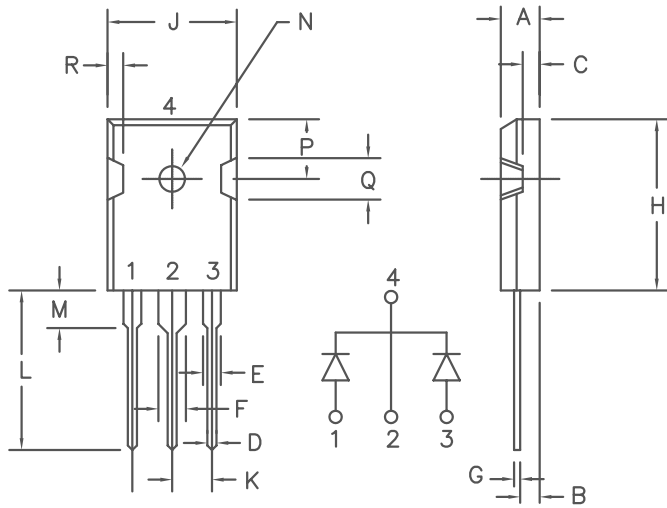


# 30Amp Schottky Barrier Rectifier FST30180 — FST30200



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
FST30180		180V	180V
FST30200		200V	200V

- Schottky Barrier Rectifier
- $V_{RRM}$  180 to 200 Volts
- 2x15 Amperes Avg.
- 175°C Junction temperature
- High surge capacity

## Electrical Characteristics

Average Forward Current per pkg.	$I_{F(AV)}$ 30Amps	$T_C = 153^\circ\text{C}$ , square wave
Average Forward Current per leg	$I_{F(AV)}$ 15Amps	$T_C = 153^\circ\text{C}$ , square wave
Maximum Surge Current per leg	$I_{FSM}$ 250 Amps	8.3ms, half sine, $T_J = 175^\circ\text{C}$
Max. Peak Forward Voltage per leg	$V_{FM}$ 0.83 Volts	$I_{FM} = 15\text{A}$ , $T_J = 25^\circ\text{C}^*$
Typical Peak Forward Voltage per leg	$V_{FM}$ 0.62 Volts	$I_{FM} = 15\text{A}$ , $T_J = 125^\circ\text{C}^*$
Typ. Peak Reverse Current per leg	$I_{RM}$ 400 $\mu\text{A}$	$V_{RRM}$ , $T_J = 125^\circ\text{C}^*$
Max. Peak Reverse Current per leg	$I_{RM}$ 100 $\mu\text{A}$	$V_{RRM}$ , $T_J = 25^\circ\text{C}$
Typical Junction Capacitance per leg	$C_J$ 295 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°C to 175°C
Operating junction temp range	$T_J$	-55°C to 175°C
Max thermal resistance per leg	$R_{\theta JC}$	1.8°C/W junction to case
Max thermal resistance per pkg.	$R_{\theta JC}$	0.9°C/W junction to case
Typical thermal resistance (greased)	$R_{\theta CS}$	0.25°C/W junction to sink
Mounting Torque		8-12 inch pounds (#6 screw)
Weight		.22 ounces (6.36 grams) typical

