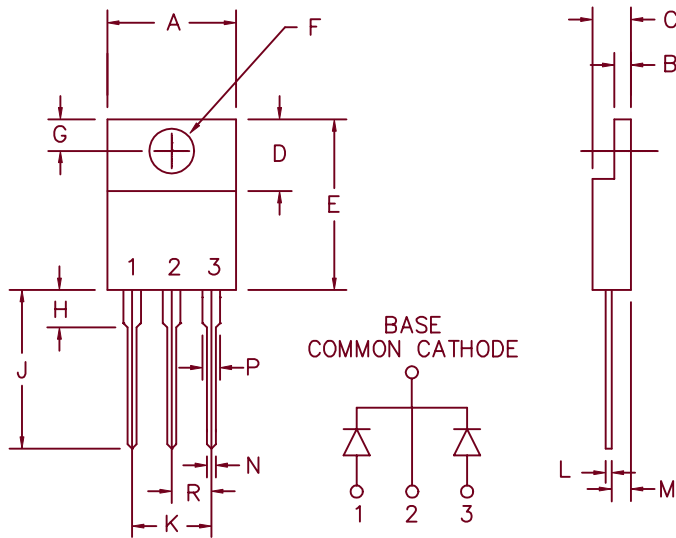


# 20 Amp Schottky Barrier Rectifiers FST2035 — FST2045



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

Microsemi Catalog Number	Industry Part Number	Repetitive Peak Reverse Voltage	Transient Peak Reverse Voltage
FST2035	12CTQ035,15CTQ035 20CTQ035	35V	35V
FST2040	MBR1535CT,MBR2035CT 12CTQ040,15CTQ040 20CTQ040	40V	40V
FST2045	MBR1540CT,MBR2040CT 12CTQ045,15CTQ045 20CTQ045	45V	45V
	MBR1545CT,MBR2045CT MBR1545CTP,MBR2045CTP		

- 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	$T_C = 160^\circ C$ , Square wave, $R_{\theta JC} = 1.2^\circ C/W$
Average Forward Current per leg	$I_F(AV)$ 10 Amps	$T_C = 160^\circ C$ , Square wave, $R_{\theta JC} = 2.4^\circ C/W$
Maximum Surge Current per leg	$I_{FSM}$ 225 Amps	8.3ms, half sine, $T_J = 175^\circ C$
Max. Peak Forward Voltage per leg	$V_{FM}$ .48 Volts	$I_{FM} = 10A$ , $T_J = 175^\circ C^*$
Max. Peak Forward Voltage per leg	$V_{FM}$ .65 Volts	$I_{FM} = 10A$ , $T_J = 25^\circ C^*$
Max. Peak Reverse Current per leg	$I_{RM}$ 10 mA	$V_{RRM}$ , $T_J = 125^\circ C^*$
Max. Peak Reverse Current per leg	$I_{RM}$ 250 $\mu A$	$V_{RRM}$ , $T_J = 25^\circ C$
Typical Junction Capacitance	$C_J$ 660 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 $175^\circ C$
Operating junction temp range	$T_J$	$-55^\circ C$ to $175^\circ C$
Max thermal resistance per leg	$R_{\theta JC}$	$2.4^\circ C/W$
Max thermal resistance per pkg.	$R_{\theta JC}$	$1.2^\circ C/W$
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

