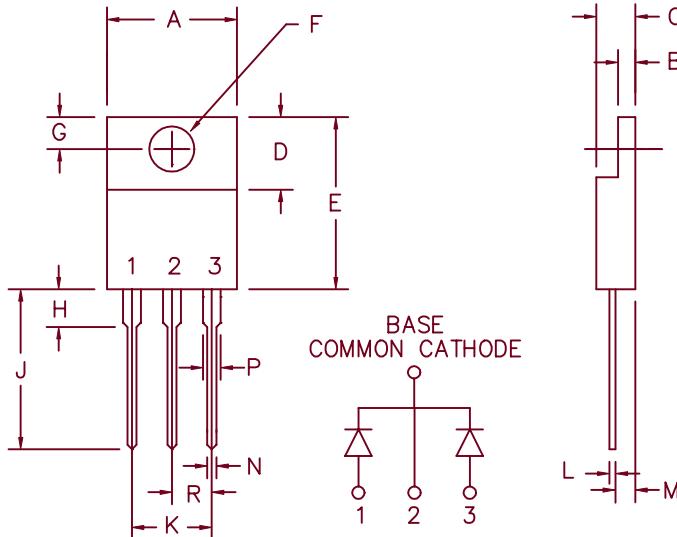


# 20 Amp Schottky Barrier Rectifiers

## FST2035 – FST2045



Dim.	Inches		Millimeter		
	Minimum	Maximum	Minimum	Maximum	Notes
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.	F(AV) 20 Amps	T <sub>C</sub> = 139°C, Square wave, R <sub>θJC</sub> = 2.8°C/W
Average Forward Current per leg	F(AV) 10 Amps	T <sub>C</sub> = 139°C, Square wave, R <sub>θJC</sub> = 5.6°C/W
Maximum Surge Current per leg	FSM 225 Amps	8.3ms, half sine, T <sub>J</sub> = 175°C
Max. Peak Forward Voltage per leg	V <sub>FM</sub> .48 Volts	FM = 10A, T <sub>J</sub> = 175°C*
Max. Peak Forward Voltage per leg	V <sub>FM</sub> .65 Volts	FM = 10A, T <sub>J</sub> = 25°C*
Max. Peak Reverse Current per leg	RM 10 mA	V <sub>RRM</sub> , T <sub>J</sub> = 125°C*
Max. Peak Reverse Current per leg	RM 250 μA	V <sub>RRM</sub> , T <sub>J</sub> = 25°C
Typical Junction Capacitance	C <sub>J</sub> 660 pF	V <sub>R</sub> = 5.0V, T <sub>J</sub> = 25°C

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

## Thermal and Mechanical Characteristics

Storage temp range	T <sub>STG</sub>	-55°C to 175°C
Operating junction temp range	T <sub>J</sub>	-55°C to 175°C
Max thermal resistance per leg	R <sub>θJC</sub>	5.6°C/W
Max thermal resistance per pkg.	R <sub>θJC</sub>	2.8°C/W
Typical thermal resistance per leg	R <sub>θJC</sub>	4.7°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

