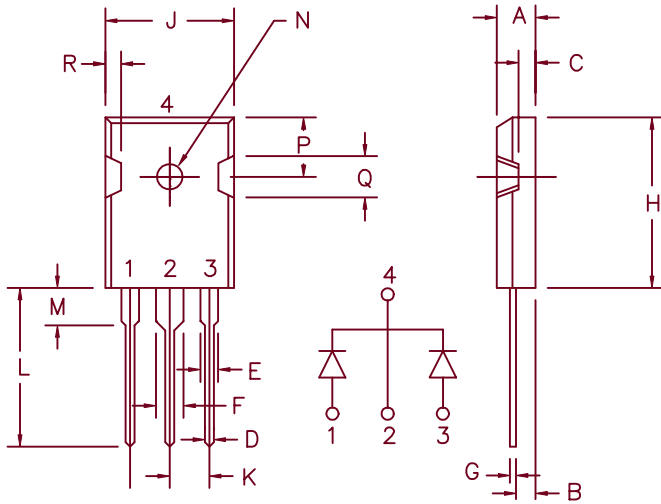


# 40 Amp Schottky OR'ing Rectifier FST4015



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	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
FST4015	40L15CW MBR40L15CW	15V	15V

- Schottky barrier rectifier
- $V_f @ 20A, 125^\circ C = 0.29V$
- High surge capacity
- $125^\circ C$  Junction temperature
- Guard ring reverse protection

## Electrical Characteristics

Average Forward Current per leg	$I_{F(AV)} 20$ Amps	$T_C = 105^\circ C$
Average Forward Current per pkg	$I_{F(AV)} 40$ Amps	$T_C = 105^\circ C$
Maximum Surge Current per leg	$I_{FSM} 300$ Amps	8.3ms, half sine
Max. Repetitive Reverse Current	$I_{R(OV)} 2$ Amps	$f=1KHZ, 25^\circ C, 1\mu s$ square wave
Max. Peak Forward Voltage per leg	$V_{FM} .40$ Volts	$I_{FM} = 20A, T_J = 25^\circ C^*$
Typ. Peak Forward Voltage per leg	$V_{FM} .29$ Volts	$I_{FM} = 20A, T_J = 125^\circ C^*$
Max. Peak Reverse Current per leg	$I_{RM} 8$ mA	$V_{RRM}, T_J = 25^\circ C$
Typ. Peak Reverse Current per leg	$I_{RM} 320$ mA	$V_{RRM}, T_J = 100^\circ C^*$
Typ. Peak Reverse Current per leg	$I_{RM} 175$ mA	$V_R = 5V, T_J = 100^\circ C^*$
Typical Junction Capacitance per leg	$C_j 1550$ 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	$T_{STG}$	$-55^\circ C$ to $150^\circ C$
Operating junction temp range	$T_J$	$-55^\circ C$ to $125^\circ C$
Max. thermal resistance per leg	$R_{\theta JC}$	$1.5^\circ C/W$ Junction to case
Max. thermal resistance per pkg	$R_{\theta JC}$	$0.75^\circ C/W$ Junction to case
Mounting torque		5-10 inch pounds (#6 screw)
Weight		.22 ounces (6.36 grams) typical

