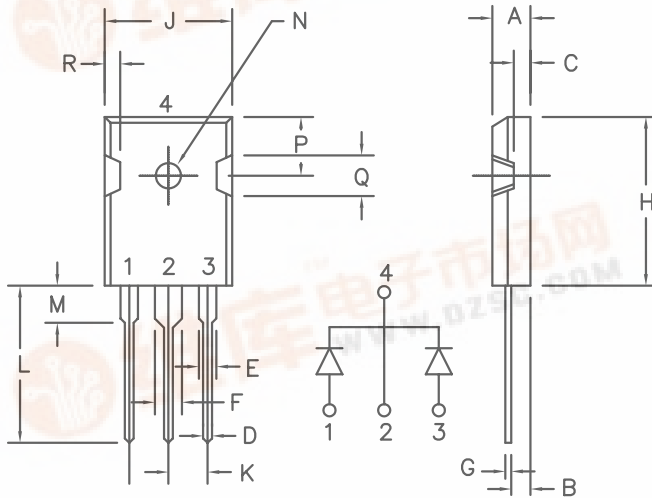


40Amp Schottky Barrier Rectifier FST40120 — FST40150



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

FST40120

120V

120V

FST40150

150V

150V

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

Electrical Characteristics

Average Forward Current per pkg.
Average Forward Current per leg
Maximum Surge Current per leg
Typical Peak Forward Voltage per leg
Max. Peak Forward Voltage per leg
Max. Peak Reverse Current per leg
Max. Peak Reverse Current per leg
Typical Junction Capacitance per leg

$I_F(AV)$ 40Amps
 $I_F(AV)$ 20Amps
 I_{FSM} 400 Amps
 V_{FM} 0.71 Volts
 V_{FM} 0.87 Volts
 I_{RM} 1.0 mA
 I_{RM} 250 μA
 C_J 350 pF

$T_C = 145^\circ C$, square wave, $R_{\theta JC} = 0.9^\circ C/W$
 $T_C = 145^\circ C$, square wave, $R_{\theta JC} = 1.8^\circ C/W$
8.3ms, half sine, $T_J = 175^\circ C$
 $I_{FM} = 20A$, $T_J = 125^\circ C^*$
 $I_{FM} = 20A$, $T_J = 25^\circ C^*$
 V_{RRM} , $T_J = 125^\circ C^*$
 V_{RRM} , $T_J = 25^\circ C$
 $V_R = 5.0V$, $T_J = 25^\circ C$

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

Thermal and Mechanical Characteristics

Storage temp range
Operating junction temp range
Max thermal resistance per leg
Max thermal resistance per pkg.
Mounting Torque
Weight

T_{STG}
 T_J
 $R_{\theta JC}$
 $R_{\theta JC}$

$-55^\circ C$ to $175^\circ C$
 $-55^\circ C$ to $175^\circ C$
 $1.8^\circ C/W$
 $0.9^\circ C/W$
10 inch pounds maximum (4-40 screw)
.22 ounces (6.36 grams) typical



COLORADO

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Broomfield, CO. 80020
PH: (303) 469-2161

