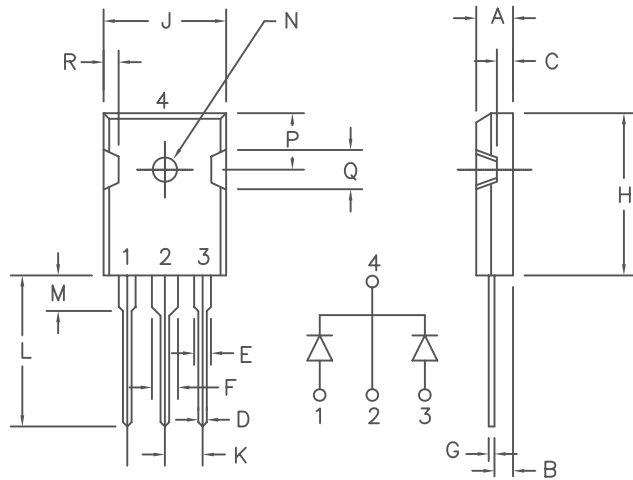


40 Amp Schottky Rectifier

USD4030C — USD4045C



Similar to TO-247AD

Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
A	.185	.209	4.70	5.31	
B	.087	.102	2.21	2.59	
C	.059	.098	1.50	2.49	
D	.040	.055	1.02	1.40	
E	.079	.094	2.01	2.39	
F	.118	.133	3.00	3.38	
G	.016	.031	.410	0.78	
H	.819	.883	20.80	22.4	
J	.627	.650	15.93	16.5	
K	.215	—	5.46	—	Typ.
L	.790	.810	20.07	20.6	
M	.157	.180	3.99	4.57	
N	.139	.144	3.53	3.66	Dia.
P	.255	.300	6.48	7.62	
Q	.170	.210	4.32	5.33	
R	.080	.110	2.03	2.79	

Microsemi Catalog Number	Industry Part Number	Repetitive Peak Reverse Voltage	Transient Peak Reverse Voltage
USD4030C		30V	30V
USD4040C		40V	40V
USD4045C		45V	45V

- Schottky Barrier Rectifier
- Guard ring protection
- Low forward voltage
- 150°C junction temperature
- Reverse energy tested

Electrical Characteristics		
Average forward current per leg	$I_F(AV)$ 40 Amps	$T_C = 110^\circ\text{C}$, square wave, $R_{\theta JC} = 1.0^\circ\text{C/W}$
Average forward current per leg	$I_F(AV)$ 20 Amps	$T_C = 110^\circ\text{C}$, square wave, $R_{\theta JC} = 2.0^\circ\text{C/W}$
Maximum surge current per leg	I_{FSM} 300 Amps	8.3ms, half sine, $T_J = 150^\circ\text{C}$
Max. repetitive reverse current	I_{RM} 2 Amps	$f = \text{KHZ}$, 25°C , 1uS square wave
Max. peak forward voltage per leg	V_{FM} .55 Volts	$I_{FM} = 20\text{A}$, $T_J = 25^\circ\text{C}^*$
Max. peak forward voltage	V_{FM} .38 Volts	$I_{FM} = 20\text{A}$, $T_J = 150^\circ\text{C}^*$
Max. peak reverse current per leg	I_{RM} 2 mA	V_{RRM} , $T_J = 25^\circ\text{C}$
Typical peak reverse current per leg	I_{RM} 125 mA	V_{RRM} , $T_J = 125^\circ\text{C}^*$
Typical junction capacitance per leg	C_J 1200 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	T_{STG}	-55°C to +150°C
Operating junction temp range	T_J	-55°C to +150°C
Max thermal resistance per leg	$R_{\theta JC}$	1.8°C/W Junction to case
Max thermal resistance per pkg	$R_{\theta JC}$	0.9°C/W Junction to case
Mounting Torque		10 inch pounds max. (4-40 screw)
Weight		.22 ounces (6.36 grams) typical



