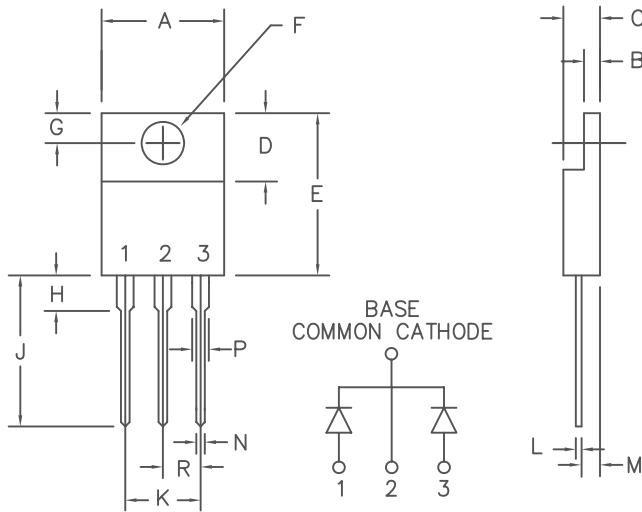


12 Amp Schottky Rectifiers USD635C — USD645C



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	.161	3.53	4.09	Dia.
G	.100	.135	2.54	3.43	
H	---	.250	---	6.35	
J	.500	.580	12.70	14.73	
K	.190	.210	4.83	5.33	
L	.014	.022	.357	.559	
M	.080	.115	2.03	2.92	
N	.015	.040	.380	1.02	
P	.045	.070	1.14	1.78	
R	.090	.110	2.29	2.79	

PLASTIC TO-220AB

Microsemi Catalog Number	Industry Part Number	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
USD635C		35V	35V
USD640C		40V	40V
USD645C		45V	45V

- Schottky Barrier Rectifier
- Guard Ring Protection
- Low Power Loss
- 150°C Junction Temperature
- Reverse Energy Tested

Electrical Characteristics		
Average forward current	I _{F(AV)} 12 Amps	T _C = 127°C Square wave, R _{θJC} = 1.2°C/W
Average forward current	I _{F(AV)} 6 Amps	T _C = 127°C Square wave, R _{θJC} = 2.4°C/W
Maximum surge current	I _{F(AV)} 225 Amps	8.3 ms, half sine, T _J = 150°C
Max repetitive reverse current	I _{R(OV)} 2 Amps	f = 1KHZ, 25°C, 1uS Square wave
Max peak forward voltage	V _{FM} .48 Volts	I _{FM} = 6A: T _J = 25°C*
Typical peak forward voltage	V _{FM} .30 Volts	I _{FM} = 6A: T _J = 150°C*
Max. peak reverse current	I _{RM} 2 mA	V _{RRM, T_J} = 25°C
Typical peak reverse current	I _{RM} 50 mA	V _{RRM, T_J} = 100°C*
Typical junction capacitance	C _J 575 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 150°C
Operating junction temp range	T _J	-55°C to 150°C
Max thermal resistance per leg	R _{θJC}	1.2°C/W
Max thermal resistance per pkg.	R _{θJC}	2.4°C/W
Mounting torque		8-12 inch pounds maximum (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

