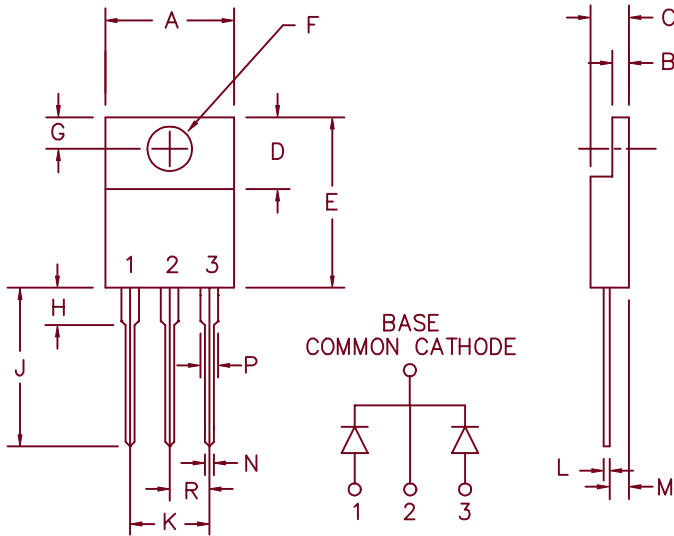


30 Amp Schottky Rectifiers FST3135 — FST3145



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
FST3135	30CTQ035 MBR2535CT, MBR3035CT	35V	35V
FST3140	30CTQ040 MBR2540CT	40V	40V
FST3145	30CTQ045 MBR2545CT, MBR3045CT MBR4045CT MBR2545CTP, MBR3045ST	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.	$I_F(AV)$ 30 Amps	$T_C = 154^\circ C$, Square wave, $R_{\theta JC} = 1.0^\circ C/W$
Average Forward Current per leg	$I_F(AV)$ 15 Amps	$T_C = 154^\circ C$, Square wave, $R_{\theta JC} = 2.0^\circ C/W$
Maximum Surge Current per leg	I_{FSM} 250 Amps	8.3ms, half sine, $T_J = 175^\circ C$
Max. Peak Forward Voltage per leg	V_{FM} 0.53 Volts	$I_{FM} = 15A$, $T_J = 175^\circ C^*$
Max. Peak Forward Voltage per leg	V_{FM} 0.66 Volts	$I_{FM} = 15A$, $T_J = 25^\circ C^*$
Max. Peak Reverse Current per leg	I_{RM} 15 mA	V_{RRM} , $T_J = 125^\circ C^*$
Max. Peak Reverse Current per leg	I_{RM} 500 μA	V_{RRM} , $T_J = 25^\circ C$
Typical junction capacitance	C_J 890 pF	$V_R = 5.0V$, $T_J = 25^\circ C$

*Pulse test: Pulse width 300 μsec . Duty cycle 2%

Thermal and Mechanical Characteristics

Storage temp range	TSTG	-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	$R_{\theta JC}$	2.0 $^\circ C/W$ Junction to case
Max thermal resistance per pkg.	$R_{\theta JC}$	1.0 $^\circ C/W$ Junction to case
Mounting torque		15 inch pounds maximum (6-32 screw)
Weight		.06 ounces (1.8 grams) typical

