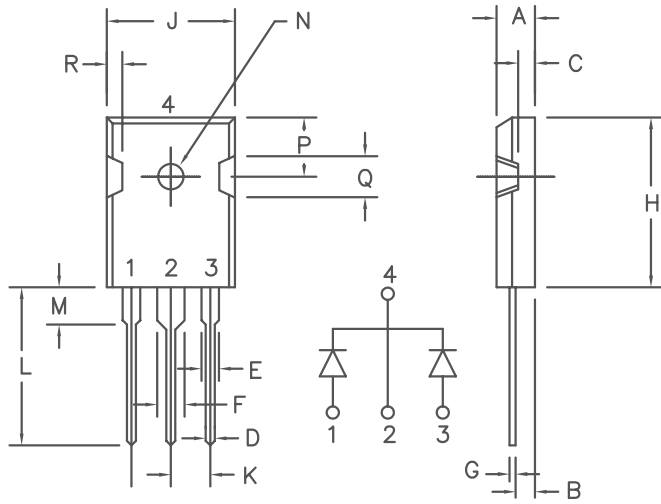


# 40 Amp Schottky Rectifier

## FST4035 — FST4045



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
FST4035	40CPQ035 MBR4035WT	35V	35V
FST4040	40CPQ040 40L40CW MBR4040WT	40V	40V
FST4045	40CPQ045 40L45CW MBR4045WT	45V	45V

- Schottky Barrier Rectifier
- Reverse energy tested
- Guard ring for reverse protection
- Low forward voltage
- 150°C junction temperature
- $V_{RRM}$  35 to 45 volts

### Electrical Characteristics

Average forward current per pkg	$I_F(AV)$ 40 Amps	$T_C = 110^\circ\text{C}$ , square wave, $R_{\theta JC} = 0.9^\circ\text{C/W}$
Average forward current per leg	$I_F(AV)$ 20 Amps	$T_C = 110^\circ\text{C}$ , square wave, $R_{\theta JC} = 1.8^\circ\text{C/W}$
Maximum surge current per leg	$I_{FSM}$ 400 Amps	8.3ms, half sine, $T_J = 150^\circ\text{C}$
Max. peak forward voltage per leg	$V_{FM}$ .48 Volts	$I_{FM} = 20\text{A}$ , $T_J = 150^\circ\text{C}^*$
Max. peak forward voltage per leg	$V_{FM}$ .55 Volts	$I_{FM} = 20\text{A}$ , $T_J = 25^\circ\text{C}^*$
Max. peak reverse current per leg	$I_{RM}$ 1 Amp	$V_{RRM}$ , $T_J = 150^\circ\text{C}^*$
Max. peak reverse current per leg	$I_{RM}$ 2 mA	$V_{RRM}$ , $T_J = 25^\circ\text{C}$
Typical junction capacitance per leg	$C_J$ 1200 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	TSTG	-55°C to +150°C
Operating junction temp range	$T_J$	-55°C to +150°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
Weight		.22 ounces (6.36 grams) typical

