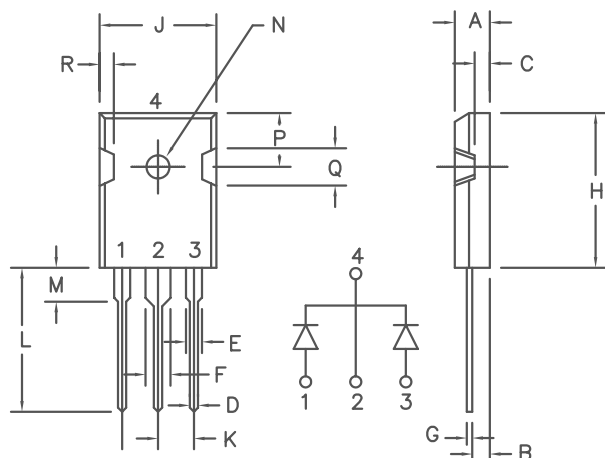


80 Amp Schottky Rectifier FST84120–FST84150



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
FST84120		120V	120V
FST84150		150V	150V

- Schottky barrier rectifier
- Guard ring for reverse protection
- Low power loss
- 175°C Junction Temperature
- VRRM 120–150 Volts

Electrical Characteristics

Average forward current per pkg.	$I_{F(AV)}$ 80 Amps	$T_C = 149^\circ\text{C}$, square wave, $R_{\theta JC} = 0.4^\circ\text{C/W}$
Average forward current per leg	$I_{F(AV)}$ 40 Amps	$T_C = 149^\circ\text{C}$, square wave, $R_{\theta JC} = 0.8^\circ\text{C/W}$
Maximum surge current	I_{FSM} 600 Amps	8.3ms, half sine, $T_J = 175^\circ\text{C}$
Max. repetitive reverse current	$I_{R(0V)}$ 2 Amps	$f = 1\text{KHz}$, 25°C , 1us square wave
Max. peak forward voltage per leg	V_{FM} .88 Volts	$I_{FM} = 40\text{A}$, $T_J = 25^\circ\text{C}^*$
TYP. peak forward voltage per leg	V_{FM} .68 Volts	$I_{FM} = 40\text{A}$, $T_J = 125^\circ\text{C}^*$
TYP. peak reverse current per leg	I_{RM} 700 μA	V_{RRM} , $T_J = 125^\circ\text{C}^*$
Max. peak reverse current per leg	I_{RM} 500 μA	V_{RRM} , $T_J = 25^\circ\text{C}$
Typical junction capacitance per leg	C_J 840 pF	$VR = 5.0\text{V}$, $T_J = 25^\circ\text{C}$

*Pulse test: Pulse width 300 usec. Duty Cycle 2%

Thermal and Mechanical Characteristics

Storage temp range	T_{STG}	-55°C to $+175^\circ\text{C}$
Operating junction temp range	T_J	-55°C to $+175^\circ\text{C}$
Max thermal resistance per leg	$R_{\theta JC}$	0.8°C/W
Max thermal resistance per pkg.	$R_{\theta JC}$	0.4°C/W
Mounting Torque		8–12 inch pounds (#6 screw)
Weight		.22 ounces (6.36 grams) typical