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05-31-07 Rev. 2

USD4030C — USD4045C

Figure 1
Typical Forward Characteristics — Per Leg

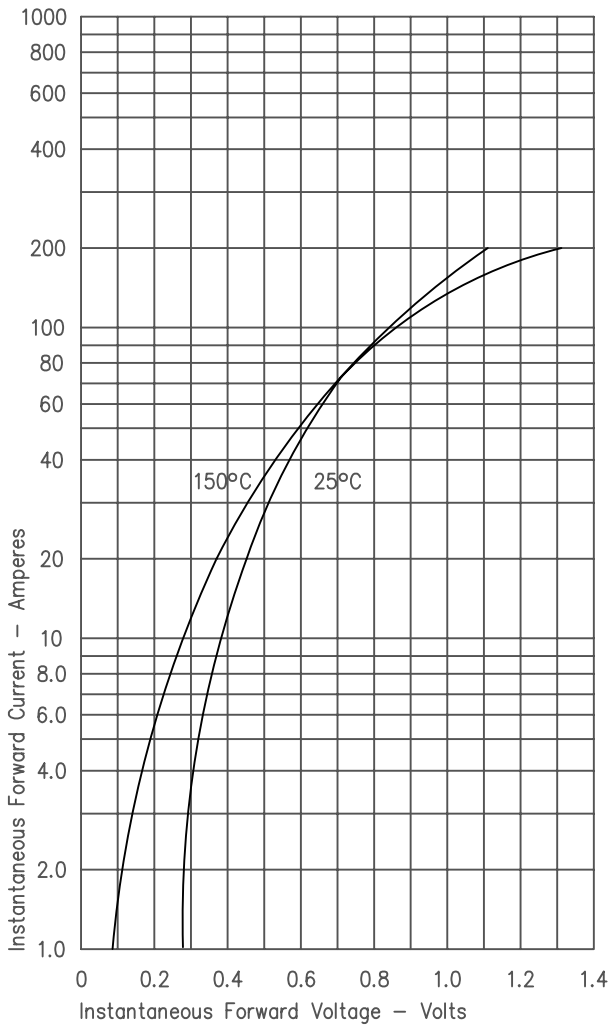


Figure 3
Typical Junction Capacitance — Per Leg

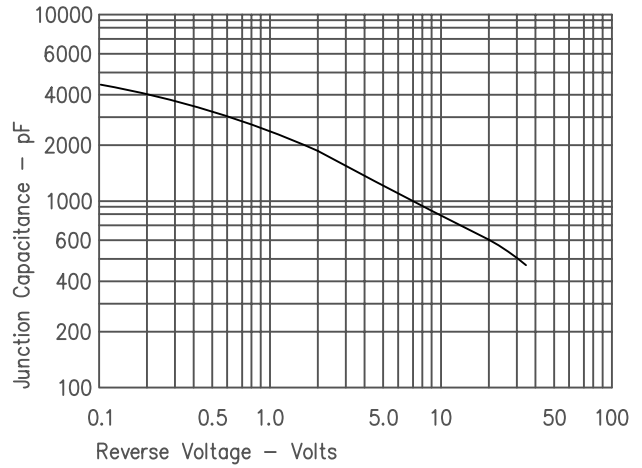


Figure 4
Forward Current Derating — Per Leg

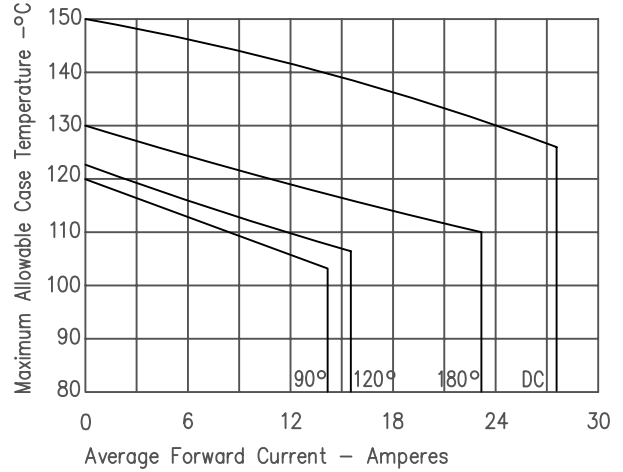


Figure 2
Typical Reverse Characteristics — Per Leg

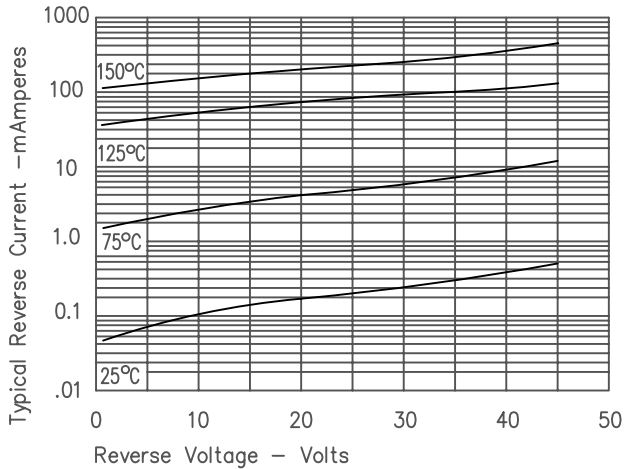


Figure 5
Maximum Forward Power Dissipation — Per Leg

