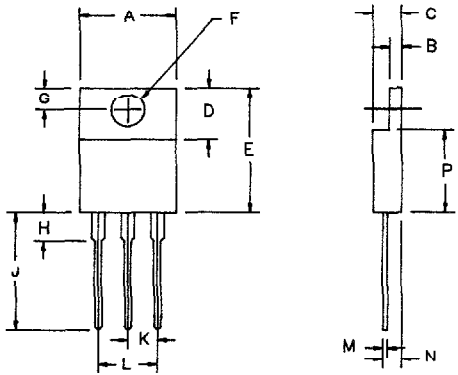


# 10 Amp Schottky Barrier Rectifiers

## FST1045



Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
A	.390	.415	9.90	10.5	
B	.050	.055	1.27	1.40	
C	.180	.185	4.57	4.70	
D	.248	.260	6.30	6.60	
E	.590	.605	14.98	15.40	
F	.145	.150	3.68	3.81	Dia.
G	.108	.120	2.74	3.05	
H	.163	.170	4.14	4.32	
J	.540	.570	13.72	14.5	
K	.087	.091	2.20	2.31	
L	.200	.205	5.08	5.21	
M	.021	.025	.533	.635	
N	.125	.140	3.18	3.56	
P	.335	.342	8.50	8.69	

### PLASTIC TO220

Microsemi Catalog Number	Repetitive Peak Reverse Voltage	Transient Peak Reverse Voltage	
FST1045	45V	45V	<ul style="list-style-type: none"> <li>• Schottky barrier rectifier</li> <li>• Guard ring for reverse protection</li> <li>• Low power loss, high efficiency</li> <li>• Reverse energy tested</li> <li>• <math>V_{RRM}</math> 45 Volts maximum</li> </ul>

#### Electrical Characteristics

Average Forward Current per pkg.	$I_{F(AV)}$ 10 Amps	$T_C = 110^\circ\text{C}$ , Square wave, $R_{\theta JC} = 2.8^\circ\text{C/W}$
Average Forward Current per leg	$I_{F(AV)}$ 5 Amps	$T_C = 110^\circ\text{C}$ , Square wave, $R_{\theta JC} = 5.6^\circ\text{C/W}$
Maximum Surge Current per leg	$I_{FSM}$ 300 Amps	8.3ms, half sine, $T_J = 150^\circ\text{C}$
Max. Peak Forward Voltage per leg	$V_{FM}$ .42 Volts	$I_{FM} = 5\text{A}$ , $T_J = 150^\circ\text{C}^*$
Max. Peak Forward Voltage per leg	$V_{FM}$ .52 Volts	$I_{FM} = 5\text{A}$ , $T_J = 25^\circ\text{C}^*$
Max. Peak Reverse Current per leg	$I_{RM}$ 500 mA	$V_{RRM}$ , $T_J = 125^\circ\text{C}^*$
Max. Peak Reverse Current per leg	$I_{RM}$ 2 mA	$V_{RRM}$ , $T_J = 25^\circ\text{C}$
Typical Junction Capacitance	$C_J$ 380 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	$T_{STG}$	$-40^\circ\text{C}$ to $150^\circ\text{C}$
Operating junction temp range	$T_J$	$-40^\circ\text{C}$ to $150^\circ\text{C}$
Max thermal resistance per leg	$R_{\theta JC}$	$5.6^\circ\text{C/W}$ Junction to case
Max thermal resistance per pkg.	$R_{\theta JC}$	$2.8^\circ\text{C/W}$ Junction to case
Typical thermal resistance per leg	$R_{\theta JC}$	$4.67^\circ\text{C/W}$ Junction to case
Mounting torque		15 inch pounds maximum (6-32 screw)
Typical Weight		.08 ounces (2.3 grams) typical

**Microsemi Corp.**  
**Colorado**

# FST1045



Figure 1  
Typical Forward Characteristics - Per Leg

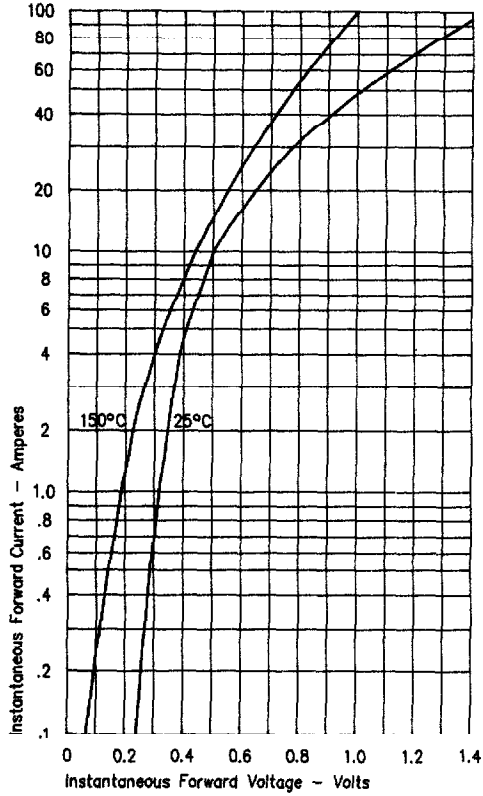


Figure 3  
Typical Junction Capacitance - Per Leg

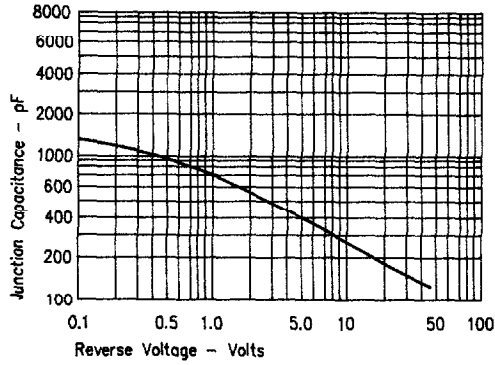


Figure 4  
Forward Current Derating - Per Leg

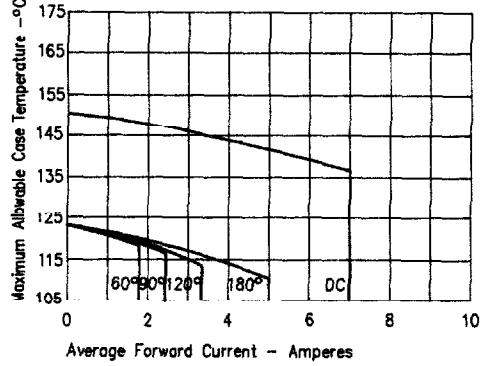


Figure 2  
Typical Reverse Characteristics - Per Leg

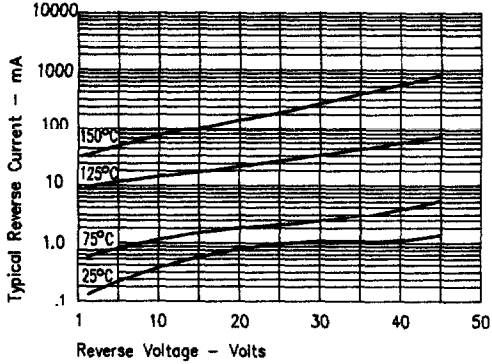


Figure 5  
Maximum Forward Power Dissipation - Per Leg

