

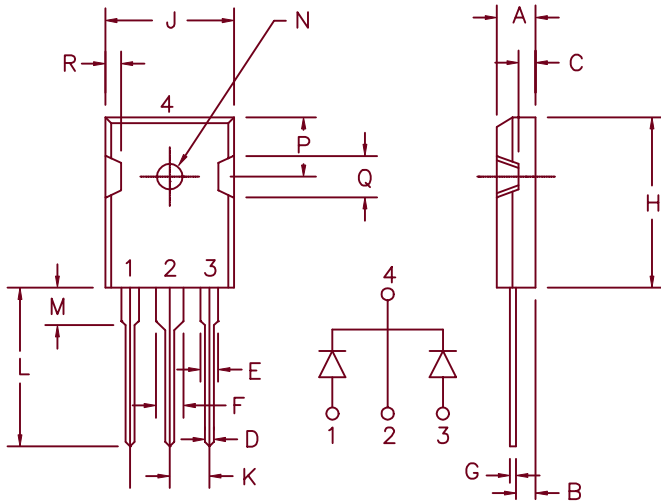
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# 30Amp Schottky Barrier Rectifier FST3080 — FST30100



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
FST3080	30CPQ080 MBR3080WT	80V	80V
FST3090		90V	90V
FST30100	30CPQ100 MBR30100WT	100V	100V

- Schottky Barrier Rectifier
- Guard ring for reverse protection
- Low power loss, high efficiency
- High surge capacity
- $V_{RRM}$  80 to 100 Volts

## Electrical Characteristics

Average Forward Current per pkg.	$I_{F(AV)}$ 30Amps	$T_C = 155^\circ\text{C}$ , square wave, $R_{\theta JC} = 0.9^\circ\text{C/W}$
Average Forward Current per leg	$I_{F(AV)}$ 15Amps	$T_C = 155^\circ\text{C}$ , square wave, $R_{\theta JC} = 1.8^\circ\text{C/W}$
Maximum Surge Current per leg	$I_{FSM}$ 350 Amps	8.3ms, half sine, $T_J = 175^\circ\text{C}$
Max. Peak Forward Voltage per leg	$V_{FM}$ 0.65 Volts	$I_{FM} = 15\text{A}$ , $T_J = 175^\circ\text{C}^*$
Max. Peak Forward Voltage per leg	$V_{FM}$ 0.85 Volts	$I_{FM} = 15\text{A}$ , $T_J = 25^\circ\text{C}^*$
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 $\mu\text{A}$	$V_{RRM}$ , $T_J = 25^\circ\text{C}$
Typical Junction Capacitance per leg	$C_J$ 550 pF	$V_R = 5.0\text{V}$ , $T_J = 25^\circ\text{C}$

\*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	$R_{\theta JC}$	$1.8^\circ\text{C/W}$
Max thermal resistance per pkg.	$R_{\theta JC}$	$0.9^\circ\text{C/W}$
Mounting Torque		10 inch pounds maximum (4-40 screw)
Weight		.22 ounces (6.36 grams) typical

