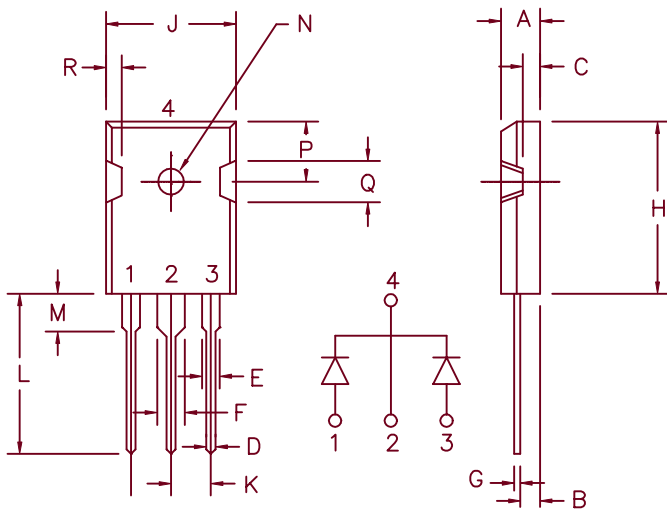


50Amp Schottky Barrier Rectifier FST5035 – FST5050



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

FST5035
FST5040
FST5045
FST5050

Repetitive Peak Reverse Voltage

35V
40V
45V
50V

Transient Peak Reverse Voltage

35V
40V
45V
50V

- Guard ring for reverse protection
- Low power loss, high efficiency
- High surge capacity
- 175°C Junction Temperature
- VRRM 35 to 50 Volts

Electrical Characteristics

Average Forward Current per pkg.
Average Forward Current per leg
Maximum Surge Current per leg
Max. Peak Forward Voltage per leg
Max. Peak Forward Voltage per leg
Max. Peak Reverse Current per leg
Max. Peak Reverse Current per leg
Typical Junction Capacitance per leg

$I_{F(AV)}$ 50 Amps
 $I_{F(AV)}$ 25 Amps
 I_{FSM} 400 Amps
 V_{FM} .50 Volts
 V_{FM} .67 Volts
 I_{RM} 15 mA
 I_{RM} 500 μ A
 C_j 1400 pF

$T_C = 142^\circ\text{C}$, Square wave, $R_{\theta JC} = 1.0^\circ\text{C/W}$
 $T_C = 142^\circ\text{C}$, Square wave, $R_{\theta JC} = 2.0^\circ\text{C/W}$
8.3ms, half sine, $T_J = 175^\circ\text{C}$
 $I_{FM} = 25\text{A}$, $T_J = 175^\circ\text{C}^*$
 $I_{FM} = 25\text{A}$, $T_J = 25^\circ\text{C}^*$
 V_{RRM} , $T_J = 125^\circ\text{C}^*$
 V_{RRM} , $T_J = 25^\circ\text{C}$
 $V_R = 5.0\text{V}$, $T_J = 25^\circ\text{C}$

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

Thermal and Mechanical Characteristics

Storage temp range
Operating junction temp range
Max thermal resistance per leg
Max thermal resistance per pkg.
Weight

TSTG
 T_J
 $R_{\theta JC}$
 $R_{\theta JC}$

-55°C to $+175^\circ\text{C}$
 -55°C to $+175^\circ\text{C}$
 2.0°C/W
 1.0°C/W
.22 ounces (6.36 grams) typical