# FST4035 — FST4045

Figure 1  
Typical Forward Characteristics — Per Leg

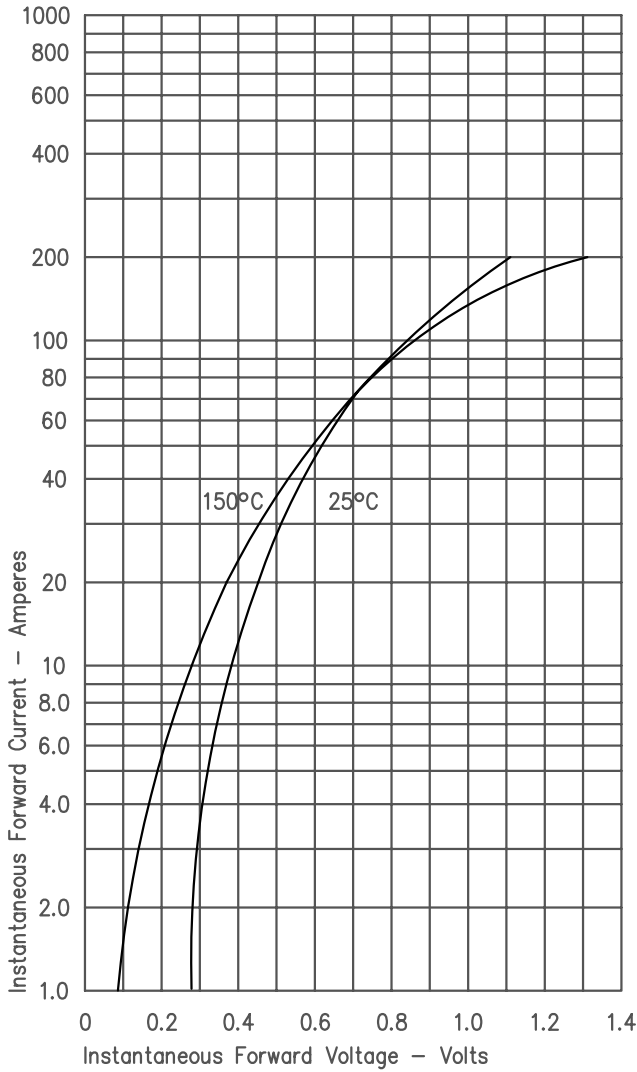


Figure 3  
Typical Junction Capacitance — Per Leg

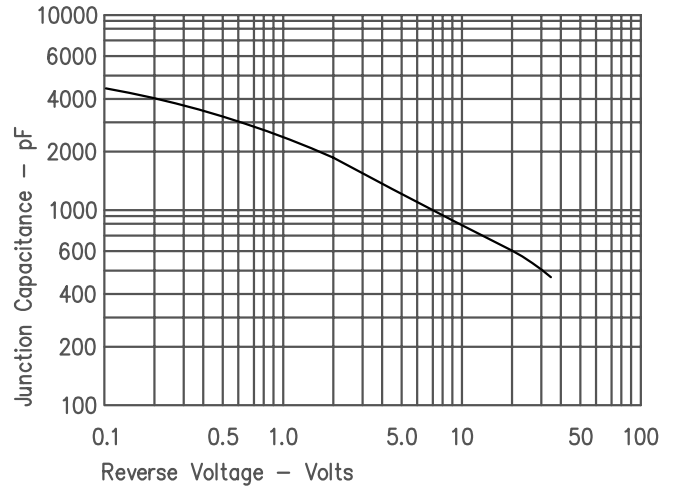


Figure 4  
Forward Current Derating — Per Leg

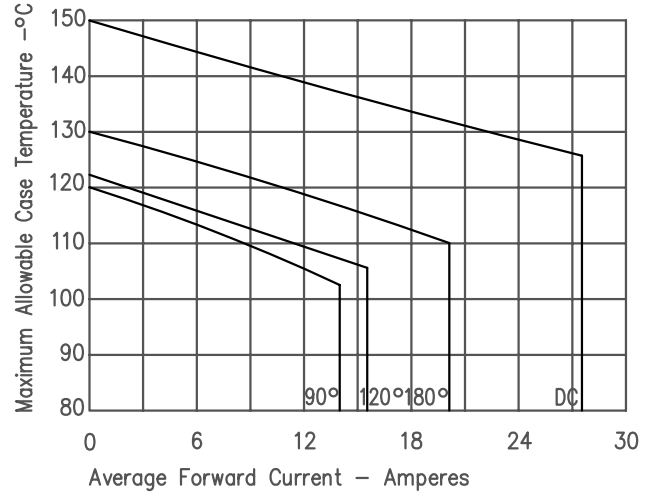


Figure 2  
Typical Reverse Characteristics — Per Leg

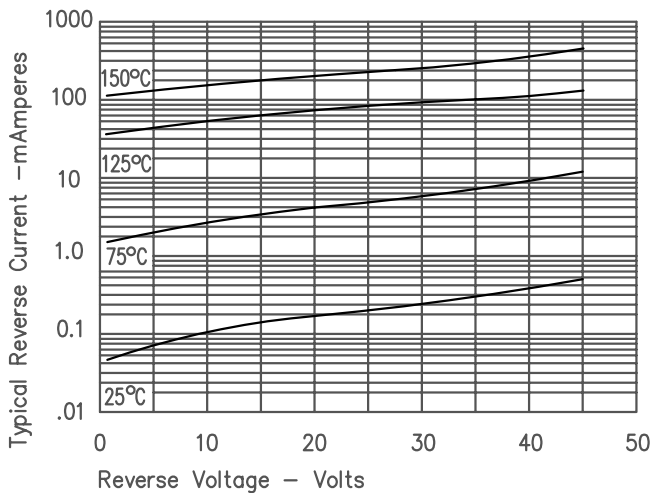


Figure 5  
Maximum Forward Power Dissipation — Per Leg

