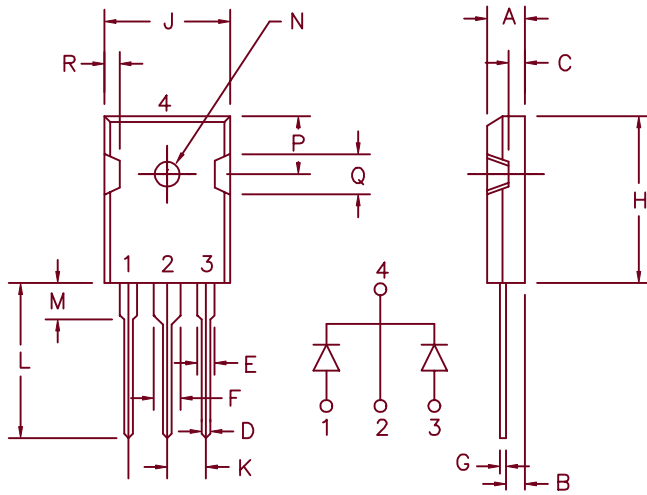


80 Amp Schottky Rectifier FST8320



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
FST8320	80CPQ020	20V	20V

- Schottky Barrier Rectifier
- Guard ring reverse protection 20V @ 150°C
- $V_F @ 40A PK, 150^\circ C = 0.30V$

Electrical Characteristics

Average forward current	$I_F(AV) 80$ Amps	$T_C = 128^\circ C$, Square wave
Average forward current per leg	$I_F(AV) 40$ Amps	$T_C = 128^\circ C$, Square wave
Maximum surge current per leg	$I_{FSM} 500$ Amps	8.3ms, half sine, $T_J = 150^\circ C$
Max. repetitive reverse current per leg	$I_R(OV) 2$ Amps	$f = 1KHZ, 25^\circ C, 1\mu s$ square wave
Max. peak forward voltage per leg	$V_{FM} .43$ Volts	$I_{FM} = 40A, T_J = 25^\circ C^*$
Max. peak forward voltage per leg	$V_{FM} .52$ Volts	$I_{FM} = 80A, T_J = 25^\circ C^*$
Max. peak reverse current per leg	$I_{RM} 1000$ mA	$V_{RRM}, T_J = 125^\circ C^*$
Max. peak reverse current per leg	$I_{RM} 15$ mA	$V_{RRM}, T_J = 25^\circ C$
Typical junction capacitance per leg	$C_J 3450$ pF	$VR = 5.0V, T_J = 25^\circ C$

*Pulse test: Pulse width 300 μ sec. Duty Cycle 2%

Thermal and Mechanical Characteristics

Storage temp range	T_{STG}	$-55^\circ C$ to $150^\circ C$
Operating junction temp range	T_J	$-55^\circ C$ to $150^\circ C$
Max thermal resistance per leg	$R_{\theta JC}$	$0.6^\circ C/W$
Max thermal resistance per pkg	$R_{\theta JC}$	$0.3^\circ C/W$
Typical thermal resistance (greased)	$R_{\theta CS}$	$0.25^\circ C/W$
Mounting Base Torque		10 inch pounds maximum
Weight		.22 ounces (6.36 grams) typical

