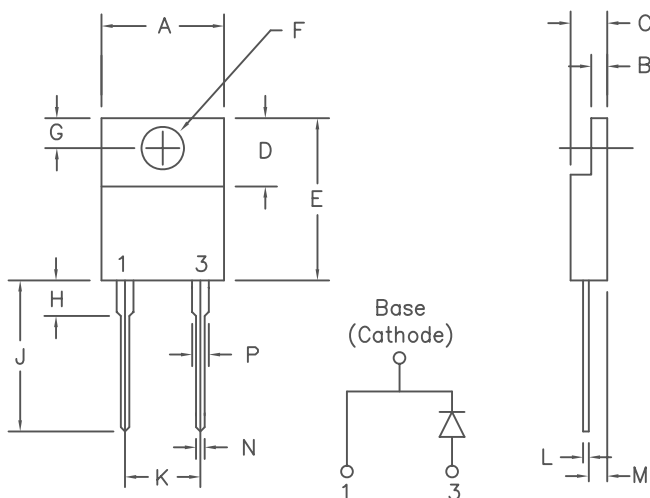


# 6 Amp Schottky Rectifiers USD635 — USD645



Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
A	.390	.415	9.91	10.54	Dia.
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	
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	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
USD635		35V	35V
USD640		40V	40V
USD645		45V	45V

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

Electrical Characteristics		
Average forward current	I <sub>F(AV)</sub> 6 Amps	T <sub>C</sub> = 123°C Square wave, R <sub>θJC</sub> = 2.5°C/W
Maximum surge current	I <sub>F(AV)</sub> 225 Amps	8.3 ms, half sine, T <sub>J</sub> = 150°C
Max repetitive reverse current	I <sub>R(OV)</sub> 2 Amps	f = 1KHZ, 25°C, 1uS Square wave
Max peak forward voltage	V <sub>FM</sub> .48 Volts	I <sub>FM</sub> = 6A: T <sub>J</sub> = 25°C*
Typical peak forward voltage	V <sub>FM</sub> .30 Volts	I <sub>FM</sub> = 6A: T <sub>J</sub> = 150°C*
Max. peak reverse current	I <sub>RM</sub> 2 mA	V <sub>RRM, T<sub>J</sub></sub> = 25°C
Typical peak reverse current	I <sub>RM</sub> 50 mA	V <sub>RRM, T<sub>J</sub></sub> = 100°C*
Typical junction capacitance	C <sub>J</sub> 575 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 temperature range	T <sub>STG</sub>	-55°C to 150°C
Operating junction temp range	T <sub>J</sub>	-55°C to 150°C
Maximum thermal resistance	R <sub>θJC</sub>	2.5°C/W Junction to Case
Weight		.08 ounces (2.3 grams) typical