FST84120–FST84150

Figure 1
Typical Forward Characteristics – Per Leg

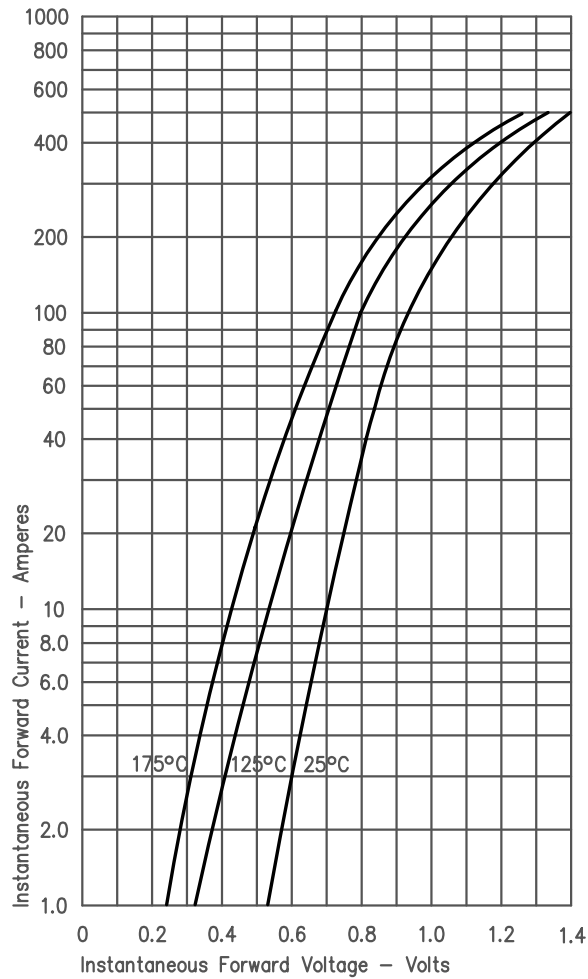


Figure 3
Typical Junction Capacitance – Per Leg

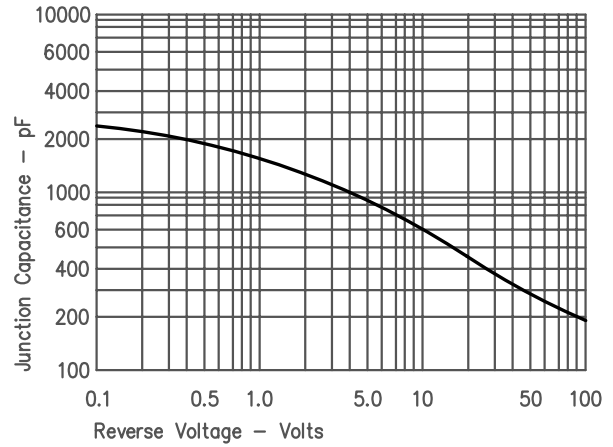


Figure 4
Forward Current Derating – Per Leg

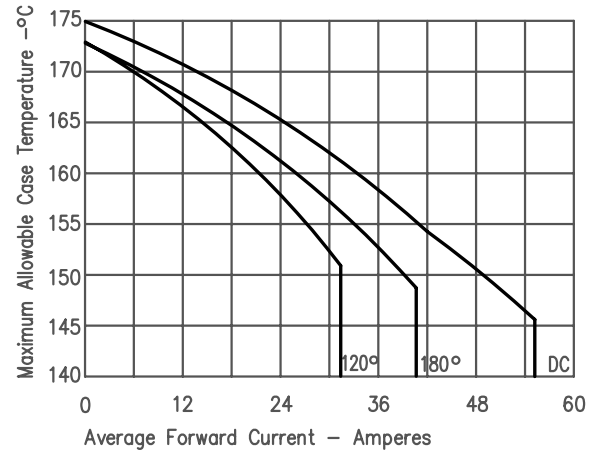


Figure 2
Typical Reverse Characteristics – Per Leg

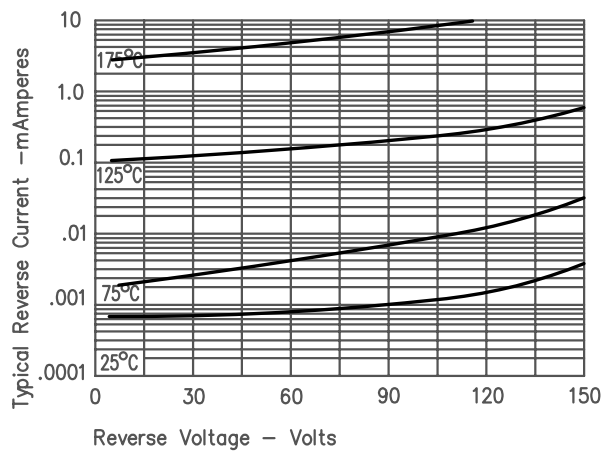


Figure 5
Maximum Forward Power Dissipation – Per Leg

