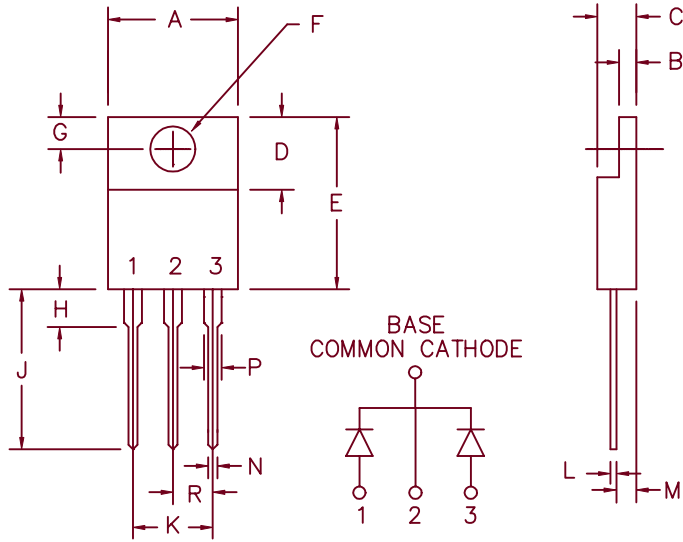


# 20 Amp Schottky Barrier Rectifiers FST2035 — FST2045



Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
A	.390	.415	9.91	10.54	
B	.045	.055	1.14	1.40	
C	.180	.190	4.57	4.83	
D	.245	.260	6.22	6.60	
E	.550	.650	13.97	16.51	
F	.139	.161	3.53	4.09	Dia.
G	.100	.135	2.54	3.43	
H	---	.250	---	6.35	
J	.500	.580	12.70	14.73	
K	.190	.210	4.83	5.33	
L	.014	.022	.357	.559	
M	.080	.115	2.03	2.92	
N	.015	.040	.380	1.02	
P	.045	.070	1.14	1.78	
R	.090	.110	2.29	2.79	

PLASTIC TO-220AB

## Technical Bulletin

Microsemi Catalog Number	Repetitive Peak Reverse Voltage	Transient Peak Reverse Voltage
FST2035	35V	35V
FST2040	40V	40V
FST2045	45V	45V

- Schottky barrier rectifier
- Guard ring for reverse protection
- Low power loss, high efficiency
- High surge capacity
- $V_{RRM}$  35 to 45 Volts

## Electrical Characteristics

Average Forward Current per pkg.	$I_{F(AV)}$ 20 Amps	$T_C = 139^\circ\text{C}$ , Square wave, $R_{\theta JC} = 2.8^\circ\text{C/W}$
Average Forward Current per leg	$I_{F(AV)}$ 10 Amps	$T_C = 139^\circ\text{C}$ , Square wave, $R_{\theta JC} = 5.6^\circ\text{C/W}$
Maximum Surge Current per leg	$I_{FSM}$ 225 Amps	8.3ms, half sine, $T_J = 175^\circ\text{C}$
Max. Peak Forward Voltage per leg	$V_{FM}$ .48 Volts	$I_{FM} = 10\text{A}$ , $T_J = 175^\circ\text{C}^*$
Max. Peak Forward Voltage per leg	$V_{FM}$ .65 Volts	$I_{FM} = 10\text{A}$ , $T_J = 25^\circ\text{C}^*$
Max. Peak Reverse Current per leg	$I_{RM}$ 10 mA	$V_{RRM}$ , $T_J = 125^\circ\text{C}^*$
Max. Peak Reverse Current per leg	$I_{RM}$ 250 $\mu\text{A}$	$V_{RRM}$ , $T_J = 25^\circ\text{C}$
Typical Junction Capacitance	$C_J$ 660 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	$T_{STG}$	$-55^\circ\text{C}$ to $175^\circ\text{C}$
Operating junction temp range	$T_J$	$-55^\circ\text{C}$ to $175^\circ\text{C}$
Max thermal resistance per leg	$R_{\theta JC}$	$5.6^\circ\text{C/W}$
Max thermal resistance per pkg.	$R_{\theta JC}$	$2.8^\circ\text{C/W}$
Typical thermal resistance per leg	$R_{\theta JC}$	$4.7^\circ\text{C/W}$
Mounting torque		15 inch pounds maximum (6-32 screw)
Weight		.08 ounces (2.3 grams) typical

