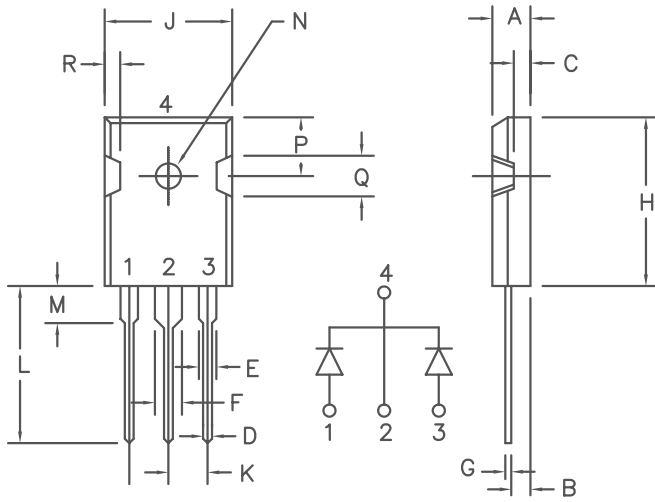


# 40Amp Schottky Barrier Rectifier FST40120 — FST40150



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
- VRRM 120 to 150 Volts

Electrical Characteristics		
Average Forward Current per pkg.	$I_F(AV)$ 40Amps	$T_C = 145^\circ C$ , square wave, $R_{\theta JC} = 0.9^\circ C/W$
Average Forward Current per leg	$I_F(AV)$ 20Amps	$T_C = 145^\circ C$ , square wave, $R_{\theta JC} = 1.8^\circ C/W$
Maximum Surge Current per leg	$I_{FSM}$ 400 Amps	8.3ms, half sine, $T_J = 175^\circ C$
Typical Peak Forward Voltage per leg	$V_{FM}$ 0.71 Volts	$I_{FM} = 20A$ , $T_J = 125^\circ C^*$
Max. Peak Forward Voltage per leg	$V_{FM}$ 0.87 Volts	$I_{FM} = 20A$ , $T_J = 25^\circ C^*$
Max. Peak Reverse Current per leg	$I_{RM}$ 1.0 mA	$V_{RRM}$ , $T_J = 125^\circ C^*$
Max. Peak Reverse Current per leg	$I_{RM}$ 250 $\mu A$	$V_{RRM}$ , $T_J = 25^\circ C$
Typical Junction Capacitance per leg	$C_J$ 350 pF	$V_R = 5.0V$ , $T_J = 25^\circ C$

\*Pulse test: Pulse width 300  $\mu sec$ , Duty cycle 2%

Thermal and Mechanical Characteristics		
Storage temp range	TSTG	-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	$R_{\theta JC}$	1.8 $^\circ C/W$
Max thermal resistance per pkg.	$R_{\theta JC}$	0.9 $^\circ C/W$
Mounting Torque		10 inch pounds maximum (4-40 screw)
Weight		.22 ounces (6.36 grams) typical