FST5035 — FST5050

Figure 1
Typical Forward Characteristics — Per Leg

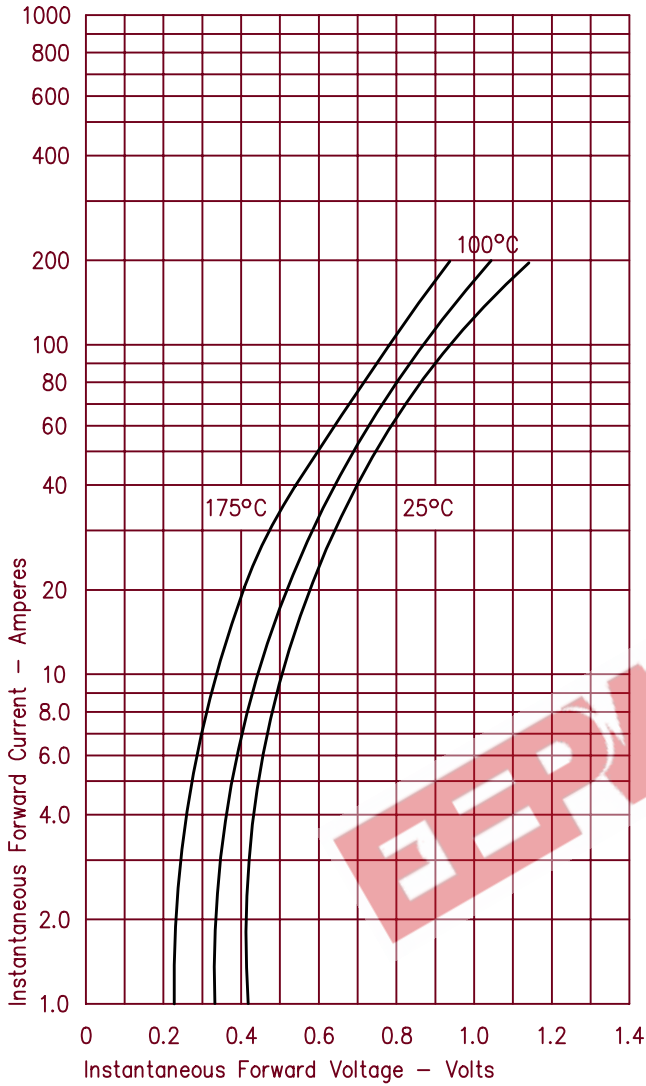


Figure 3
Typical Junction Capacitance — Per Leg

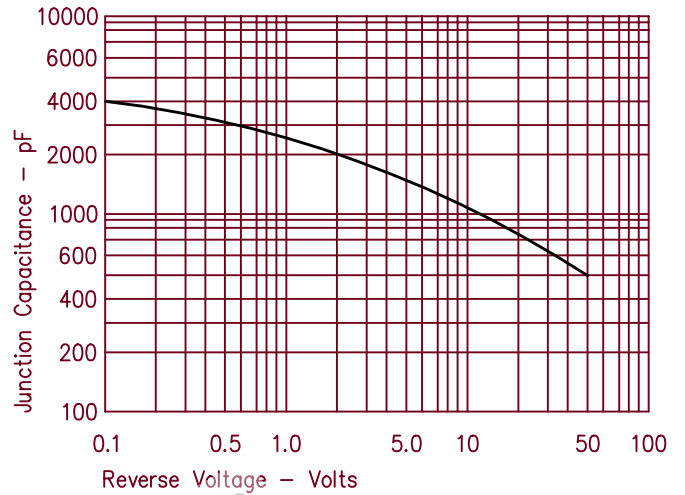


Figure 4
Forward Current Derating — Per Leg

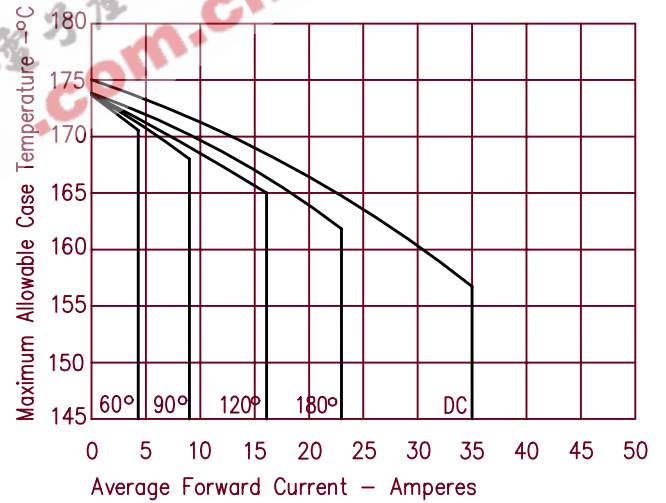


Figure 2
Typical Reverse Characteristics — Per Leg

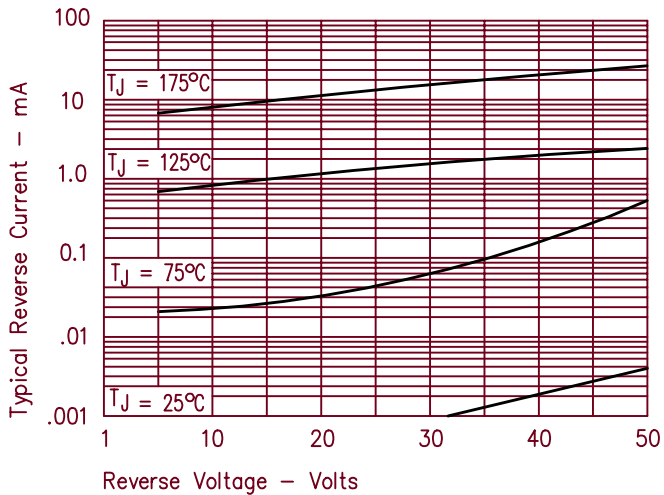


Figure 5
Maximum Forward Power Dissipation — Per Leg

