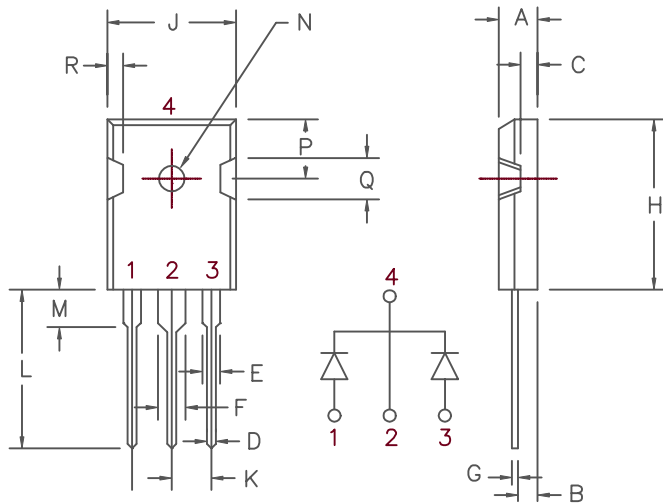


50Amp Schottky Rectifier FST5080 — FST50100



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
FST5080	40CPQ080 MBR4080WT MBR5080WT	80V	80V
FST5090		90V	90V
FST50100	40CPQ100 63CPQ100 MBR40100WT MBR50100WT	100V	100V

- Guard ring for reverse protection
- Low power loss, high efficiency
- High surge capacity
- 175°C Junction Temperature
- VRRM 80 to 100 Volts

Electrical Characteristics

Average Forward Current per pkg.	$I_F(AV)$ 50 Amps	$T_C = 129^\circ C$, Square wave, $R_{\theta JC} = 1.0^\circ C/W$
Average Forward Current per leg	$I_F(AV)$ 25 Amps	$T_C = 129^\circ C$, Square wave, $R_{\theta JC} = 2.0^\circ C/W$
Maximum Surge Current per leg	I_{FSM} 400 Amps	8.3ms, half sine, $T_J = 175^\circ C$
Max. Peak Forward Voltage per leg	V_{FM} .62 Volts	$I_{FM} = 25A$, $T_J = 175^\circ C^*$
Max. Peak Forward Voltage per leg	V_{FM} .85 Volts	$I_{FM} = 25A$, $T_J = 25^\circ C^*$
Max. Peak Reverse Current per leg	I_{RM} 15 mA	V_{RRM} , $T_J = 125^\circ C^*$
Max. Peak Reverse Current per leg	I_{RM} 500 μA	V_{RRM} , $T_J = 25^\circ C$
Typical Junction Capacitance per leg	C_J 920 pF	$V_R = 5.0V$, $T_J = 25^\circ C$

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

Thermal and Mechanical Characteristics

Storage temp range	T_{STG}	$-55^\circ C$ to $+175^\circ C$
Operating junction temp range	T_J	$-55^\circ C$ to $+175^\circ C$
Max thermal resistance per leg	$R_{\theta JC}$	$2.0^\circ C/W$
Max thermal resistance per pkg.	$R_{\theta JC}$	$1.0^\circ C/W$
Mounting Torque		5–10 inch pounds (#6 screw)
Weight		.22 ounces (6.36 grams) typical

