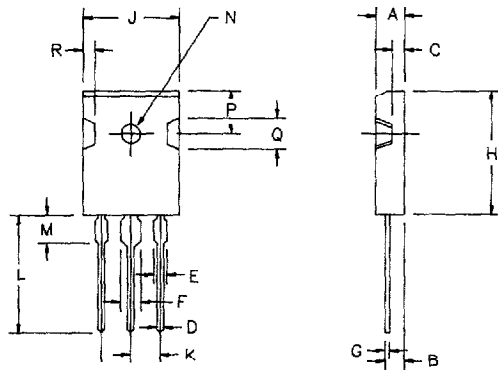


30Amp Schottky Barrier Rectifier FST3030 — FST3050



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

FST3030
FST3040
FST3045
FST3050

Repetitive Peak
Reverse Voltage

30V
40V
45V
50V

Transient Peak
Reverse Voltage

30V
40V
45V
50V

- Schottky Barrier Rectifier
- Guard ring for reverse protection
- Low power loss, high efficiency
- High surge capacity
- VRRM 30 to 50 Volts

Electrical Characteristics

Average Forward Current per pkg.	$I_F(AV)$ 30Amps	$T_C = 157^\circ C$, Square wave, $R_{\theta JC} = 0.9^\circ C/W$
Average Forward Current per leg	$I_F(AV)$ 15Amps	$T_C = 157^\circ C$, Square wave, $R_{\theta JC} = 1.8^\circ C/W$
Maximum Surge Current per leg	I_{FSM} 600 Amps	8.3ms, half sine, $T_J = 175^\circ C$
Max. Peak Forward Voltage per leg	V_{FM} .50 Volts	$I_{FM} = 15A$, $T_J = 175^\circ C^*$
Max. Peak Forward Voltage per leg	V_{FM} .66 Volts	$I_{FM} = 15A$, $T_J = 25^\circ C^*$
Max. Peak Reverse Current per leg	I_{RM} 15 mA	V_{RRM} , $T_J = 125^\circ C^*$
Max. Peak Reverse Current per leg	I_{RM} 500 μA	V_{RRM} , $T_J = 25^\circ C$
Typical Junction Capacitance	C_J 890pF	$V_R = 5.0V$, $T_J = 25^\circ C$

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

Thermal and Mechanical Characteristics

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

Microsemi Corp.
Colorado

FST3030 — FST3050



Figure 1
Typical Forward Characteristics — Per Leg

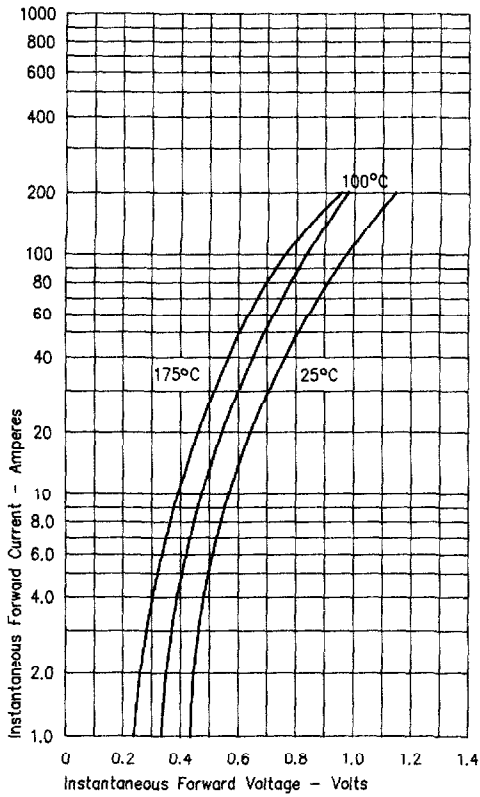


Figure 3
Typical Junction Capacitance — Per Leg

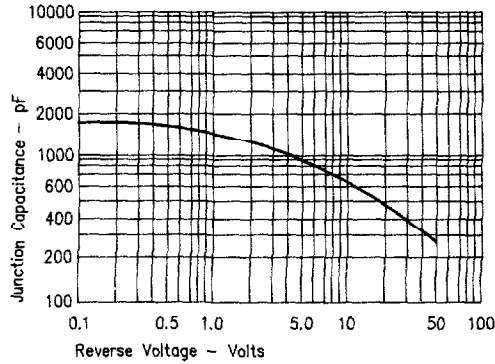


Figure 4
Forward Current Derating — Per Leg

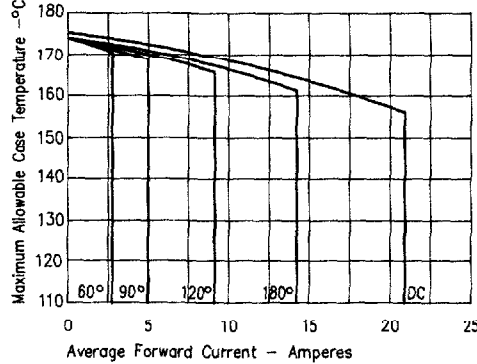


Figure 2
Typical Reverse Characteristics — Per Leg

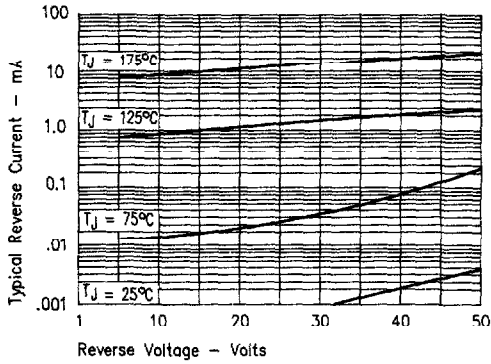


Figure 5
Maximum Forward Power Dissipation — Per Leg