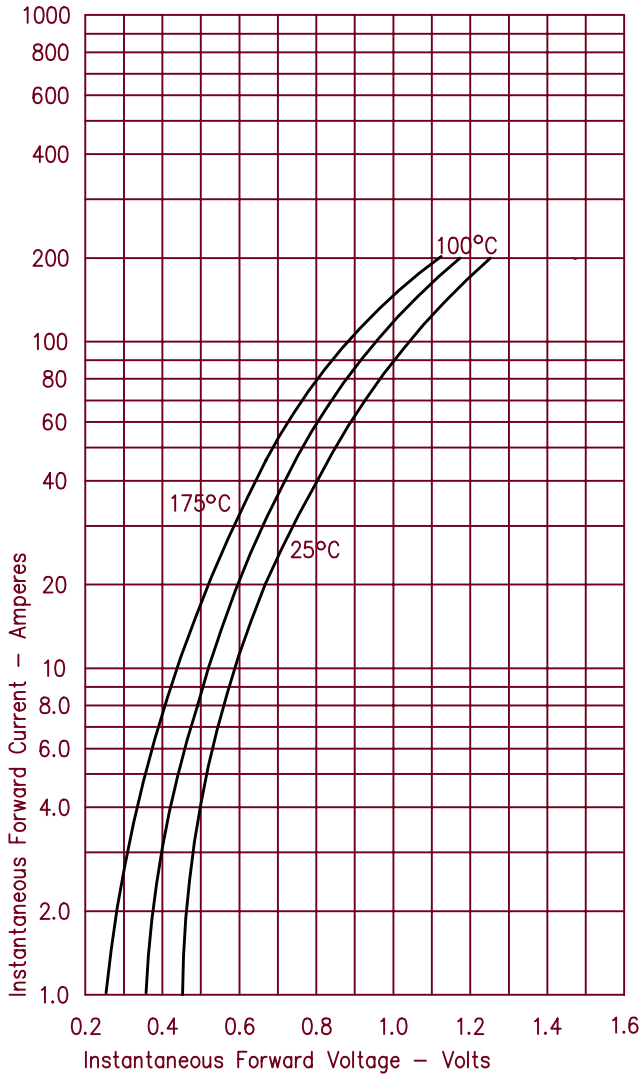


Figure 3  
Typical Junction Capacitance — Per Leg

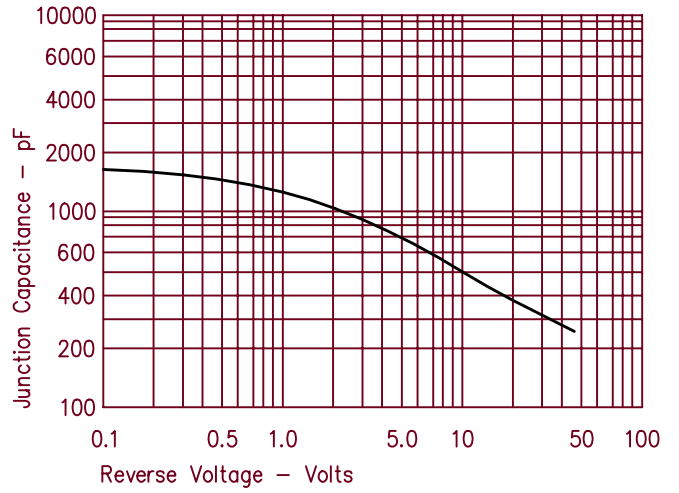


Figure 4  
Forward Current Derating — Per Leg

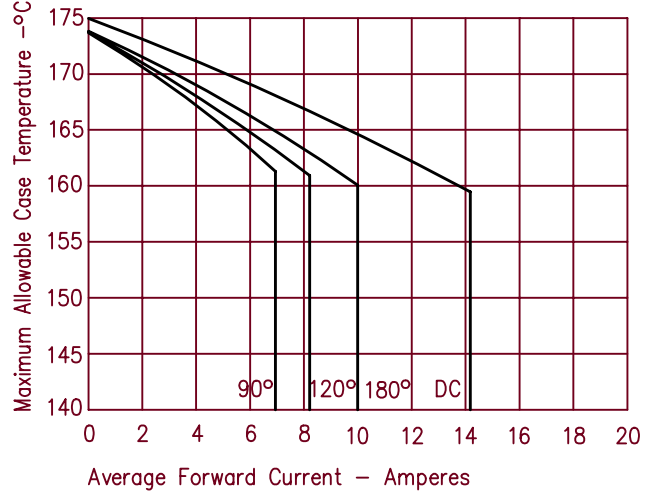


Figure 2  
Typical Reverse Characteristics — Per Leg

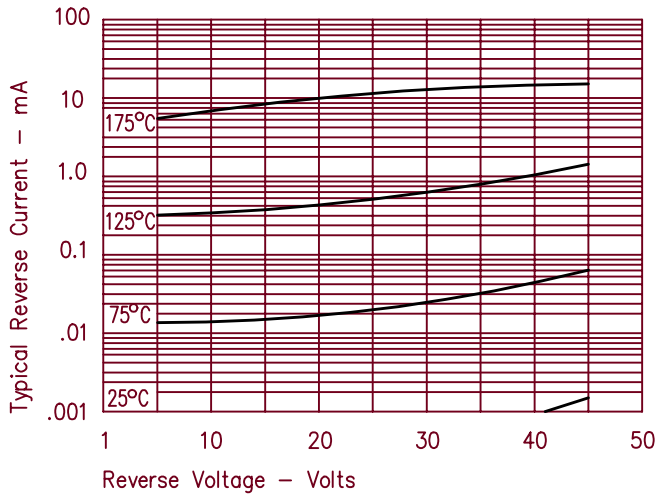


Figure 5  
Maximum Forward Power Dissipation — Per Leg

