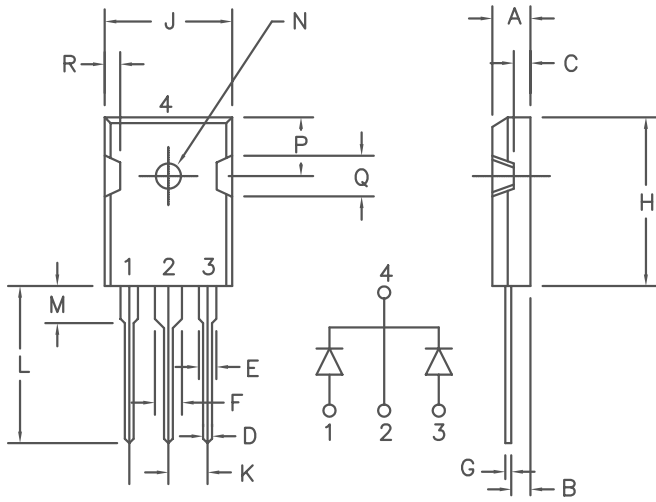


# 30Amp Schottky Barrier Rectifier FST30120 — FST30150



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
FST30120		120V	120V
FST30150	30CPQ150	150V	150V

- Schottky Barrier Rectifier
- Guard ring for reverse protection
- Low power loss, high efficiency
- High surge capacity
- VRRM 120 to 150 Volts

Electrical Characteristics		
Average Forward Current per pkg.	I <sub>F(AV)</sub> 30Amps	T <sub>C</sub> = 153°C, square wave, R <sub>θJC</sub> = 0.9°C/W
Average Forward Current per leg	I <sub>F(AV)</sub> 15Amps	T <sub>C</sub> = 153°C, square wave, R <sub>θJC</sub> = 1.8°C/W
Maximum Surge Current per leg	I <sub>FSM</sub> 350 Amps	8.3ms, half sine, T <sub>J</sub> = 175°C
Typical Peak Forward Voltage per leg	V <sub>FM</sub> 0.68 Volts	I <sub>FM</sub> = 15A, T <sub>J</sub> = 125°C*
Max. Peak Forward Voltage per leg	V <sub>FM</sub> 0.85 Volts	I <sub>FM</sub> = 15A, T <sub>J</sub> = 25°C*
Max. Peak Reverse Current per leg	I <sub>RM</sub> 1.0 mA	VRRM, T <sub>J</sub> = 125°C*
Max. Peak Reverse Current per leg	I <sub>RM</sub> 250 μA	VRRM, T <sub>J</sub> = 25°C
Typical Junction Capacitance per leg	C <sub>J</sub> 350 pF	V <sub>R</sub> = 5.0V, T <sub>J</sub> = 25°C

\*Pulse test: Pulse width 300 μsec, Duty cycle 2%

Thermal and Mechanical Characteristics		
Storage temp range	TSTG	-55°C to 175°C
Operating junction temp range	T <sub>J</sub>	-55°C to 175°C
Max thermal resistance per leg	R <sub>θJC</sub>	1.8°C/W
Max thermal resistance per pkg.	R <sub>θJC</sub>	0.9°C/W
Mounting Torque		10 inch pounds maximum (4-40 screw)
Weight		.22 ounces (6.36 grams) typical

