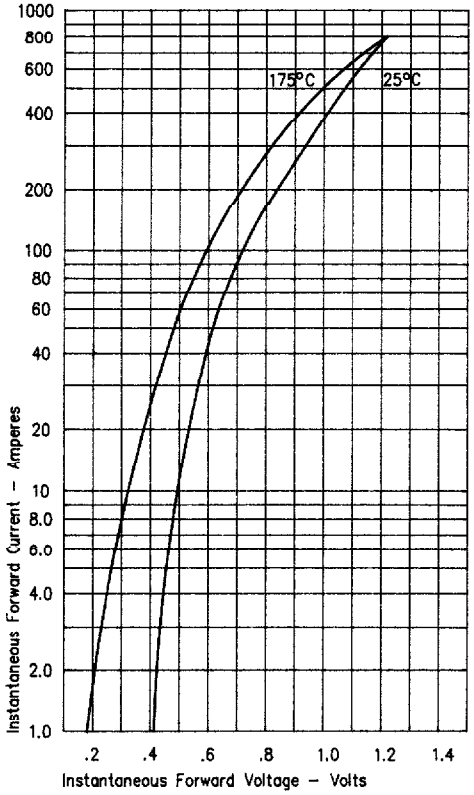

Figure 2
Typical Reverse Characteristics

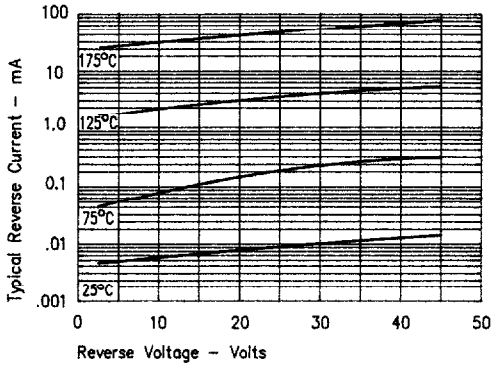

Figure 3
Typical Junction Capacitance

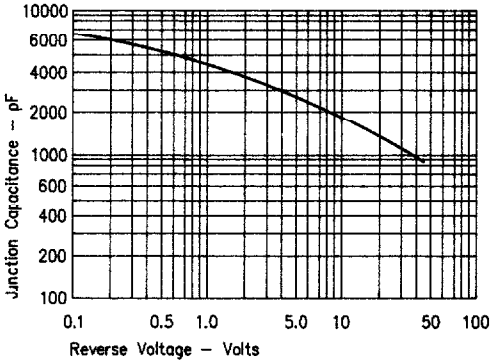

Figure 4
Forward Current Derating

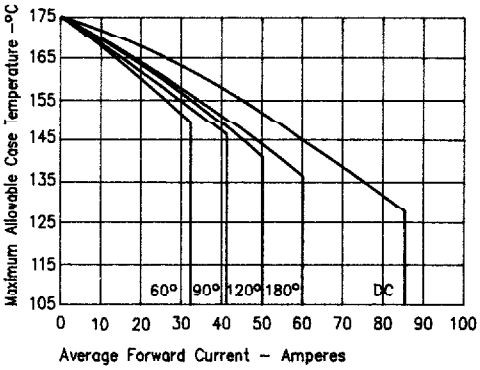

Figure 5
Maximum Forward Power Dissipation