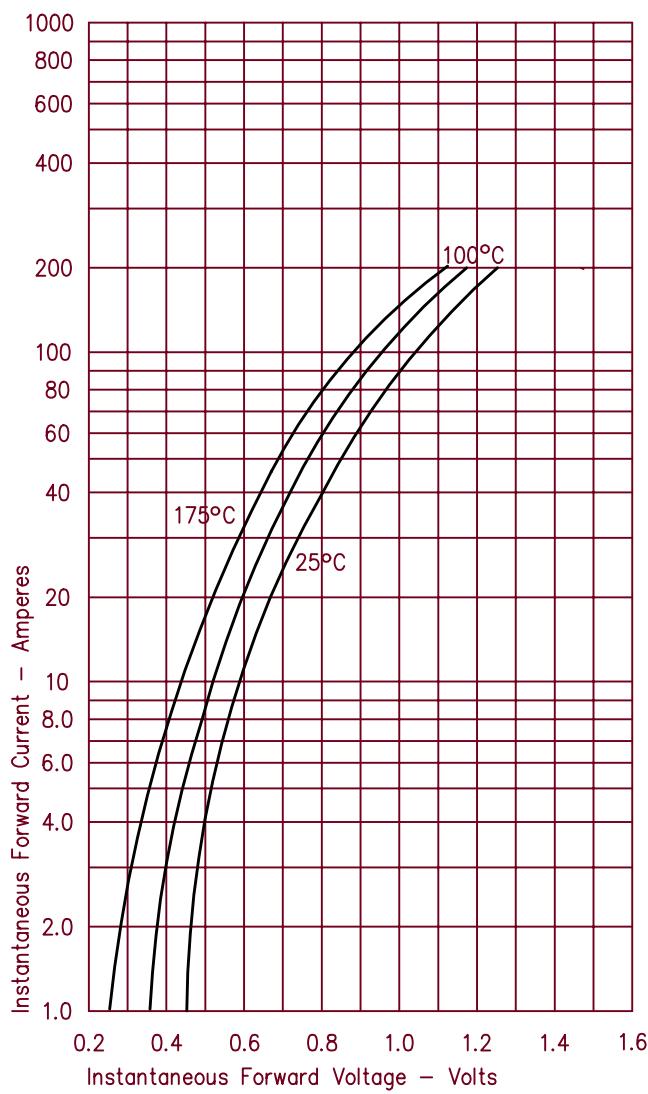


Figure 2  
Typical Reverse Characteristics – Per Leg

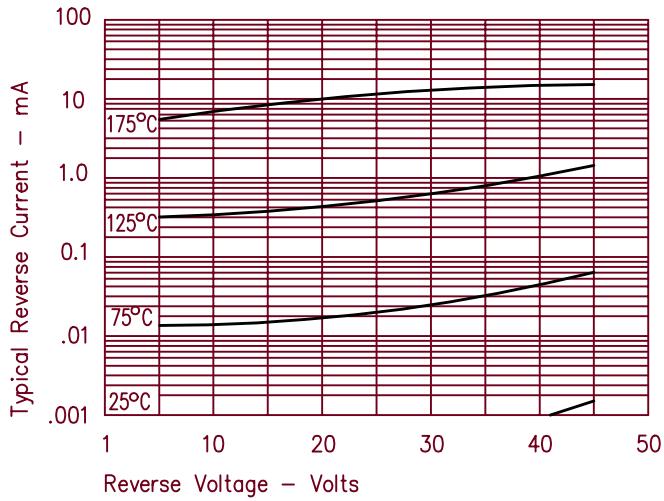


Figure 3  
Typical Junction Capacitance – Per Leg

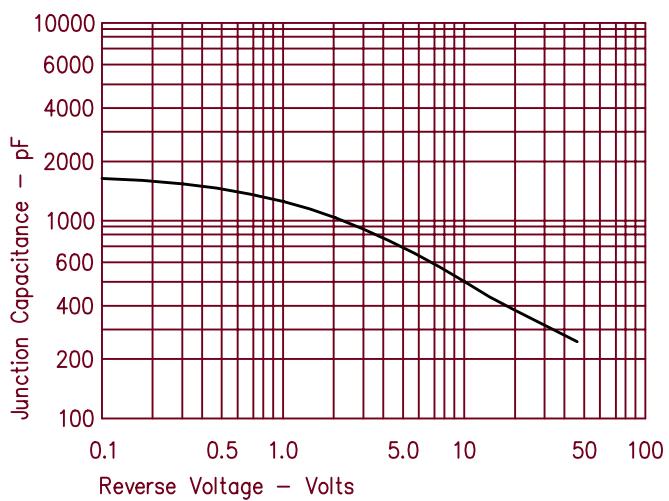


Figure 4  
Forward Current Derating – Per Leg

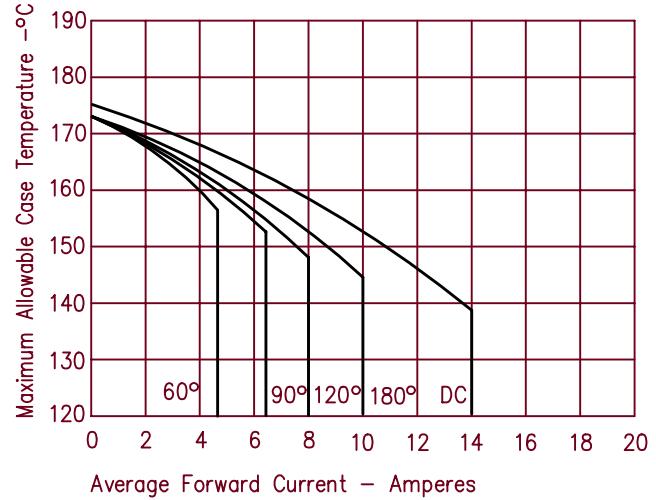


Figure 5  
Maximum Forward Power Dissipation – Per Leg

