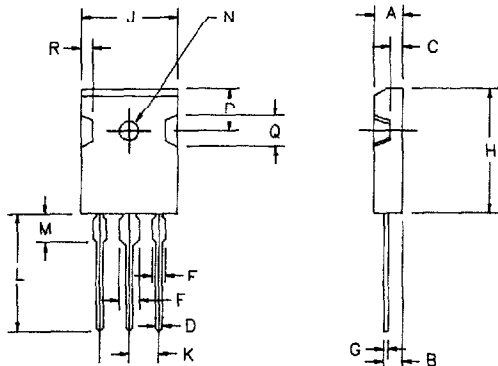


# 30Amp Schottky Barrier Rectifier FST3080 — FST3090



PLASTIC T03P

Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
A	.185	.209	4.70	5.30	
B	.110	.125	2.79	3.18	
C	.059	.098	1.50	2.50	
D	.040	.055	1.00	1.40	
E	.079	.094	2.00	2.40	
F	.118	.133	3.00	3.40	
G	.016	.031	.400	.800	
H	.860	.883	21.8	22.4	
J	.627	.650	15.9	16.5	
K	.215	—	5.45	—	
L	.795	.810	20.2	20.6	
M	.157	.180	4.00	4.60	
N	.118	.133	3.00	3.40	Dia.
P	.268	.300	6.80	7.62	
Q	.175	.210	4.44	5.30	
R	.068	.080	1.72	2.03	

Microsemi Catalog Number	Repetitive Peak Reverse Voltage	Transient Peak Reverse Voltage	<ul style="list-style-type: none"> <li>• Schottky Barrier Rectifier</li> <li>• Guard ring for reverse protection</li> <li>• Low power loss, high efficiency</li> <li>• High surge capacity</li> <li>• VRRM 80 to 90 Volts</li> </ul>
FST3080 FST3090	80V 90V	80V 90V	

Electrical Characteristics		
Average Forward Current per pkg.	$I_{F(AV)}$ 30Amps	$T_C = 153^\circ\text{C}$ , Square Wave, $R_{\theta JC} = 0.9^\circ\text{C/W}$
Average Forward Current per leg	$I_{F(AV)}$ 15Amps	$T_C = 153^\circ\text{C}$ , Square Wave, $R_{\theta JC} = 1.8^\circ\text{C/W}$
Maximum Surge Current per leg	$I_{FSM}$ 600 Amps	8.3ms, half sine, $T_J = 175^\circ\text{C}$
Max. Peak Forward Voltage per leg	$V_{FM}$ .60 Volts	$I_{FM} = 15\text{A}$ , $T_J = 175^\circ\text{C}^*$
Max. Peak Forward Voltage per leg	$V_{FM}$ .81 Volts	$I_{FM} = 15\text{A}$ , $T_J = 25^\circ\text{C}^*$
Max. Peak Reverse Current per leg	$I_{RM}$ 15 mA	VRRM, $T_J = 125^\circ\text{C}^*$
Max. Peak Reverse Current per leg	$I_{RM}$ 500 $\mu\text{A}$	VRRM, $T_J = 25^\circ\text{C}$
Typical Junction Capacitance	$C_J$ 570 pF	VR = 5.0V, $T_J = 25^\circ\text{C}$

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

Thermal and Mechanical Characteristics		
Storage temp range	TSTG	-40°C to 175°C
Operating junction temp range	$T_J$	-40°C to 175°C
Max thermal resistance per leg	$R_{\theta JC}$	1.8°C/W
Max thermal resistance per pkg.	$R_{\theta JC}$	0.9°C/W
Typical thermal resistance per leg	$R_{\theta JC}$	1.4°C/W
Mounting Torque		10 inch pounds maximum (4-40 screw)
Typical Weight		.22 ounces (6.36 grams) typical

**Microsemi Corp.**  
**Colorado**

# FST3080 - FST3090



Figure 1  
Typical Forward Characteristics - Per Leg

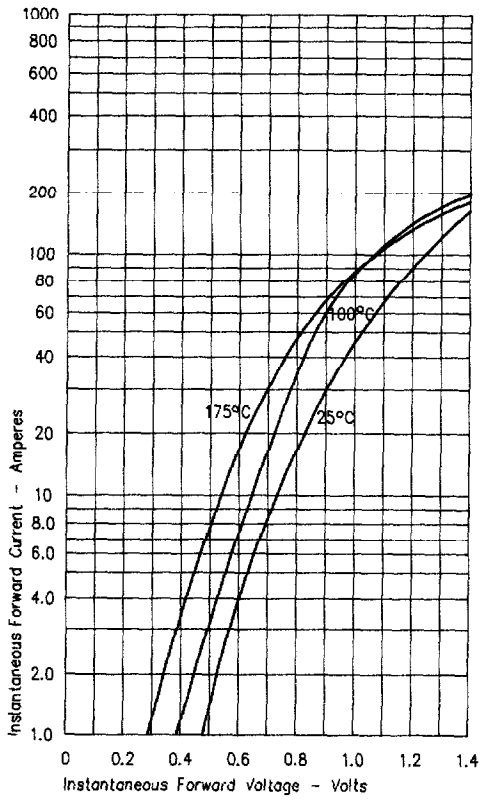


Figure 3  
Typical Junction Capacitance - Per Leg

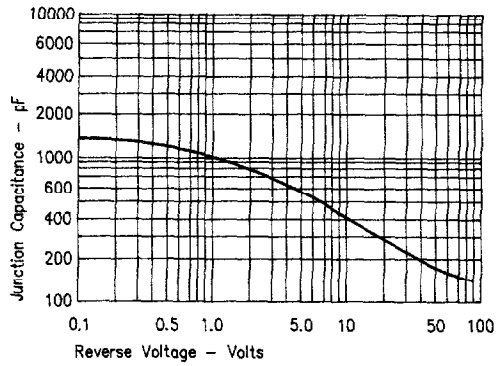


Figure 4  
Forward Current Derating - Per Leg

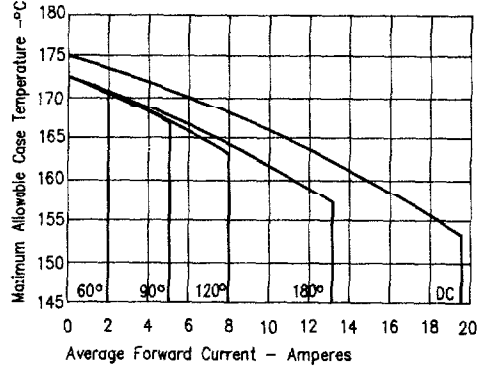


Figure 2  
Typical Reverse Characteristics - Per Leg

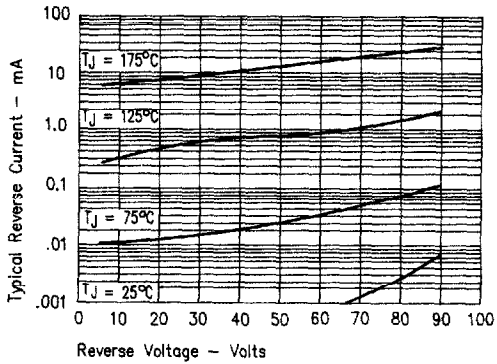


Figure 5  
Maximum Forward Power Dissipation - Per Leg

