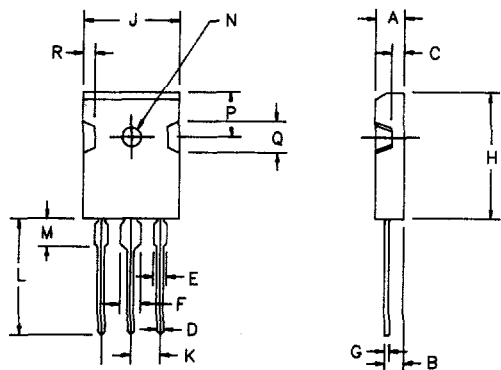


50Amp Schottky Barrier Rectifier FST5080, FST5090



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"> • Guard ring for reverse protection • Low power loss, high efficiency • High surge capacity • 175°C Junction Temperature • VRRM 80 to 90 Volts
FST5080	80V	80V	
FST5090	90V	90V	

Electrical Characteristics		
Average Forward Current per pkg.	I _{F(AV)} 50 Amps	T _C = 134°C, Square wave, R _{θJC} = 1.0°C/W
Average Forward Current per leg	I _{F(AV)} 25 Amps	T _C = 134°C, Square wave, R _{θJC} = 2.0°C/W
Maximum Surge Current per leg	I _{FSM} 700 Amps	8.3ms, half sine, T _J = 175°C
Max. Peak Forward Voltage per leg	V _{FM} .62 Volts	I _{FM} = 25A, T _J = 175°C*
Max. Peak Forward Voltage per leg	V _{FM} .82 Volts	I _{FM} = 25A, 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 920 pF	VR = 5.0V, T _J = 25°C

*Pulse test: Pulse width 300 usec. Duty Cycle 2%

Thermal and Mechanical Characteristics		
Storage temp range	T _{STG}	-40°C to +175°C
Operating junction temp range	T _J	-40°C to +175°C
Max thermal resistance per leg	R _{θJC}	2.0°C/W
Max thermal resistance per pkg.	R _{θJC}	1.0°C/W
Typical thermal resistance per leg	R _{θJC}	.95°C/W
Mounting Torque		10 inch pounds maximum (4-40 screws)
Typical Weight		.22 ounces (6.36 grams) typical

Microsemi Corp.
Colorado

FST5080, FST5090



Figure 1
Typical Forward Characteristics - Per Leg

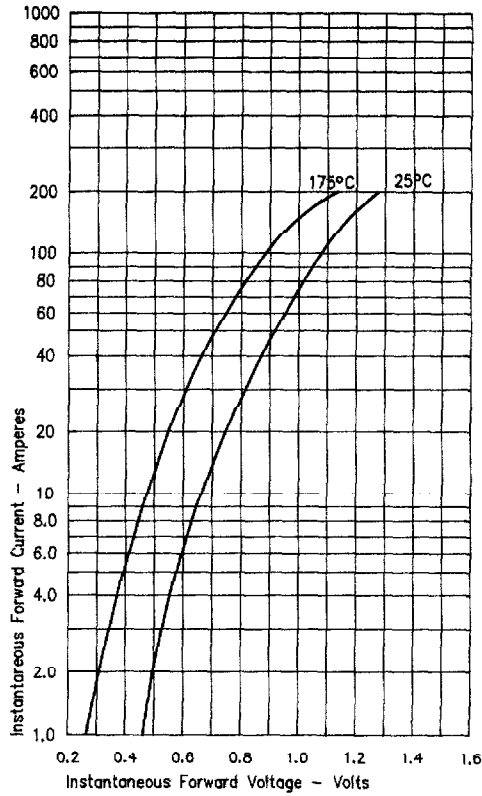


Figure 3
Typical Junction Capacitance - Per Leg

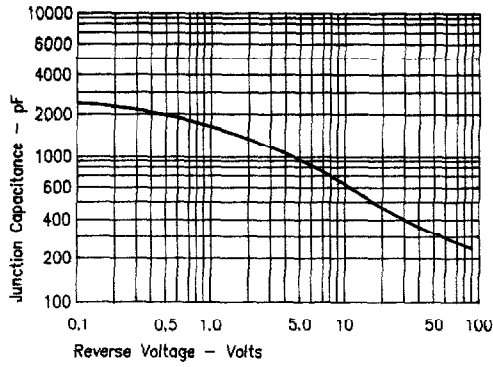


Figure 4
Forward Current Derating - Per Leg

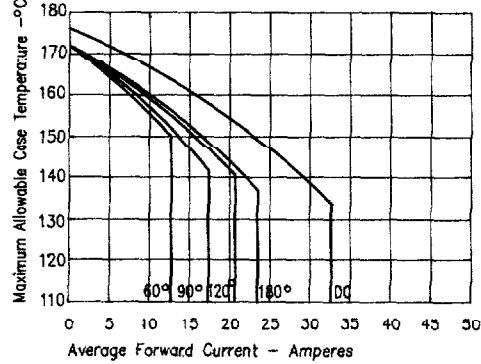


Figure 2
Typical Reverse Characteristics - Per Leg

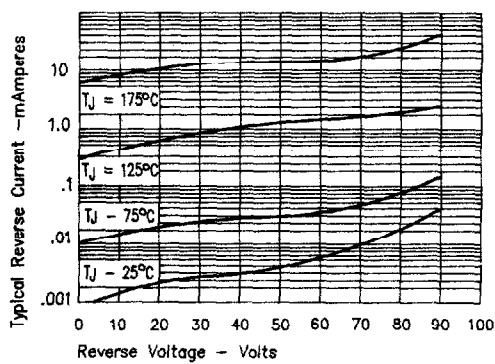


Figure 5
Maximum Forward Power Dissipation - Per Leg