# FST30120-FST30150

Figure 1  
Typical Forward Characteristics – Per Leg

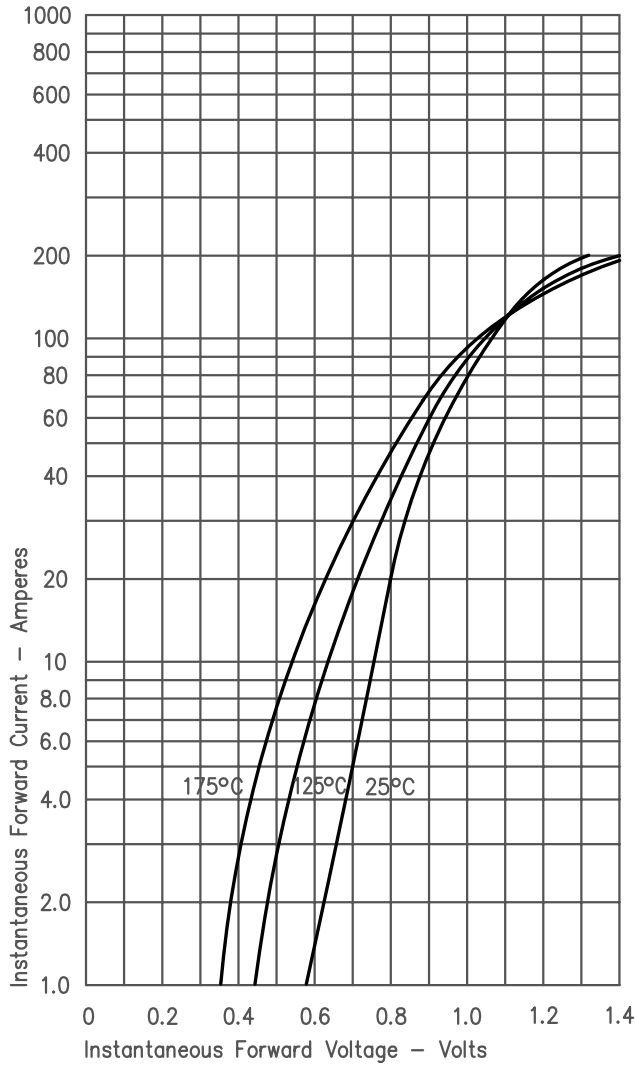


Figure 3  
Typical Junction Capacitance – Per Leg

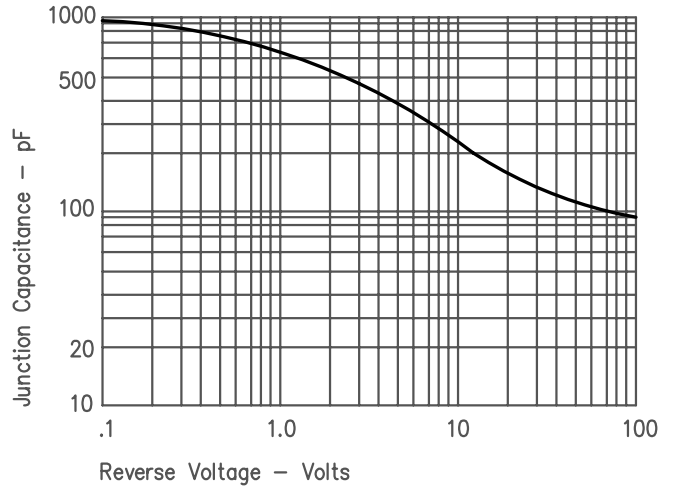


Figure 4  
Forward Current Derating – Per Leg

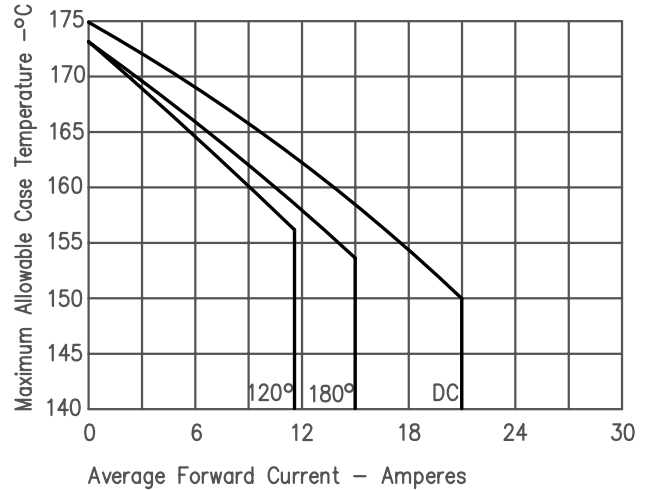


Figure 2  
Typical Reverse Characteristics – Per Leg

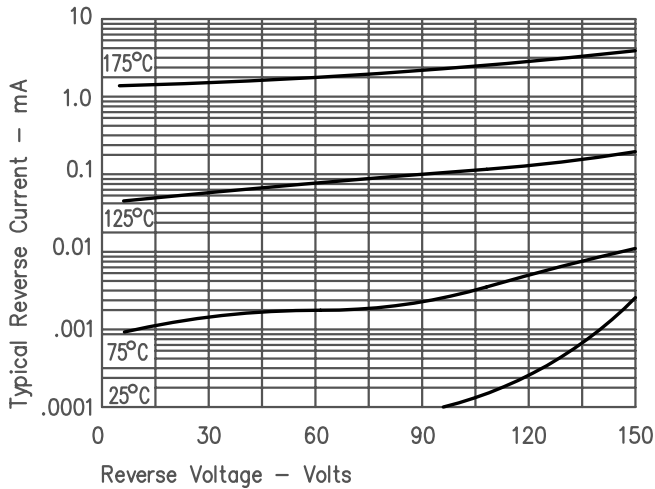


Figure 5  
Maximum Forward Power Dissipation – Per Leg