# FST2035 — FST2045

Figure 1  
Typical Forward Characteristics — Per Leg

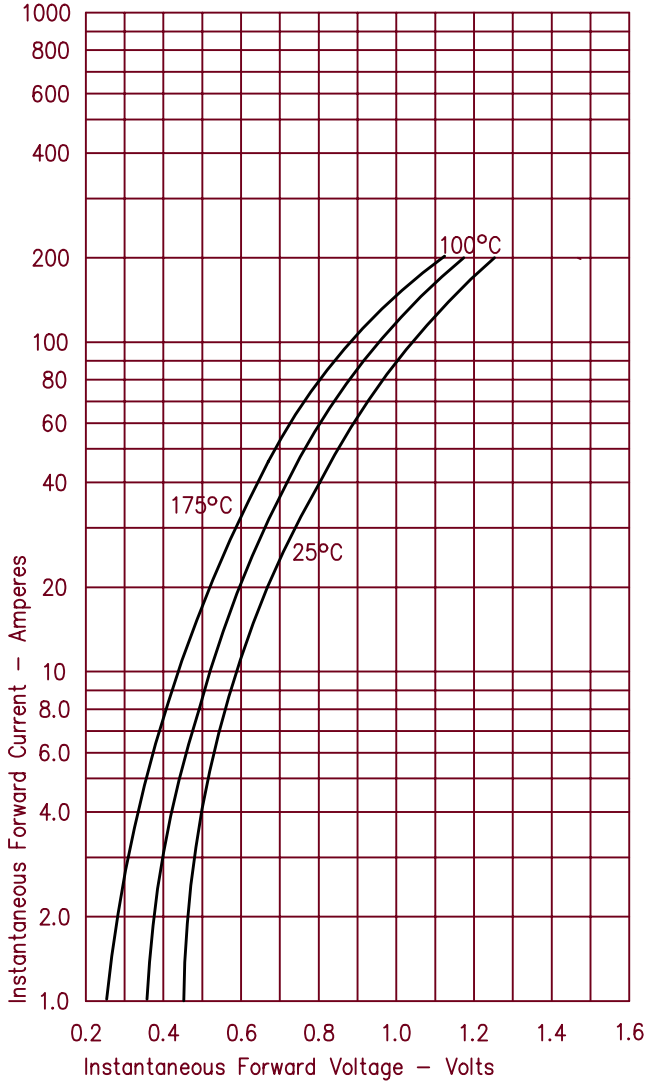


Figure 3  
Typical Junction Capacitance — Per Leg

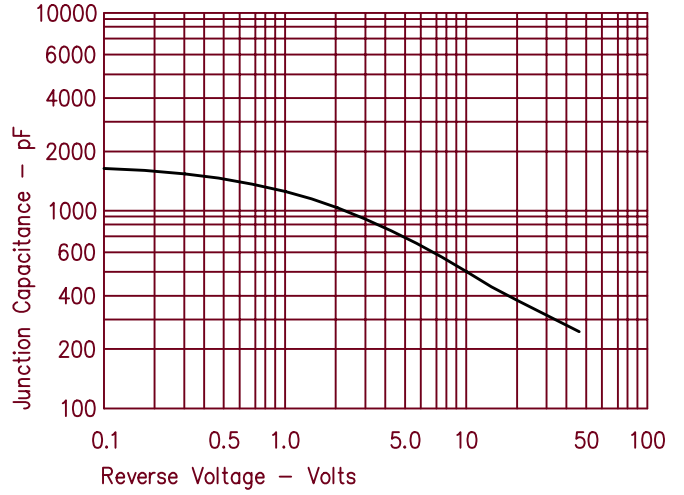


Figure 4  
Forward Current Derating — Per Leg

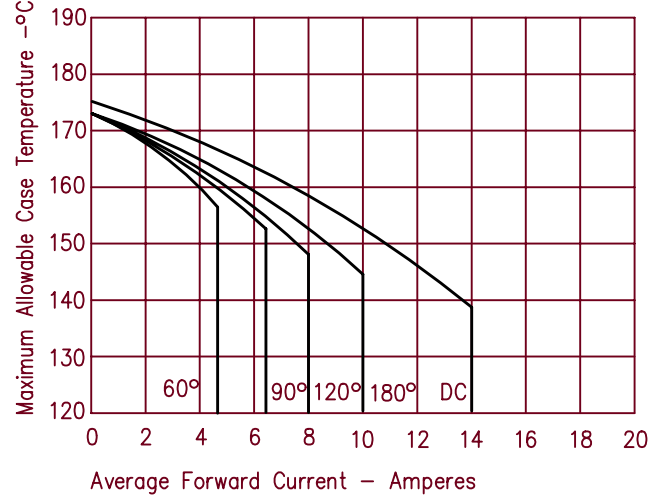


Figure 2  
Typical Reverse Characteristics — Per Leg

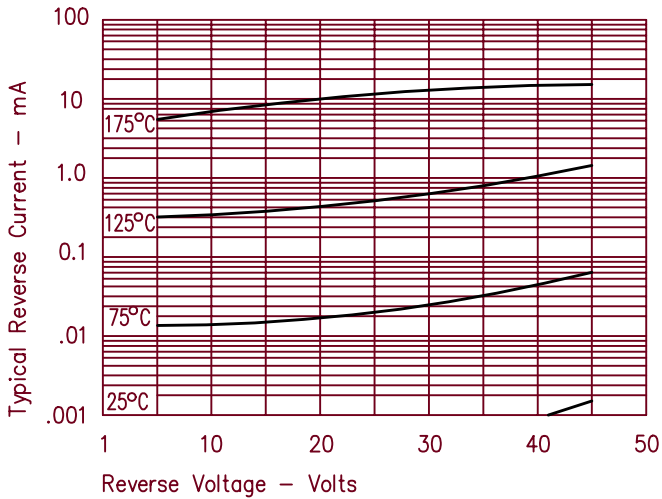


Figure 5  
Maximum Forward Power Dissipation — Per Leg