# FST4015

Figure 1  
Typical Forward Characteristics – Per Leg

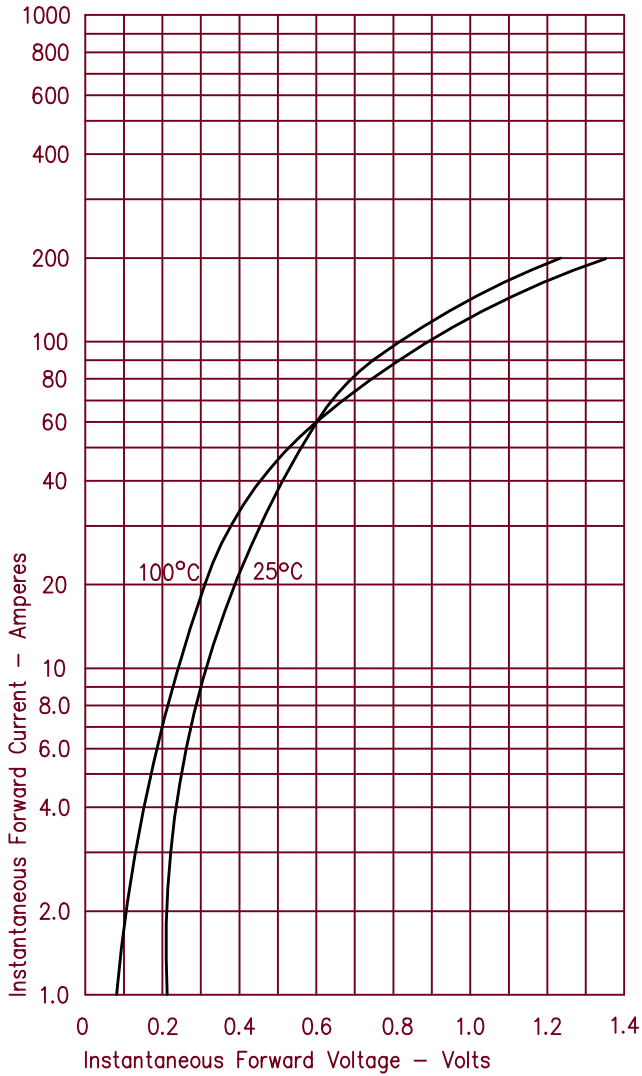


Figure 3  
Typical Junction Capacitance – Per Leg

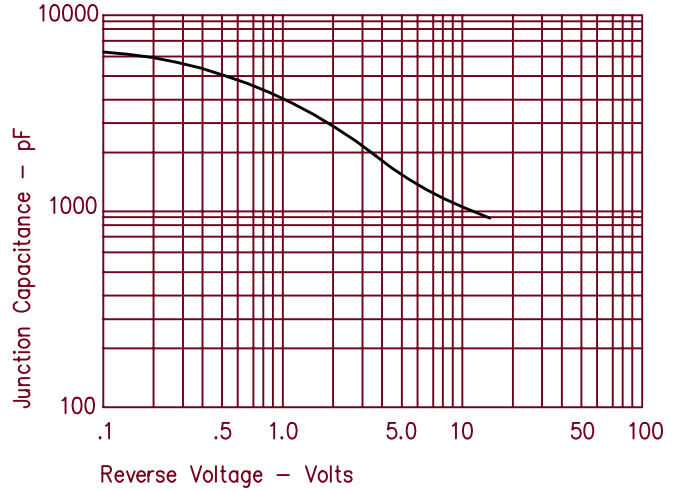


Figure 4  
Forward Current Derating – Per Leg

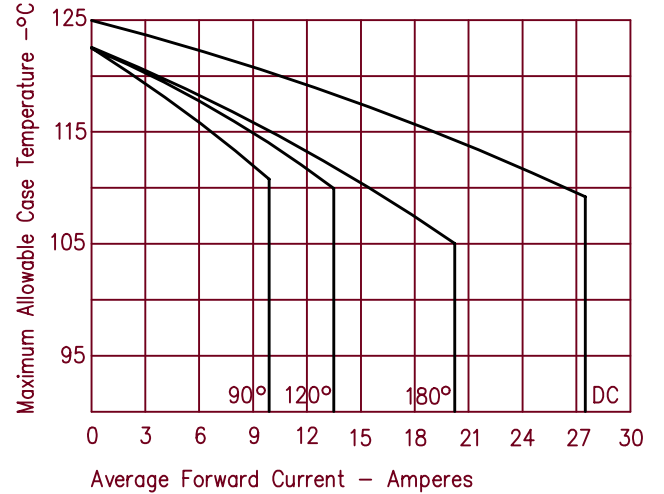


Figure 2  
Typical Reverse Characteristics – Per Leg

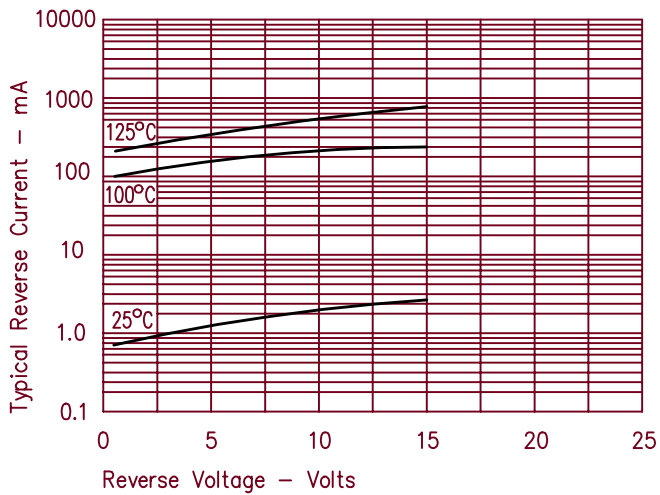
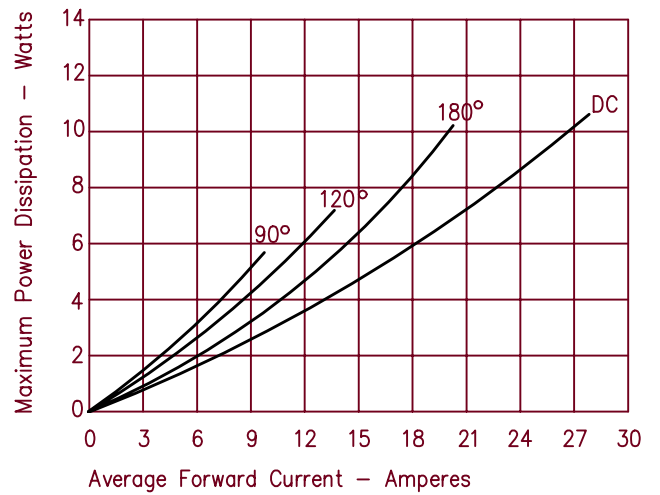


Figure 5  
Maximum Forward Power Dissipation – Per Leg





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