# FST30180 – FST30200

Figure 1  
Typical Forward Characteristics – Per Leg

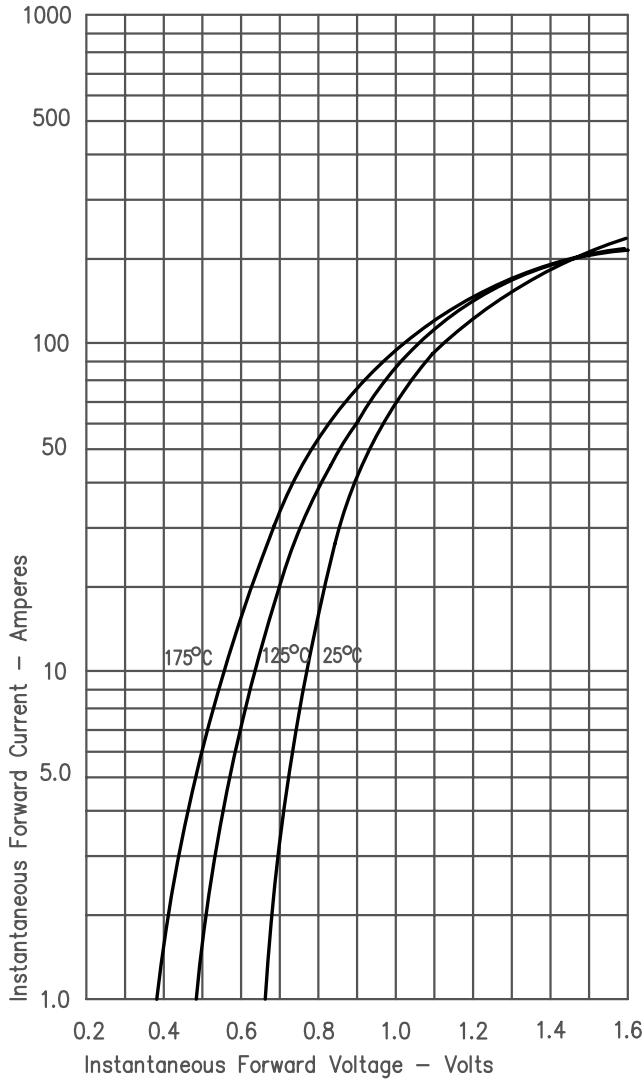


Figure 3  
Typical Junction Capacitance – Per Leg

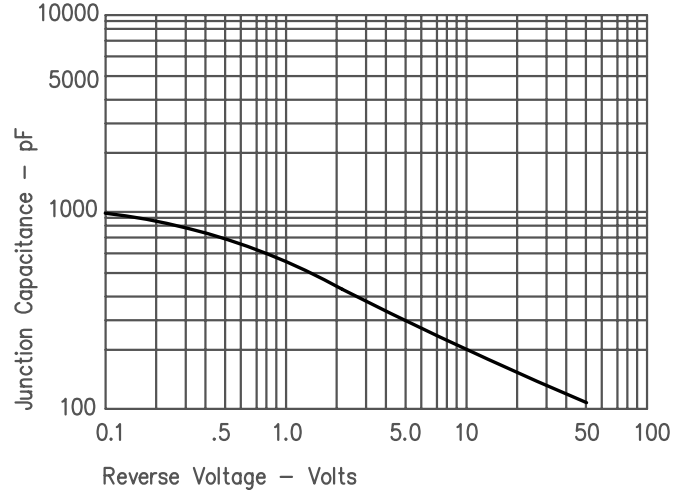


Figure 4  
Forward Current Derating – Per Leg

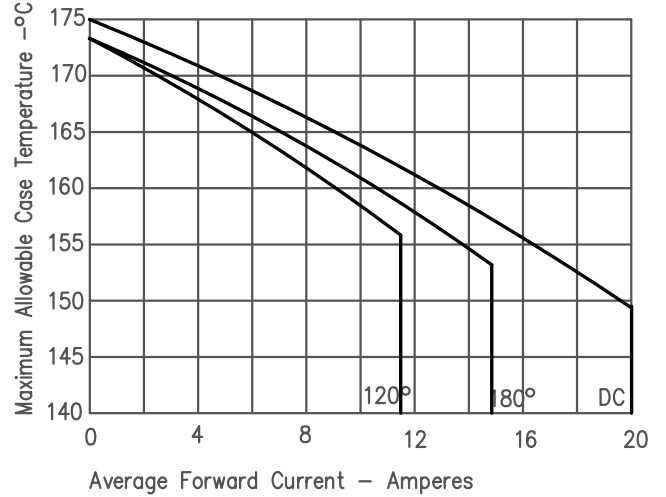


Figure 2  
Typical Reverse Characteristics – Per Leg

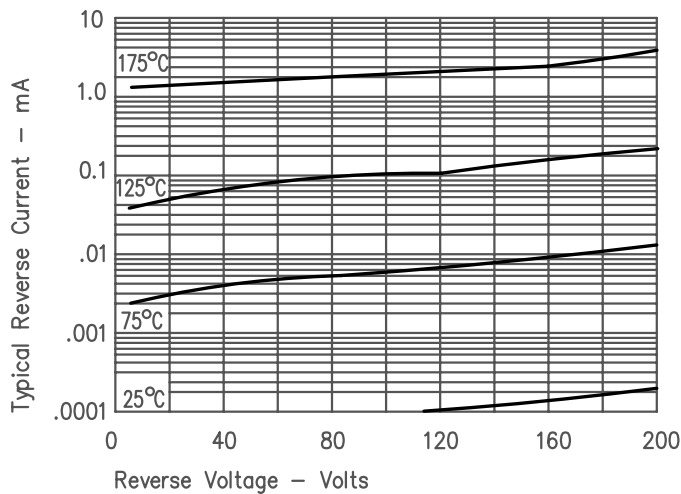


Figure 5  
Maximum Forward Power Dissipation – Per Leg

