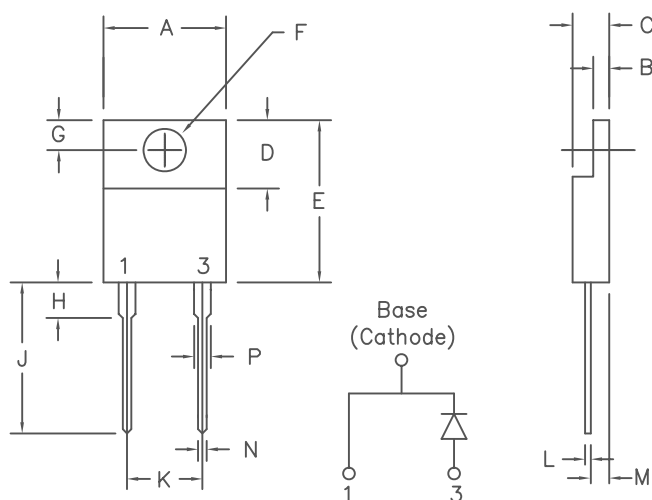


12 Amp Schottky Rectifiers USD835 — USD845



Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
A	.390	.415	9.91	10.54	
B	.045	.055	1.14	1.40	
C	.180	.190	4.57	4.83	
D	.245	.260	6.22	6.60	
E	.550	.650	13.97	16.51	
F	.139	.155	3.53	3.94	Dia.
G	.100	.120	2.54	3.05	
H	---	.250	---	6.35	
J	.500	.580	12.70	14.73	
K	.190	.210	4.83	5.33	
L	.014	.025	0.35	0.63	
M	.080	.115	2.03	2.92	
N	.028	.038	0.71	0.96	
P	.045	.055	1.14	1.40	

Similar to TO-220AC

Microsemi Catalog Number	Industry Part Number	Repetitive Peak Reverse Voltage	Transient Peak Reverse Voltage
USD835		35V	35V
USD840		40V	40V
USD845		45V	45V

- Schottky Barrier Rectifier
- Guard Ring Protection
- Low Power Loss
- 175°C Junction Temperature
- Reverse Energy Tested

Electrical Characteristics

Average Forward Current	$I_F(AV)$ 12 Amps	$T_C = 153^\circ C$, Square wave, $R_{\theta JC} = 2.0^\circ C/W$
Maximum Surge Current	I_{FSM} 300 Amps	8.3ms, half sine, $T_J = 150^\circ C$
Max. repetitive reverse current	I_{FSM} 2 Amps	$f = 1KHZ$, $25^\circ C$, 1uS Square wave
Max. Peak Forward Voltage	V_{FM} .62 Volts	$I_{FM} = 12A$, $T_J = 25^\circ C^*$
Max. Peak Forward Voltage	V_{FM} .50 Volts	$I_{FM} = 12A$, $T_J = 150^\circ C^*$
Max. Peak Reverse Current	I_{RM} 250 μA	V_{RRM} , $T_J = 25^\circ C$
Max. Peak Reverse Current	I_{RM} 2 mA	V_{RRM} , $T_J = 125^\circ C^*$
Typical Junction Capacitance	C_J 850 pF	$V_R = 5.0V$, $T_J = 25^\circ C$

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

Thermal and Mechanical Characteristics

Storage temp range	T_{STG}	$-55^\circ C$ to $175^\circ C$
Operating junction temp range	T_J	$-55^\circ C$ to $175^\circ C$
Max thermal resistance	$R_{\theta JC}$	$2.0^\circ C/W$
Mounting torque		8-12 inch pounds (6-32 screw)
Weight		.08 ounces (2.3 grams) typical