USD635C — USD645C

Figure 1
Typical Forward Characteristic — Per Leg

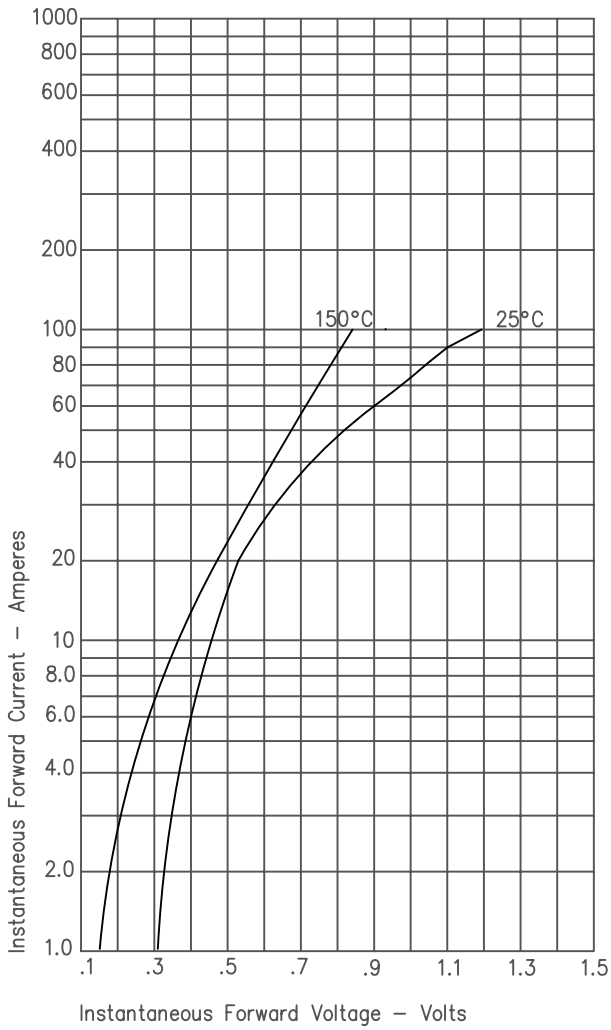


Figure 3
Typical Junction Capacitance — Per Leg

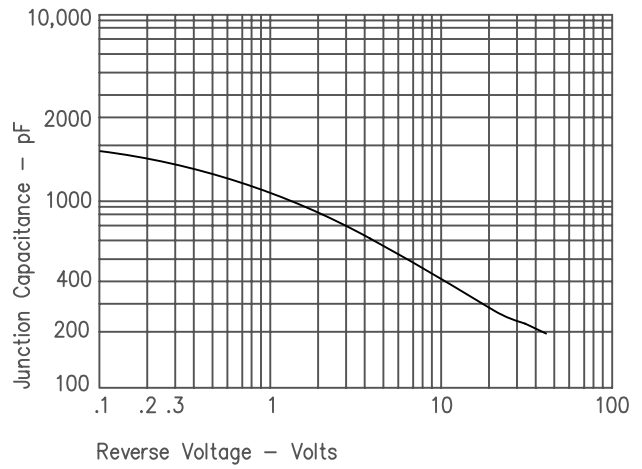


Figure 4
Forward Current Derating — Per Leg

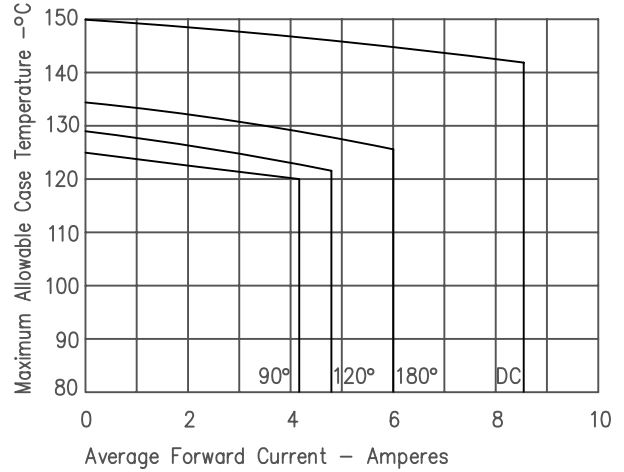


Figure 2
Typical Reverse Characteristics — Per Leg

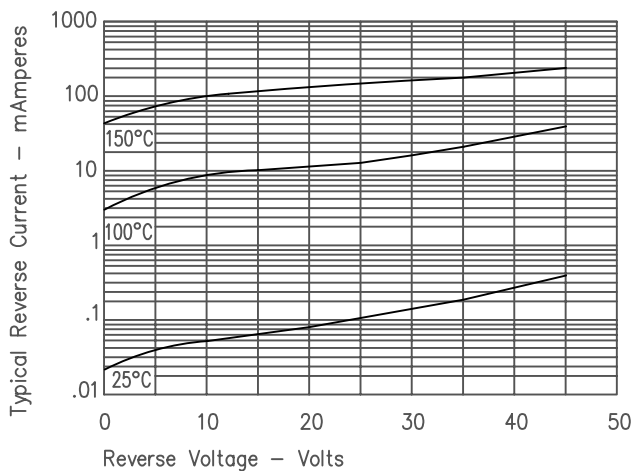


Figure 5
Maximum Forward Power Dissipation — Per Leg