FST5080 — FST50100

Figure 1
Typical Forward Characteristics – Per Leg

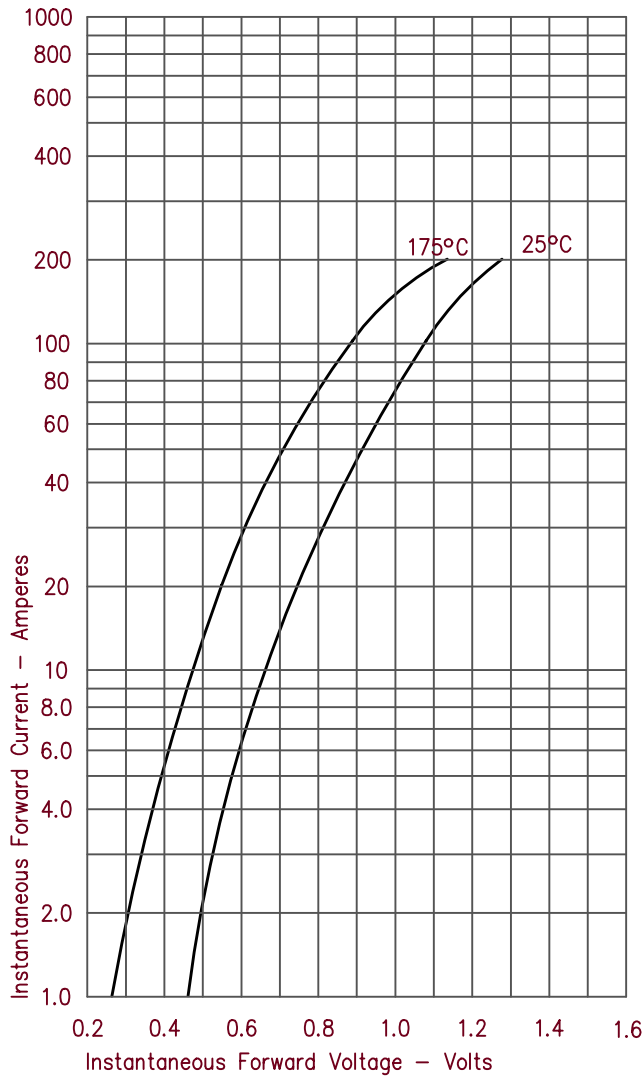


Figure 3
Typical Junction Capacitance – Per Leg

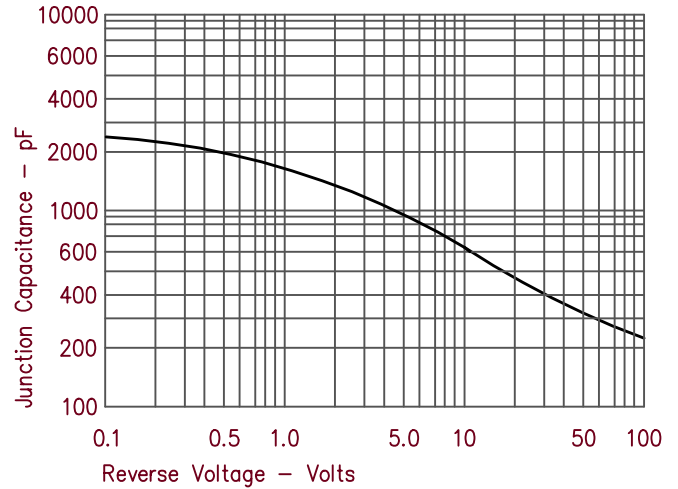


Figure 4
Forward Current Derating – Per Leg

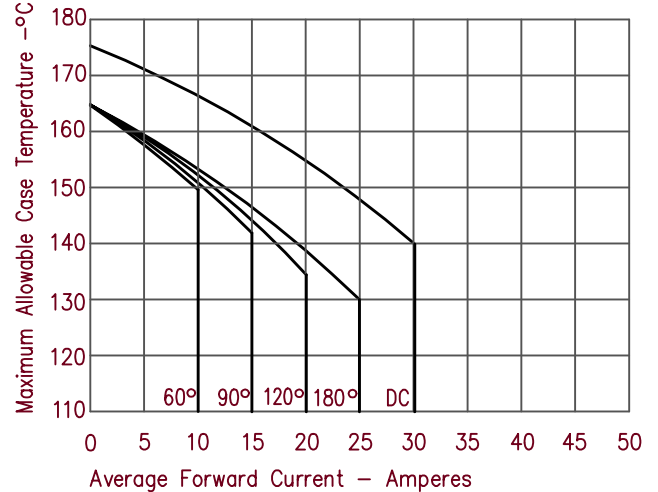


Figure 2
Typical Reverse Characteristics – Per Leg

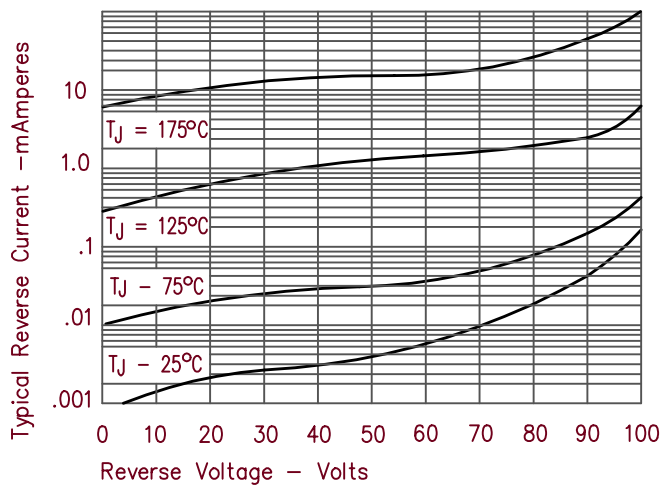


Figure 5
Maximum Forward Power Dissipation – Per Leg

