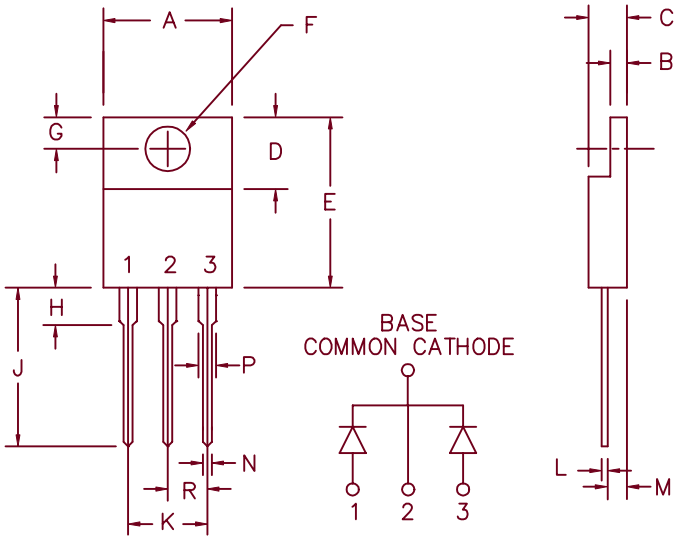
30 Amp Schottky Rectifiers

FST3135 – FST3145



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

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°C, Square wave, $R_{\theta JC}$ = 1.0°C/W
Average Forward Current per leg	$I_{F(AV)}$ 15 Amps	T_C = 154°C, Square wave, $R_{\theta JC}$ = 2.0°C/W
Maximum Surge Current per leg	I_{FSM} 250 Amps	8.3ms, half sine, T_J = 175°C
Max. Peak Forward Voltage per leg	V_{FM} 0.53 Volts	I_{FM} = 15A, T_J = 175°C *
Max. Peak Forward Voltage per leg	V_{FM} 0.66 Volts	I_{FM} = 15A, T_J = 25°C *
Max. Peak Reverse Current per leg	I_{RM} 15 mA	V_{RRM}, T_J = 125°C *
Max. Peak Reverse Current per leg	I_{RM} 500 µA	V_{RRM}, T_J = 25°C
Typical junction capacitance	C_J 890 pF	V_R = 5.0V, T_J = 25°C

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

Thermal and Mechanical Characteristics

Storage temp range	TSTG	-55°C to + 175°C
Operating junction temp range	TJ	-55°C to + 175°C
Max thermal resistance per leg	$R_{\theta JC}$	2.0°C/W Junction to case
Max thermal resistance per pkg.	$R_{\theta JC}$	1.0°C/W Junction to case
Mounting torque		15 inch pounds maximum (6-32 screw)
Weight		.06 ounces (1.8 grams) typical

