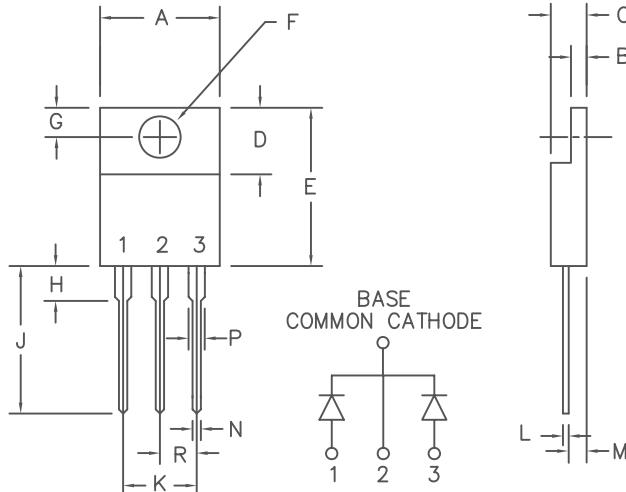


# 30 Amp Schottky Rectifiers

## FST31180 — FST31200



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	
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
FST31180		180V	180V
FST31200		200V	200V

- Schottky barrier rectifier
- Guard ring for reverse protection
- Reverse energy tested
- High surge capacity
- $V_{RRM}$  180 to 200 Volts

### Electrical Characteristics

Average Forward Current per pkg.  
Average Forward Current per leg  
Maximum Surge Current per leg  
Typ. Peak Forward Voltage per leg  
Max. Peak Forward Voltage per leg  
Typ. Peak Reverse Current per leg  
Max. Peak Reverse Current per leg  
Typical junction capacitance

$I_F(AV)$  30 Amps  
 $I_F(AV)$  15 Amps  
 $I_{FSM}$  250 Amps  
 $V_{FM}$  0.62 Volts  
 $V_{FM}$  0.83 Volts  
 $I_{RM}$  400  $\mu$ A  
 $I_{RM}$  100  $\mu$ A  
 $C_J$  295pF

$T_C = 150^\circ\text{C}$ , Square wave,  $R_{\theta JC} = 1.0^\circ\text{C}/\text{W}$   
 $T_C = 150^\circ\text{C}$ , Square wave,  $R_{\theta JC} = 2.0^\circ\text{C}/\text{W}$   
8.3ms, half sine,  $T_J = 175^\circ\text{C}$   
 $I_{FM} = 15\text{A}$ ,  $T_J = 175^\circ\text{C}$ \*  
 $I_{FM} = 15\text{A}$ ,  $T_J = 25^\circ\text{C}$ \*  
 $V_{RRM}$ ,  $T_J = 125^\circ\text{C}$ \*  
 $V_{RRM}$ ,  $T_J = 25^\circ\text{C}$   
 $V_R = 5.0\text{V}$ ,  $T_J = 25^\circ\text{C}$

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

### Thermal and Mechanical Characteristics

Storage temp range	TSTG	-55°C to + 175°C
Operating junction temp range	$T_J$	-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

