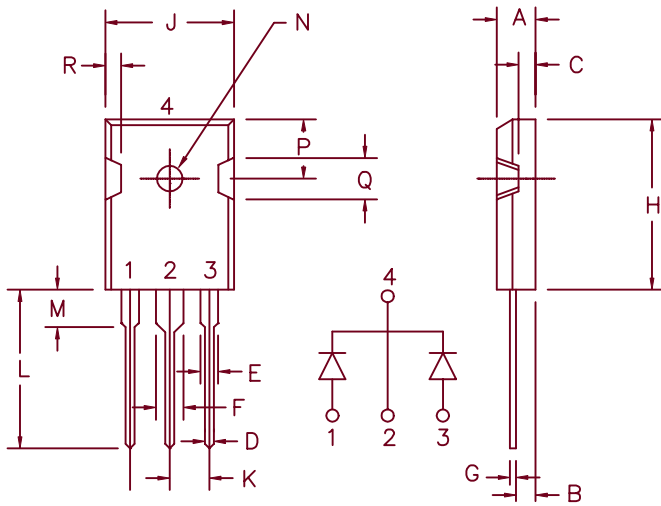


50Amp Schottky Rectifier FST5035 — FST5050



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	Industry Part Number	Repetitive Peak Reverse Voltage	Transient Peak Reverse Voltage
FST5035	MBR5035WT	35V	35V
FST5040	MBR5040WT	40V	40V
FST5045	MBR5045WT	45V	45V
FST5050		50V	50V

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

Electrical Characteristics

Average Forward Current per pkg.	$I_{F(AV)}$ 50 Amps	$T_C = 142^\circ\text{C}$, Square wave, $R_{\theta JC} = 1.0^\circ\text{C/W}$
Average Forward Current per leg	$I_{F(AV)}$ 25 Amps	$T_C = 142^\circ\text{C}$, Square wave, $R_{\theta JC} = 2.0^\circ\text{C/W}$
Maximum Surge Current per leg	I_{FSM} 400 Amps	8.3ms, half sine, $T_J = 175^\circ\text{C}$
Max. Peak Forward Voltage per leg	V_{FM} .50 Volts	$I_{FM} = 25\text{A}$, $T_J = 175^\circ\text{C}^*$
Max. Peak Forward Voltage per leg	V_{FM} .67 Volts	$I_{FM} = 25\text{A}$, $T_J = 25^\circ\text{C}^*$
Max. Peak Reverse Current per leg	I_{RM} 15 mA	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 1400 pF	$V_R = 5.0\text{V}$, $T_J = 25^\circ\text{C}$

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

Thermal and Mechanical Characteristics

Storage temp range	T_{STG}	-55°C to +175°C
Operating junction temp range	T_J	-55°C to +175°C
Max thermal resistance per leg	$R_{\theta JC}$	2.0°C/W
Max thermal resistance per pkg.	$R_{\theta JC}$	1.0°C/W
Weight		.22 ounces (6.36 grams) typical