8700 East Thomas Road, P.O. Box 1390
Scottsdale, AZ 85252
PH: (480) 941-6300
FAX: (480) 947-1503
www.microsemi.com

05-31-07 Rev. 2

USD835 — USD845

Figure 1
Typical Forward Characteristics

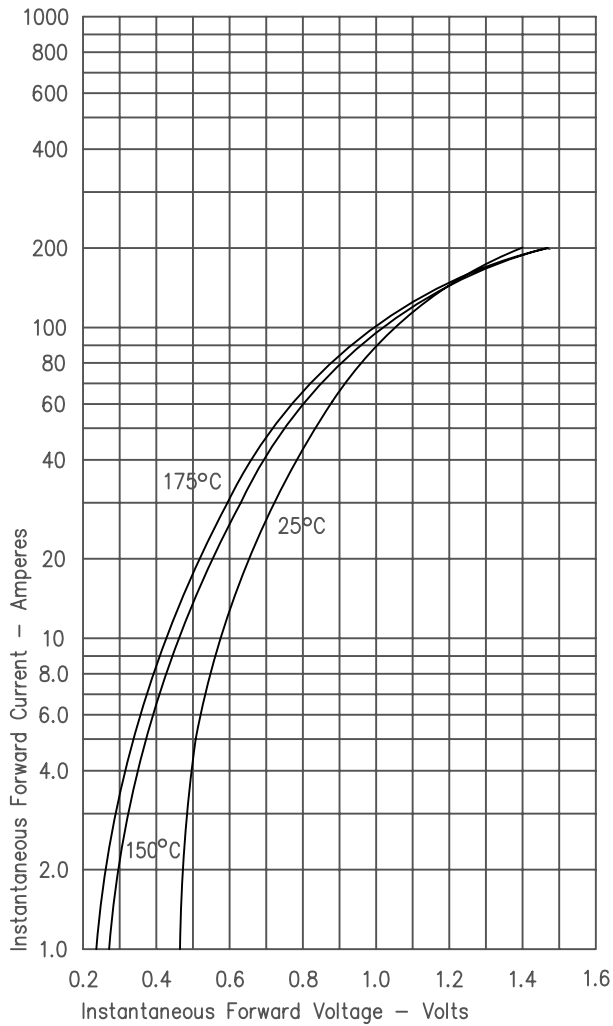


Figure 3
Typical Junction Capacitance

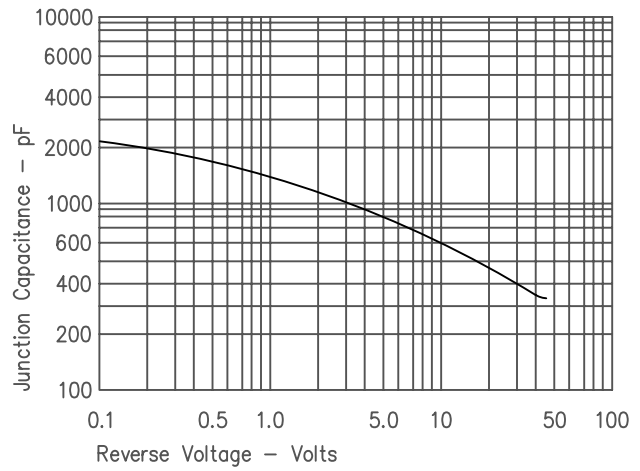


Figure 4
Forward Current Derating

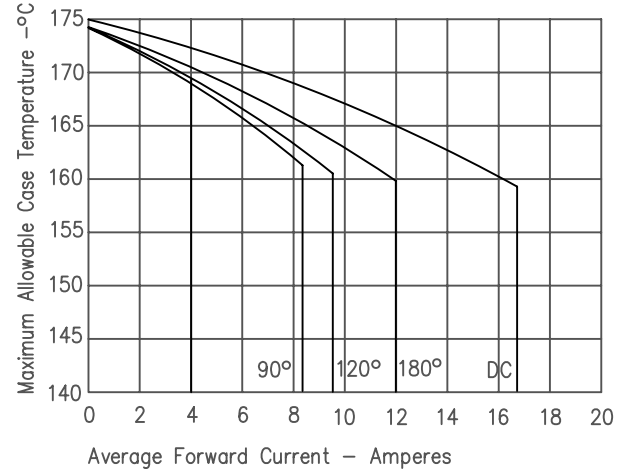


Figure 2
Typical Reverse Characteristics

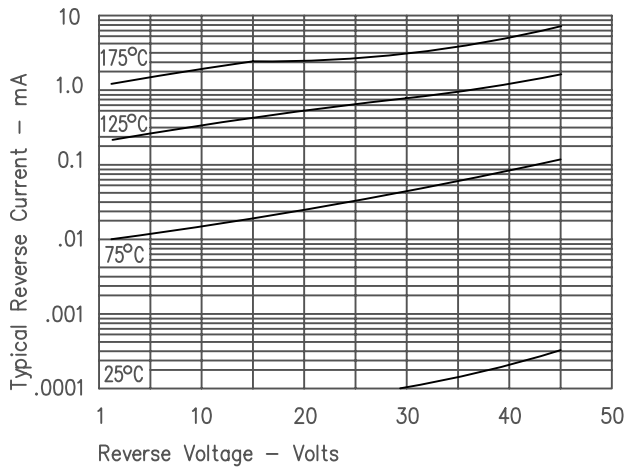


Figure 5
Maximum Forward Power Dissipation