# FST40120-FST40150

Figure 1  
Typical Forward Characteristics - Per Leg

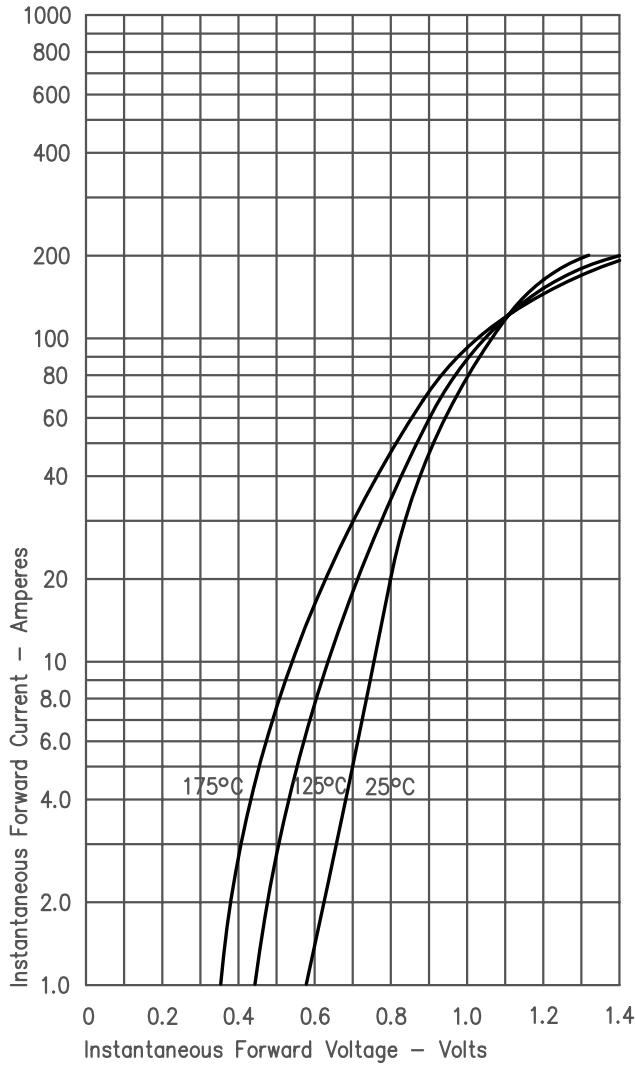


Figure 3  
Typical Junction Capacitance - Per Leg

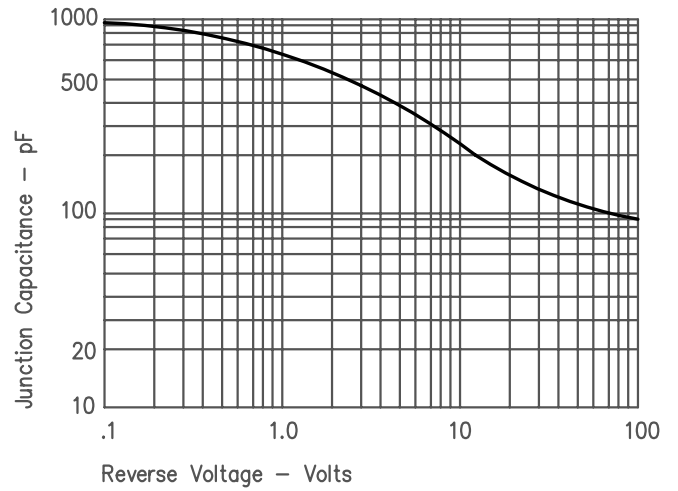


Figure 4  
Forward Current Derating - Per Leg

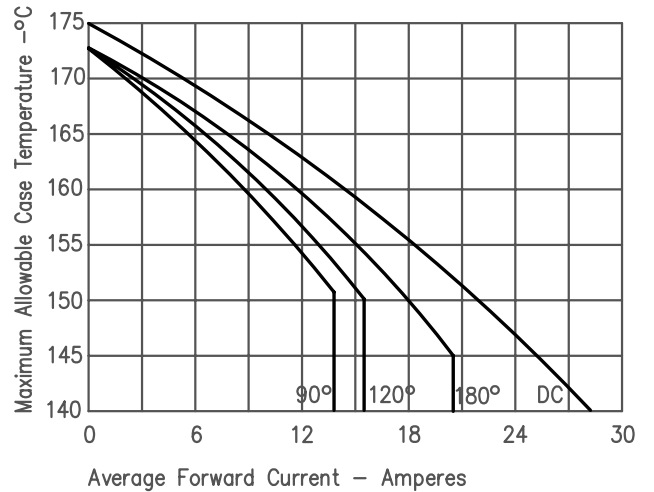


Figure 2  
Typical Reverse Characteristics - Per Leg

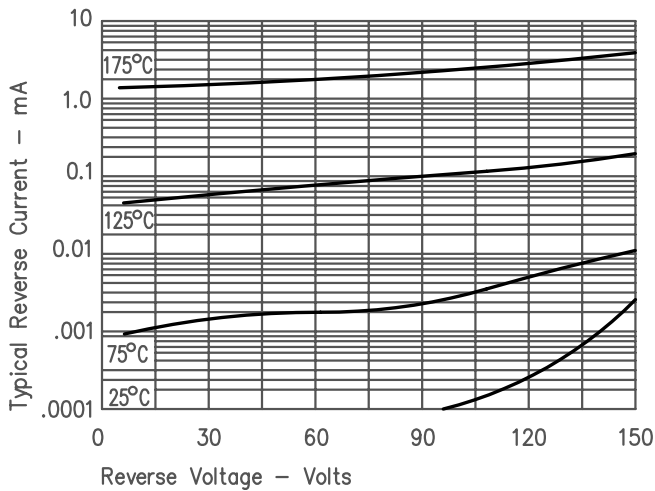


Figure 5  
Maximum Forward Power Dissipation - Per Leg