FST5035 – FST5050

Figure 1
Typical Forward Characteristics – Per Leg

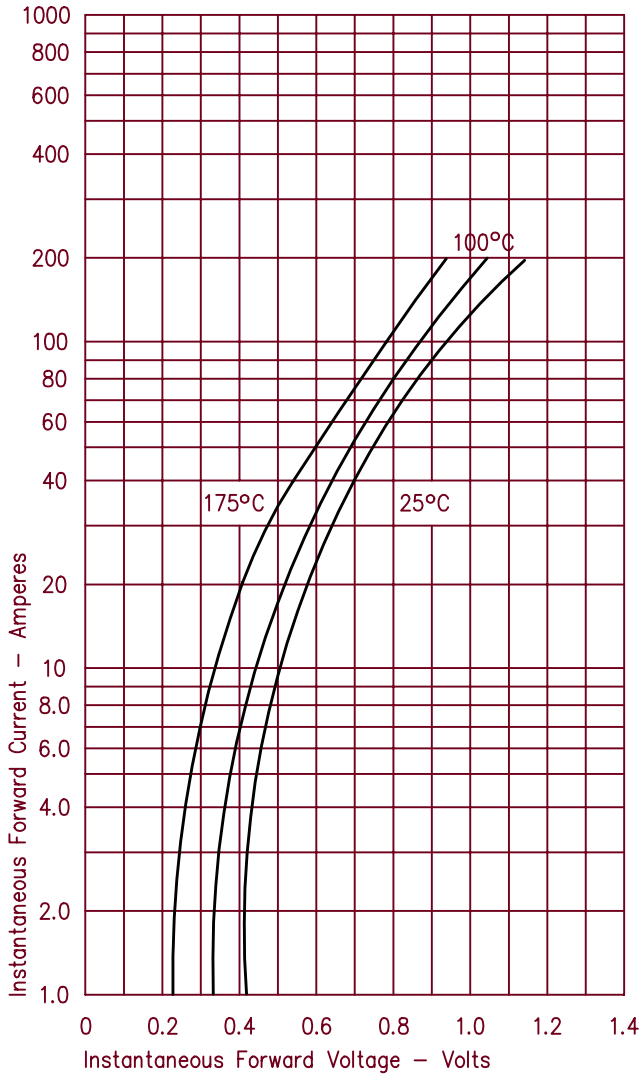


Figure 3
Typical Junction Capacitance – Per Leg

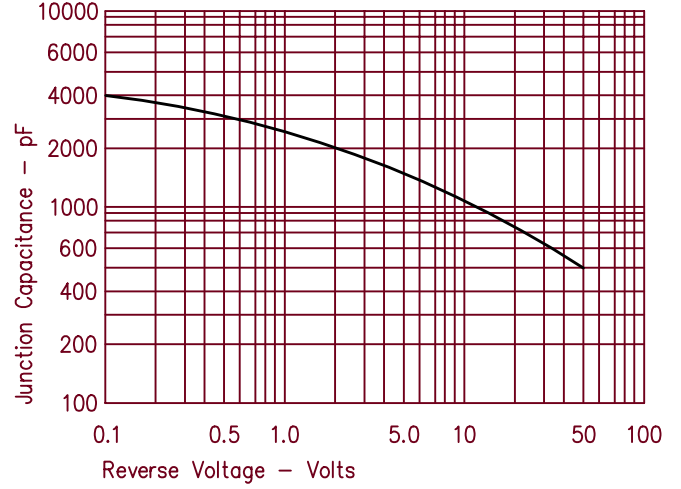


Figure 4
Forward Current Derating – Per Leg

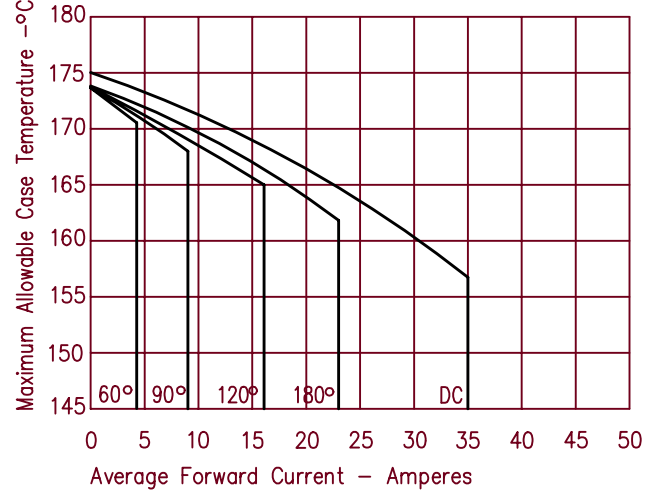


Figure 2
Typical Reverse Characteristics – Per Leg

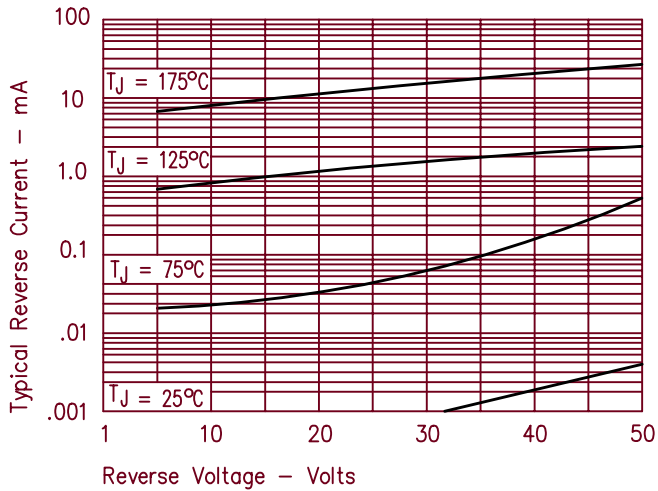
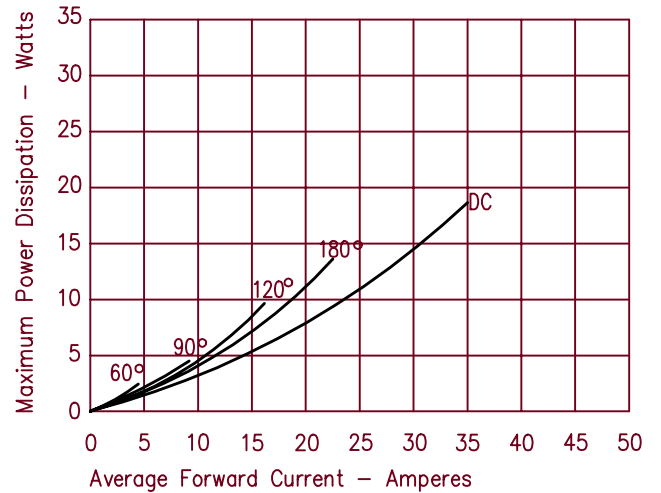


Figure 5
Maximum Forward Power Dissipation – Per Leg





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