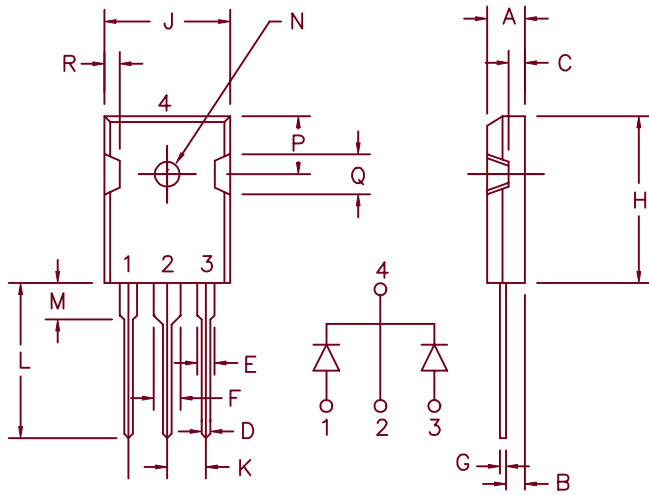


# 80 Amp Schottky Rectifier FST84100



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
FST84100		100V	100V

- Schottky Barrier Rectifier
- Guard ring reverse protection
- 2 X 40 Amperes Avg.
- 175°C Junction temperature
- VRRM 100V

## Electrical Characteristics

Average forward current	$I_{F(AV)}$ 80 Amps	$T_C = 163^\circ\text{C}$ , square wave
Average forward current per leg	$I_{F(AV)}$ 40 Amps	$T_C = 163^\circ\text{C}$ , square wave
Maximum surge current per leg	$I_{FSM}$ 800 Amps	8.3ms, half sine, $T_J = 175^\circ\text{C}$
Max. repetitive reverse current per leg	$I_{R(OV)}$ 2 Amps	$f = 1\text{KHZ}$ , $25^\circ\text{C}$ , 1us square wave
Max. peak forward voltage per leg	$V_{FM}$ .79 Volts	$I_{FM} = 40\text{A}$ , $T_J = 25^\circ\text{C}^*$
Max. peak forward voltage per leg	$V_{FM}$ .65 Volts	$I_{FM} = 40\text{A}$ , $T_J = 175^\circ\text{C}^*$
Max. peak reverse current per leg	$I_{RM}$ 5 mA	$V_{RRM}$ , $T_J = 125^\circ\text{C}^*$
Max. peak reverse current per leg	$I_{RM}$ 1.5 mA	$V_{RRM}$ , $T_J = 25^\circ\text{C}$
Typical junction capacitance per leg	$C_J$ 1530 pF	$VR = 5.0\text{V}$ , $T_J = 25^\circ\text{C}$

\*Pulse test: Pulse width 300  $\mu\text{sec}$ . Duty Cycle 2%

## Thermal and Mechanical Characteristics

Storage temp range	$T_{STG}$	$-55^\circ\text{C}$ to $175^\circ\text{C}$
Operating junction temp range	$T_J$	$-55^\circ\text{C}$ to $175^\circ\text{C}$
Max thermal resistance per leg	$R_{\theta JC}$	$0.4^\circ\text{C/W}$
Max thermal resistance per pkg	$R_{\theta JC}$	$0.2^\circ\text{C/W}$
Max thermal resistance per pkg	$R_{\theta CS}$	$0.25^\circ\text{C/W}$
Mounting Base Torque		10 inch pounds maximum
Weight		.22 ounces (6.36 grams) typical