FST3135 — FST3145

Figure 1
Typical Forward Characteristics — Per Leg

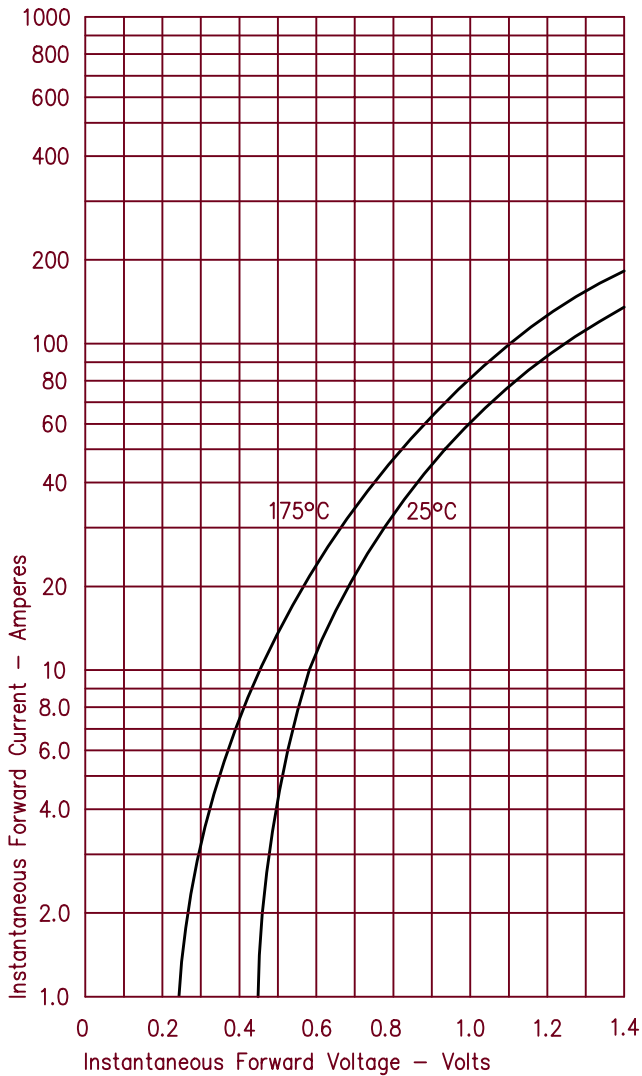


Figure 3
Typical Junction Capacitance — Per Leg

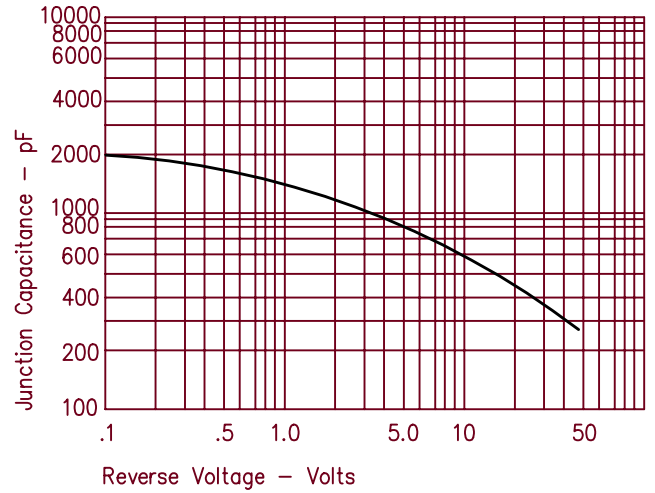


Figure 4
Forward Current Derating — Per Leg

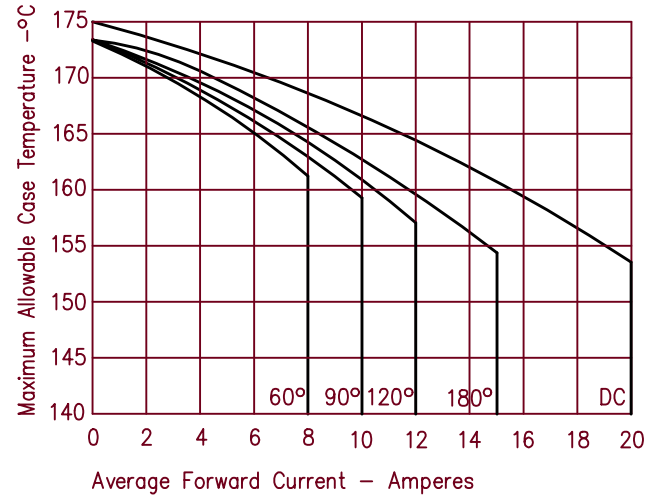


Figure 2
Typical Reverse Characteristics — Per Leg

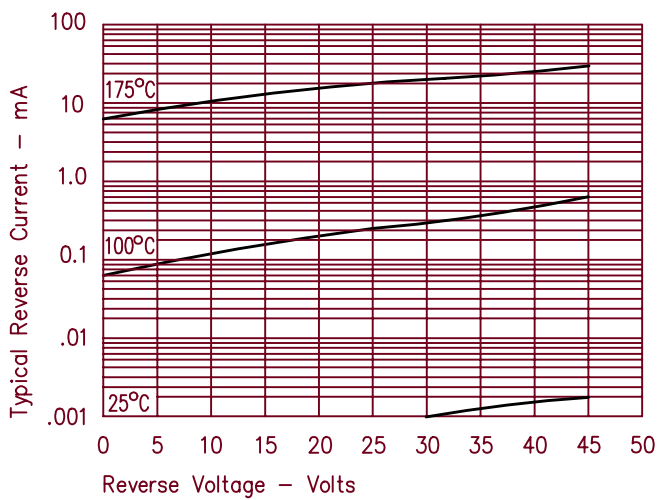


Figure 5
Maximum Forward Power Dissipation — Per Leg