# FST31180 – FST31200

Figure 1  
Typical Forward Characteristics – Per Leg

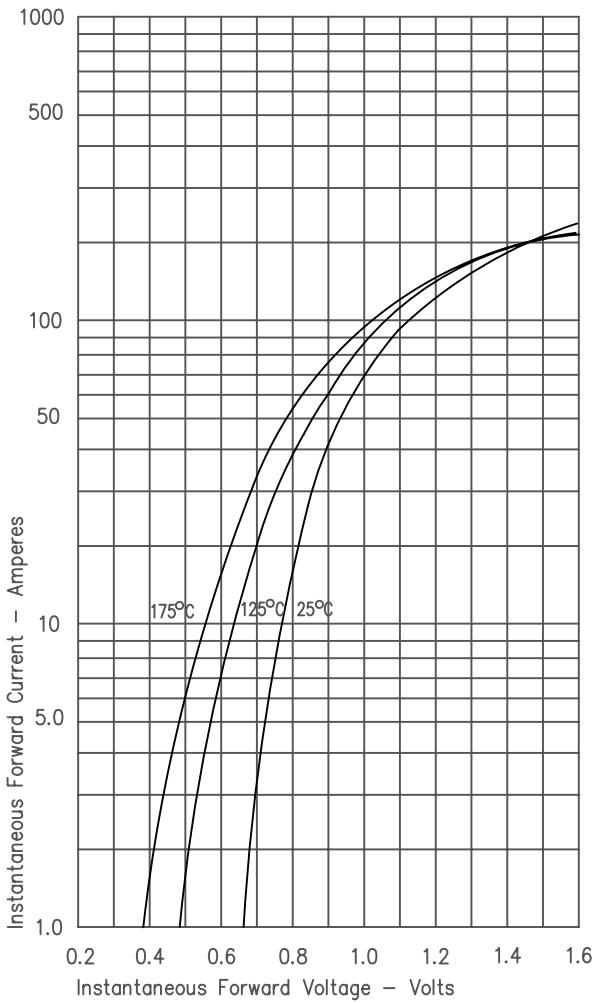


Figure 2  
Typical Reverse Characteristics – Per Leg

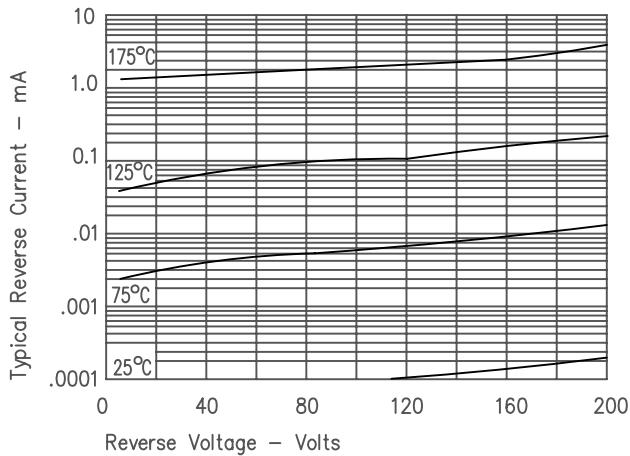


Figure 3  
Typical Junction Capacitance – Per Leg

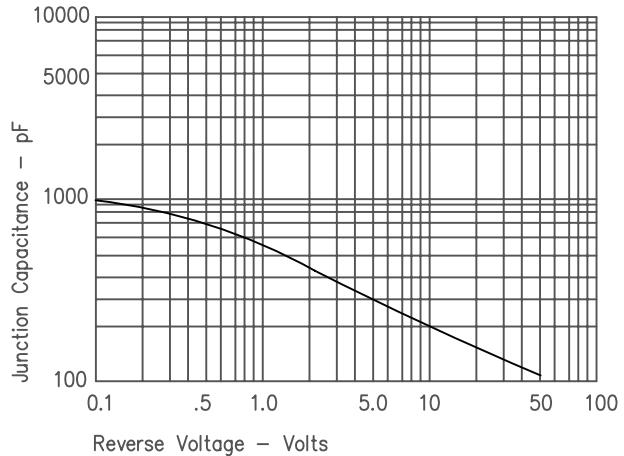


Figure 4  
Forward Current Derating – Per Leg

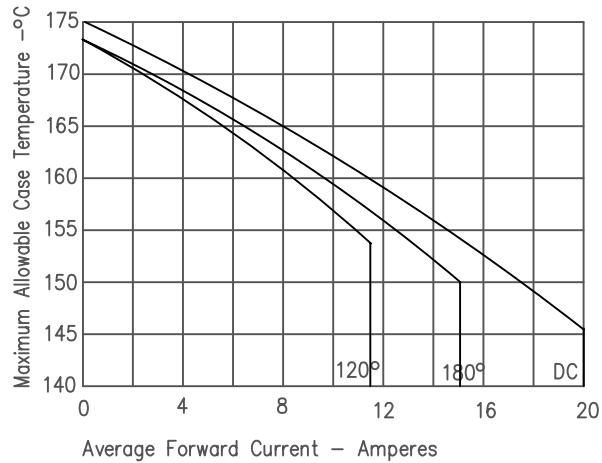


Figure 5  
Maximum Forward Power Dissipation – Per Leg