7-9-03 Rev. 2

# FST84100

Figure 1  
Typical Forward Characteristics – Per Leg

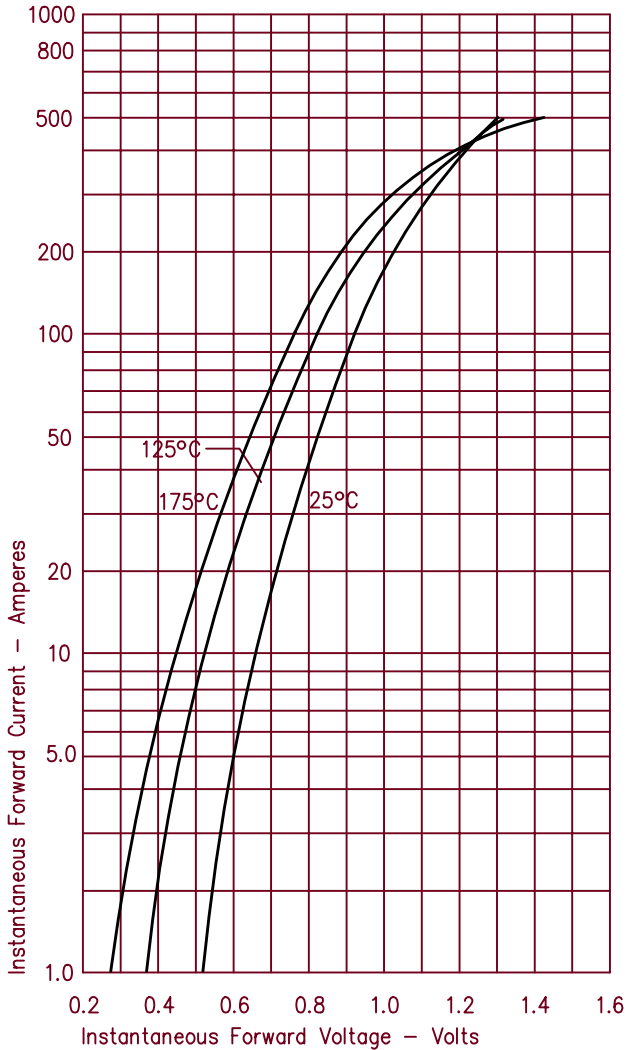


Figure 3  
Typical Junction Capacitance – Per Leg

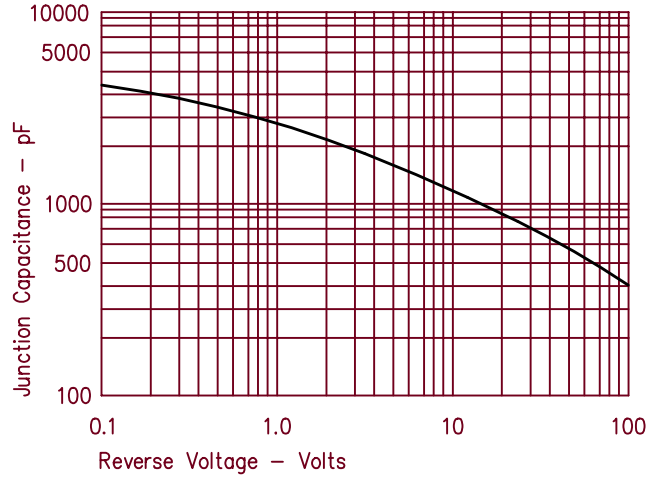


Figure 4  
Forward Current Derating – Per Leg

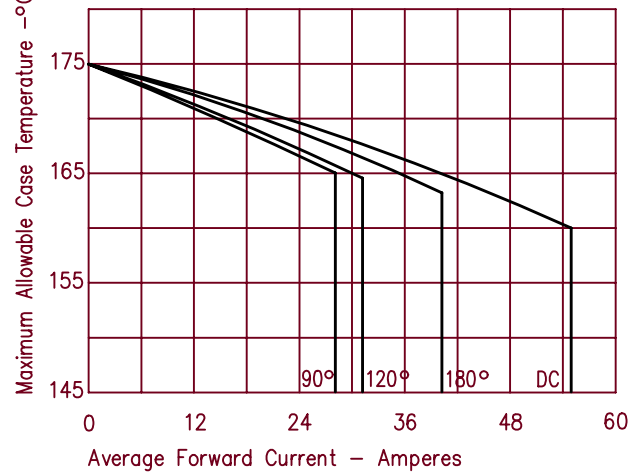


Figure 2  
Typical Reverse Characteristics – Per Leg

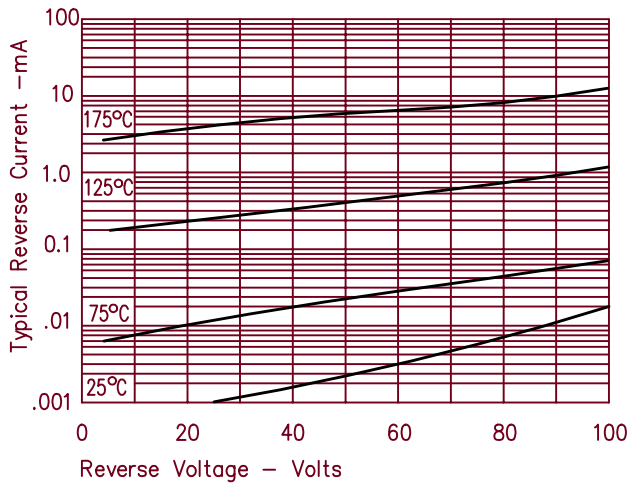


Figure 5  
Maximum Forward Power Dissipation – Per Leg