# USD635 — USD645

Figure 1  
Typical Forward Characteristic

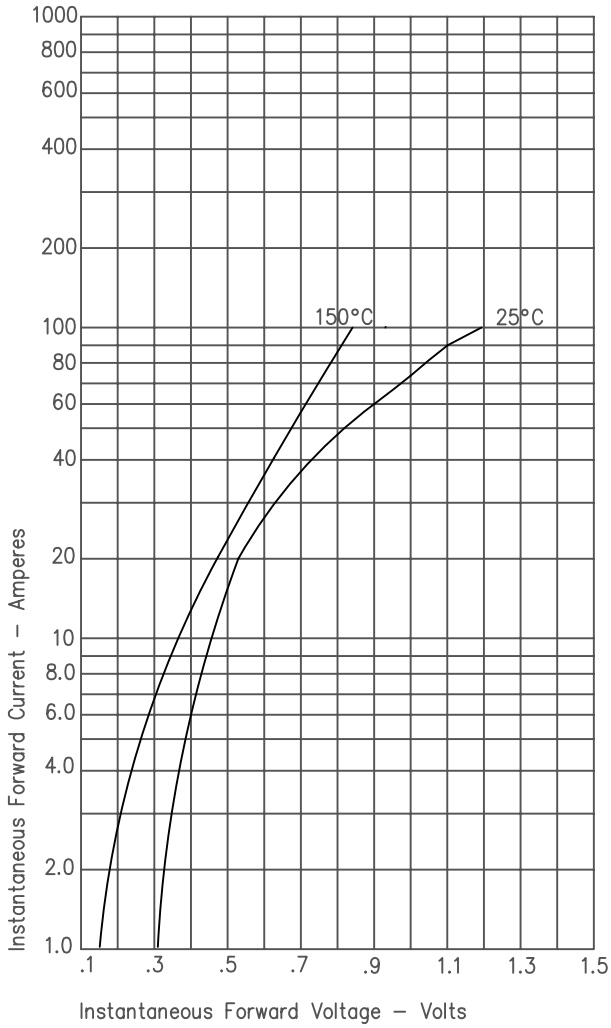


Figure 3  
Typical Junction Capacitance

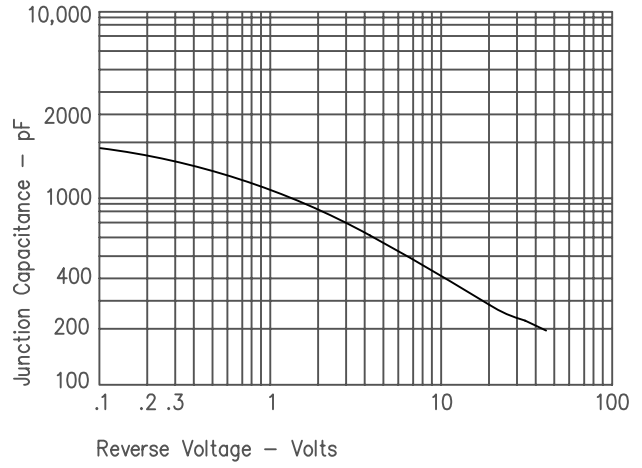


Figure 4  
Forward Current Derating

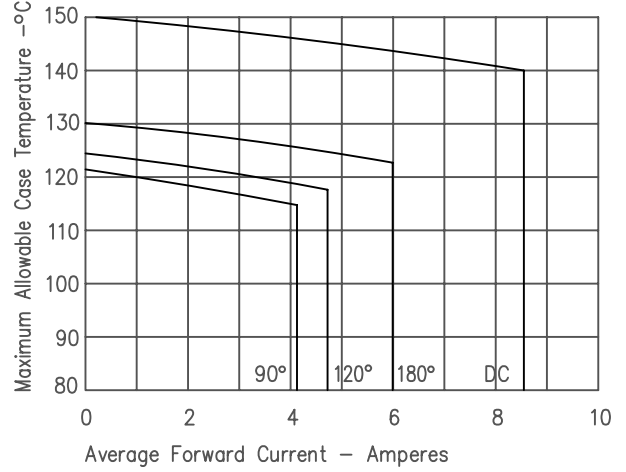


Figure 2  
Typical Reverse Characteristics

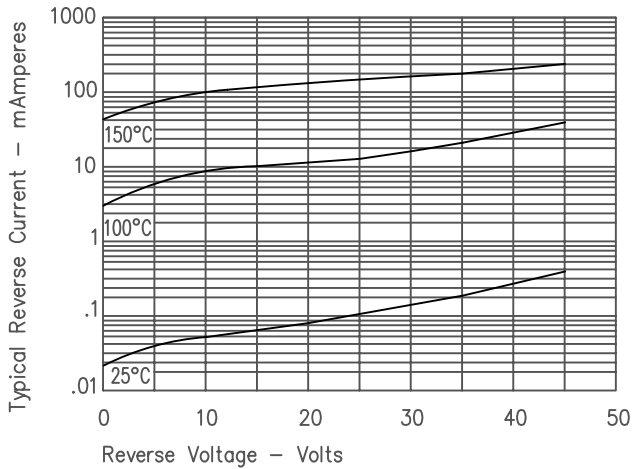


Figure 5  
Maximum Forward Power Dissipation