# FST3080 – FST30100

Figure 1  
Typical Forward Characteristics – Per Leg

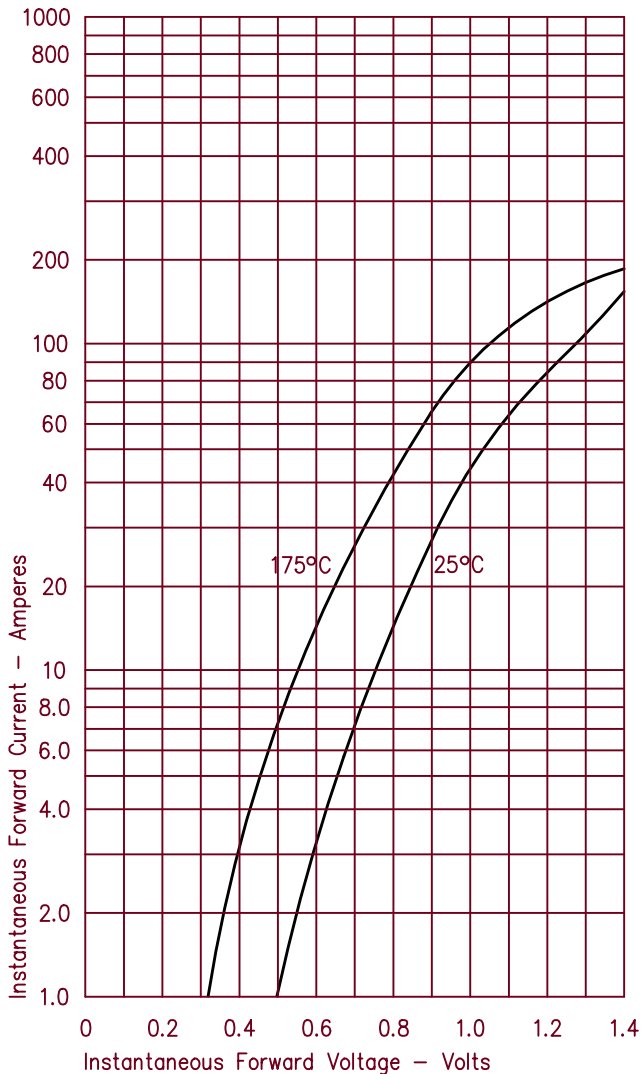


Figure 3  
Typical Junction Capacitance – Per Leg

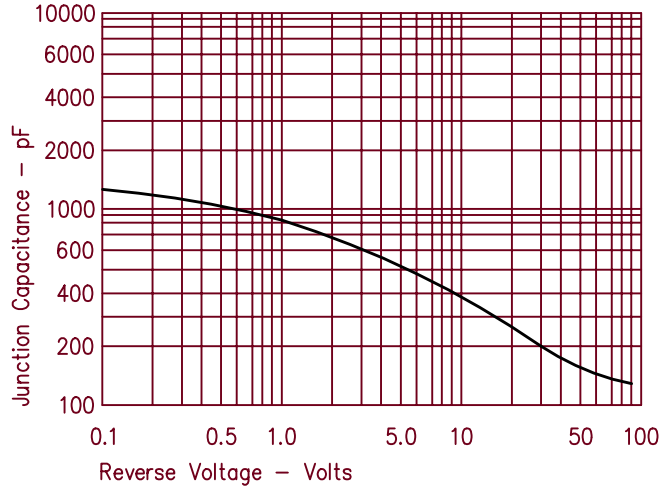


Figure 4  
Forward Current Derating – Per Leg

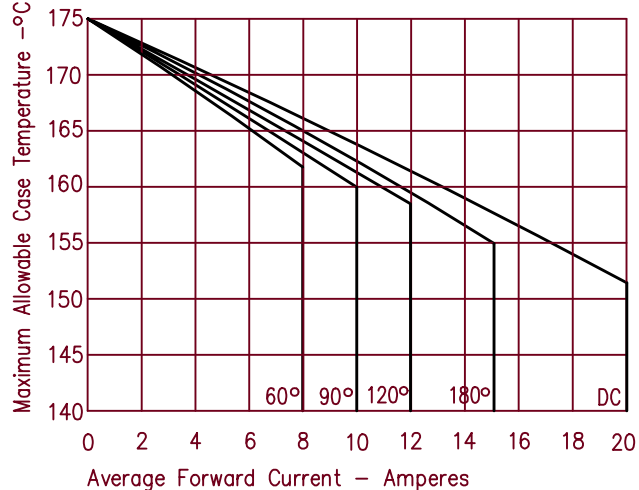


Figure 2  
Typical Reverse Characteristics – Per Leg

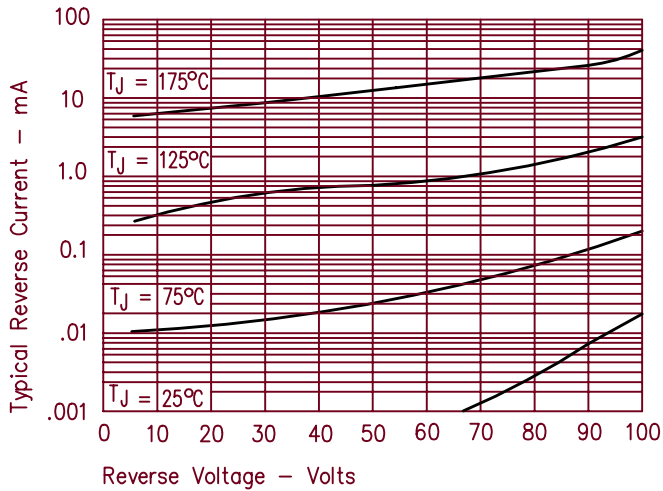


Figure 5  
Maximum Forward Power Dissipation – Per Leg