5-14-03 Rev. 2

FST8320

Figure 1
Typical Forward Characteristics – Per Leg

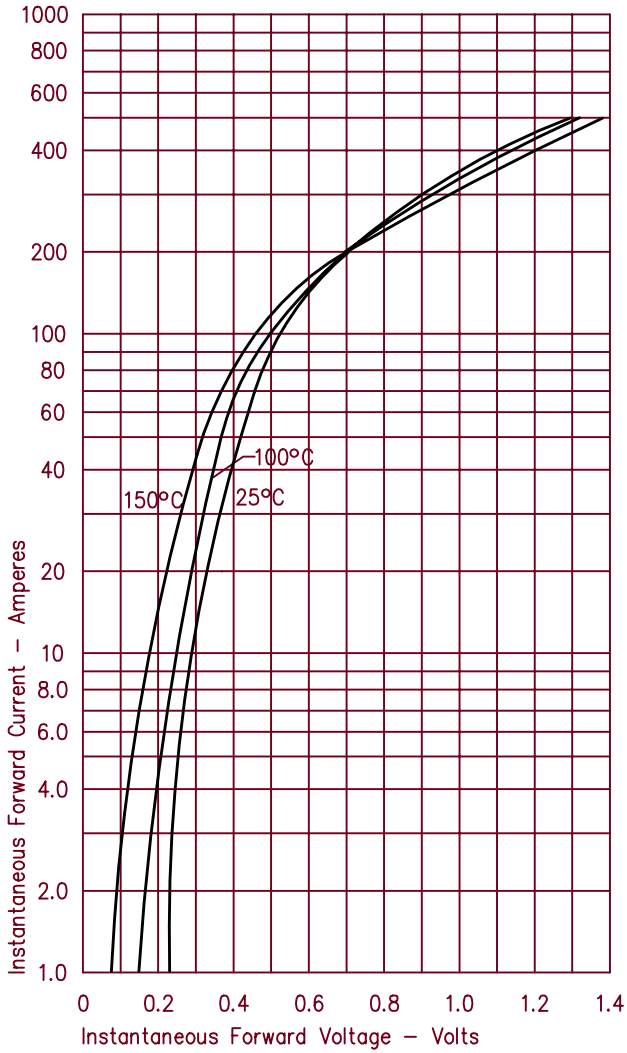


Figure 3
Typical Junction Capacitance – Per Leg

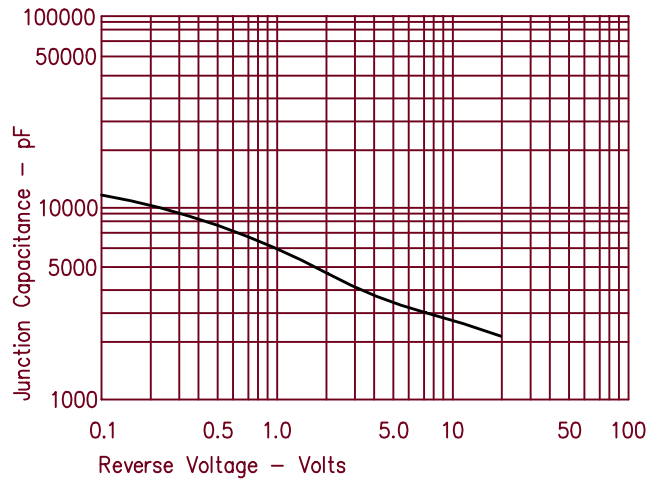


Figure 4
Forward Current Derating – Per Leg

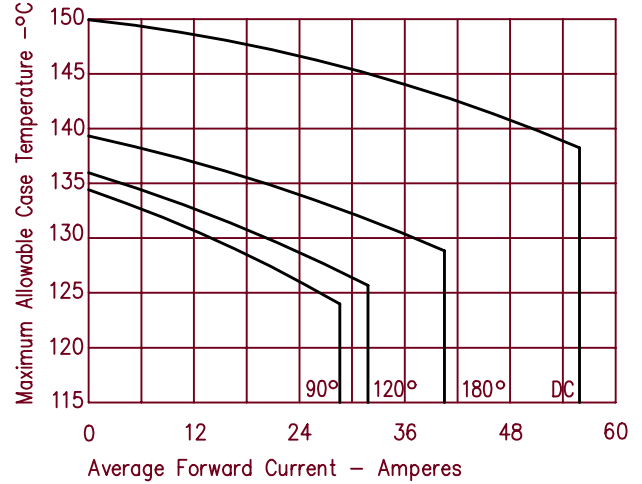


Figure 2
Typical Reverse Characteristics – Per Leg

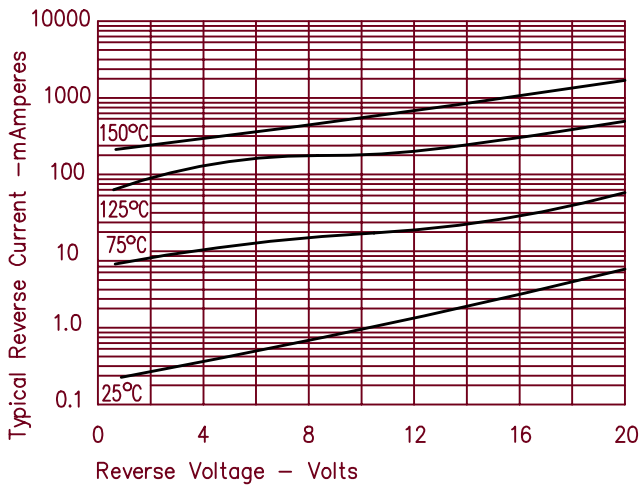
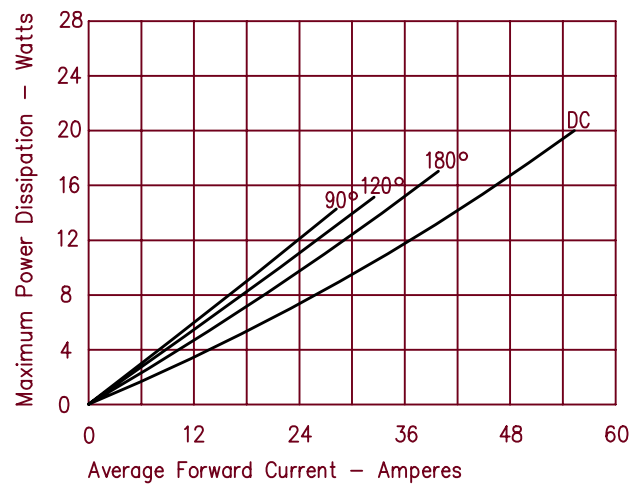


Figure 5
Maximum Forward Power Dissipation – Per Leg



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