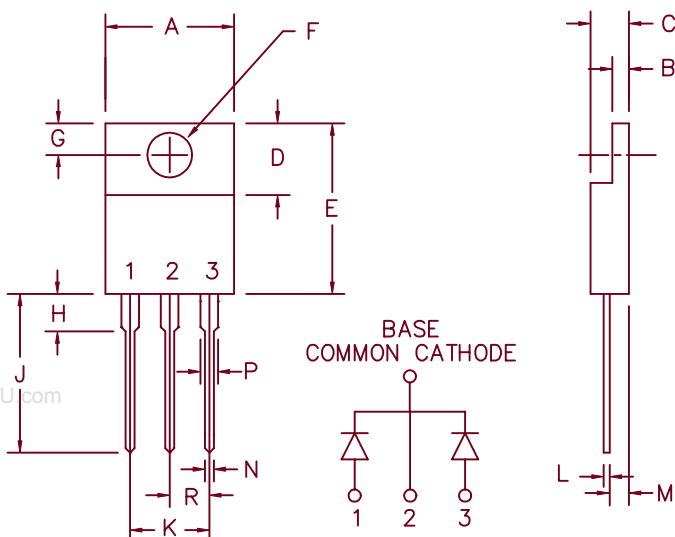


30 Amp Schottky Rectifiers

FST31100



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
FST31100	30CTQ100	100V	100V

- Schottky barrier rectifier
- Guard ring for reverse protection
- Low power loss
- 175°C Junction Temperature
- V_{RRM} 100 Volt

Electrical Characteristics

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

$I_F(AV)$ 30 Amps
 $I_F(AV)$ 15 Amps
 I_{FSM} 250 Amps
 $I_R(OV)$ 2 Amps
 V_{FM} 0.85 Volts
 V_{FM} 0.65 Volts
 I_{RM} 15 mA
 I_{RM} 250 μ A
 C_J 550 pF

$T_C = 153^\circ\text{C}$, Square wave, $R_{\theta JC} = 1.0^\circ\text{C/W}$
 $T_C = 153^\circ\text{C}$, Square wave, $R_{\theta JC} = 2.0^\circ\text{C/W}$
 8.3ms, half sine, $T_J = 175^\circ\text{C}$
 $f = 1\text{KHZ}$, 25°C , 1us square wave
 $I_{FM} = 15\text{A}$, $T_J = 25^\circ\text{C}^*$
 $I_{FM} = 15\text{A}$, $T_J = 175^\circ\text{C}^*$
 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 μ sec. Duty cycle 2%

Thermal and Mechanical Characteristics

Storage temp range
 Operating junction temp range
 Max thermal resistance per leg
 Max thermal resistance per pkg.
 Mounting torque
 Weight

TSTG
 T_J
 $R_{\theta JC}$
 $R_{\theta JC}$

-55°C to $+175^\circ\text{C}$
 -55°C to $+175^\circ\text{C}$
 2.0°C/W Junction to case
 1.0°C/W Junction to case
 15 inch pounds maximum (6-32 screw)
 .06 ounces (1.8 grams) typical