6-16-04 Rev. 0

FST40120-FST40150

Figure 1
Typical Forward Characteristics – Per Leg

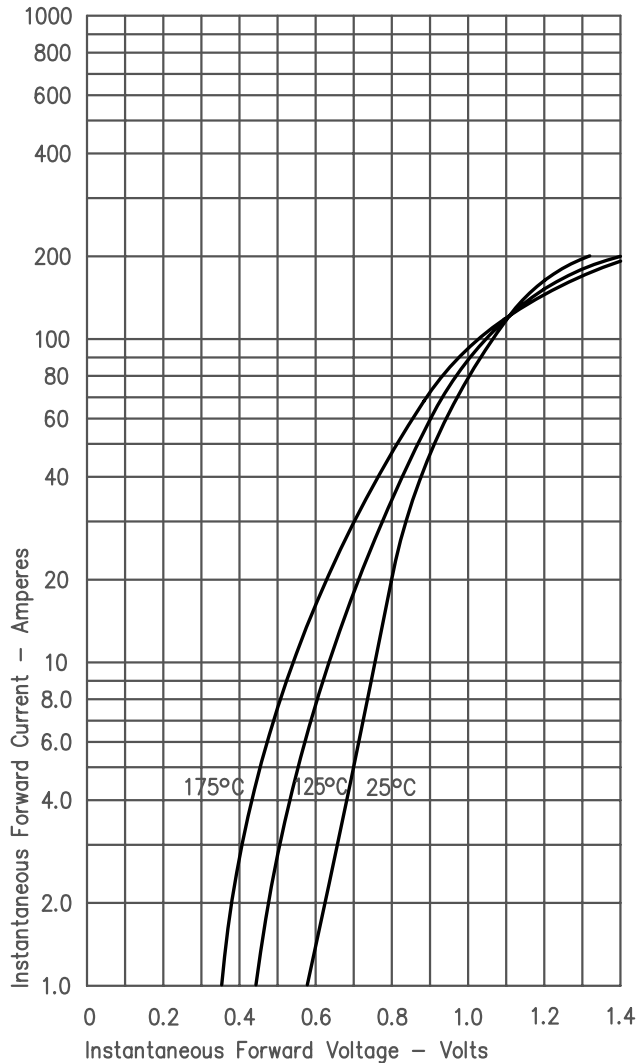


Figure 2
Typical Reverse Characteristics – Per Leg

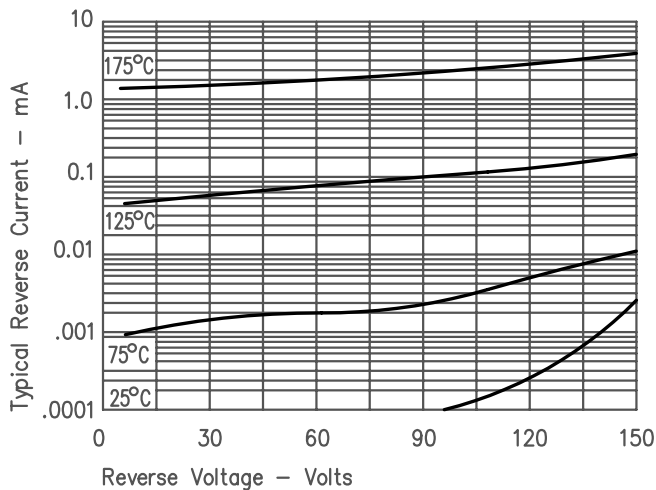


Figure 3
Typical Junction Capacitance – Per Leg

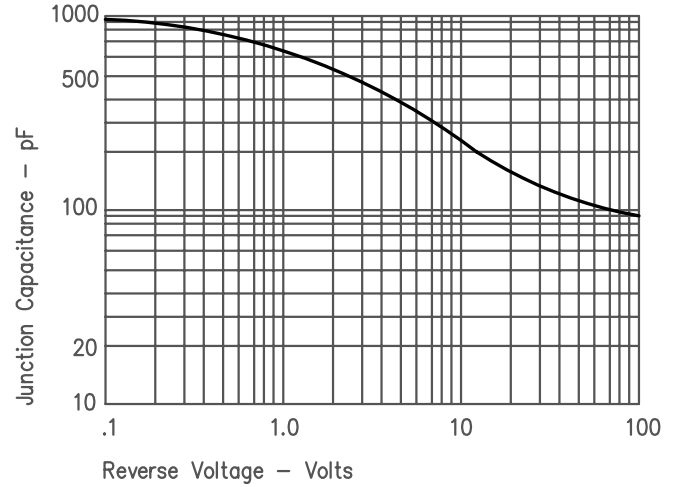


Figure 4
Forward Current Derating – Per Leg

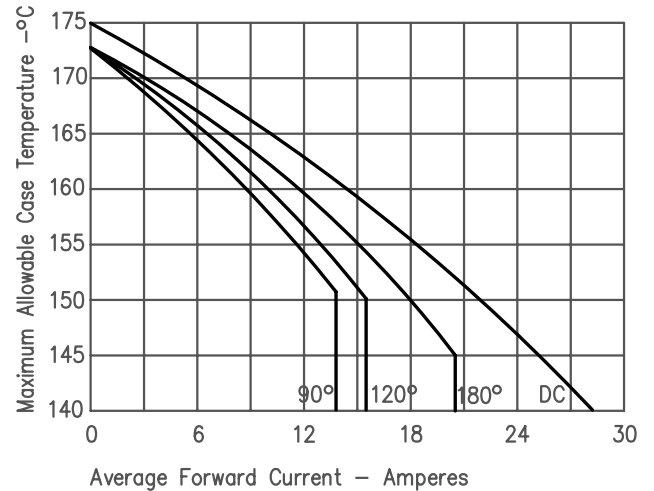


Figure 5
Maximum Forward Power Dissipation – Per Leg