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FST3135 – FST3145

Figure 1
Typical Forward Characteristics – Per Leg

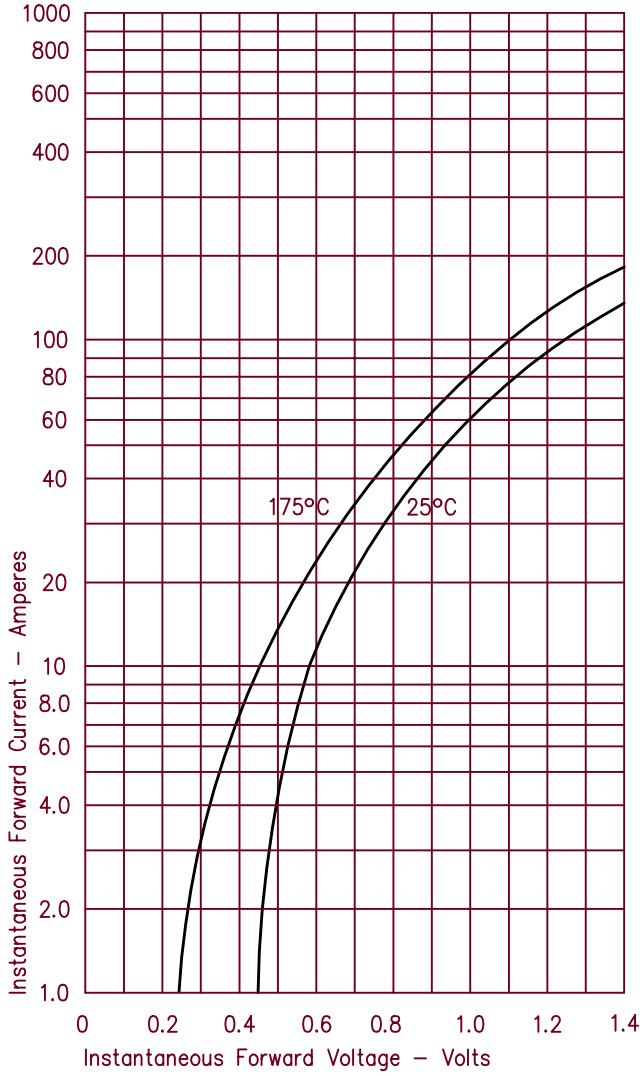


Figure 2
Typical Reverse Characteristics – Per Leg

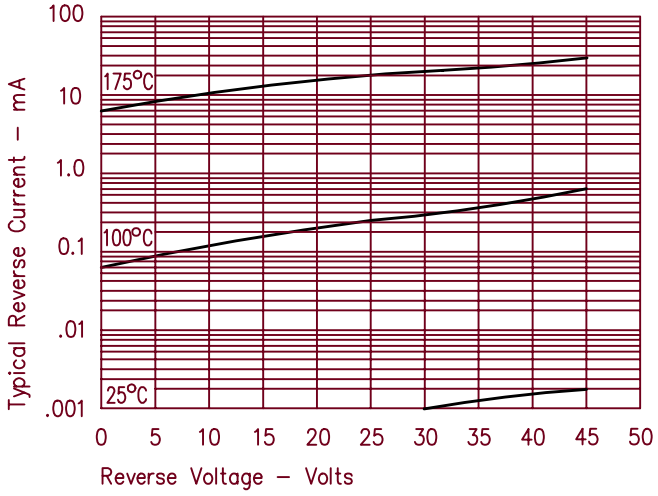


Figure 3
Typical Junction Capacitance – Per Leg

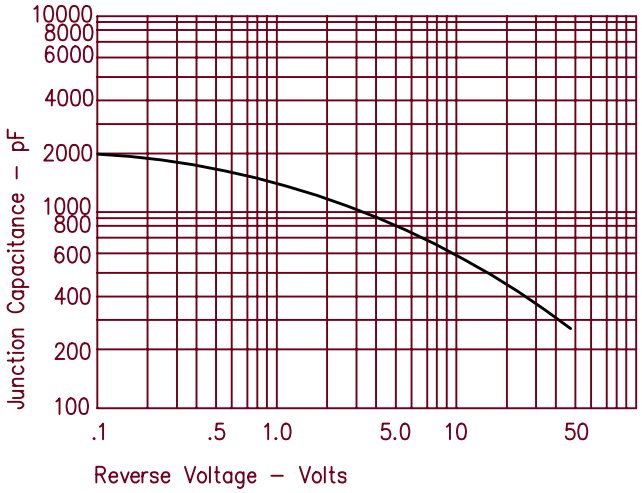


Figure 4
Forward Current Derating – Per Leg

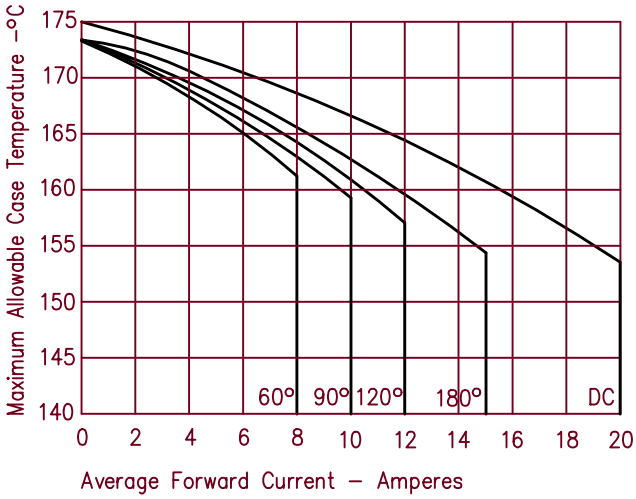
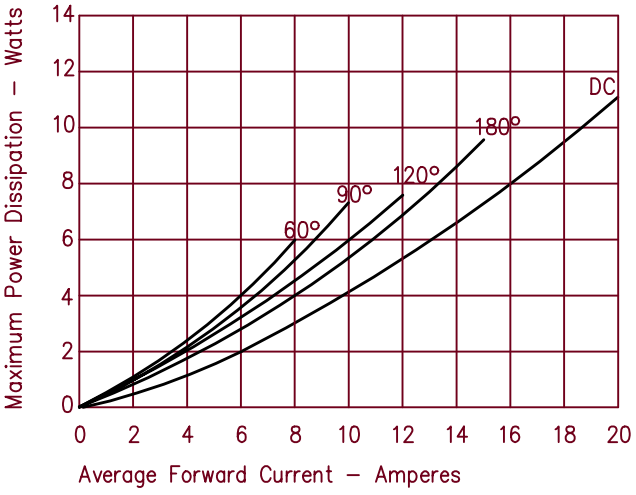


Figure 5
Maximum Forward Power Dissipation – Per Leg



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