FST31100

Figure 1
Typical Forward Characteristics – Per Leg

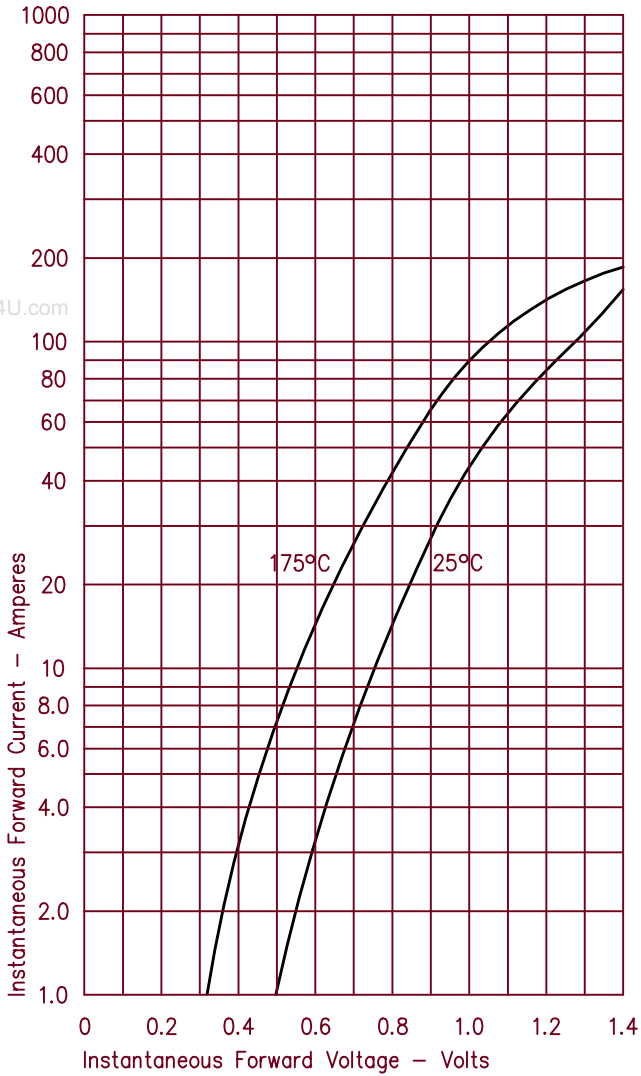


Figure 3
Typical Junction Capacitance – Per Leg

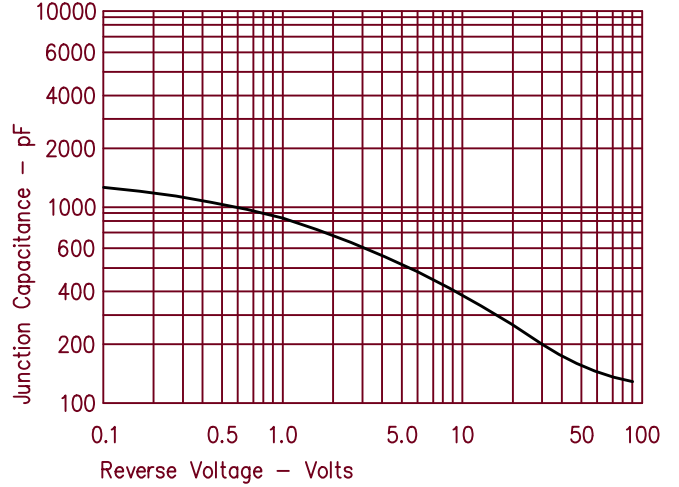


Figure 4
Forward Current Derating – Per Leg

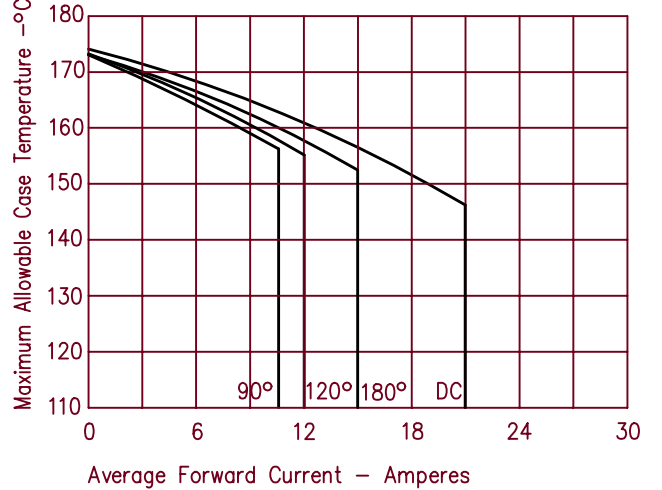


Figure 2
Typical Reverse Characteristics – Per Leg

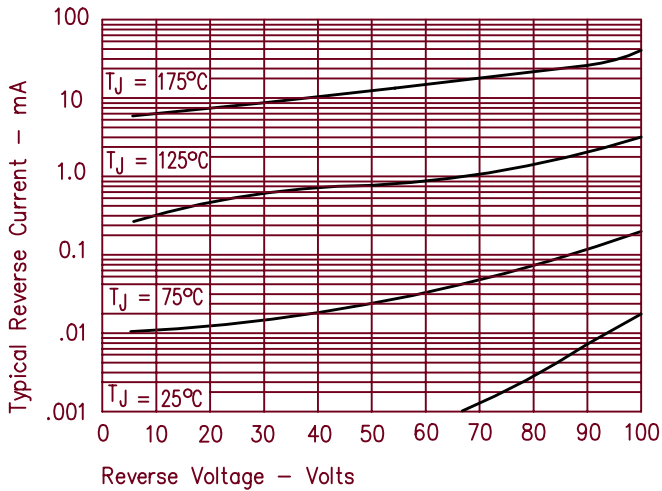


Figure 5
Maximum Forward Power Dissipation – Per Leg

