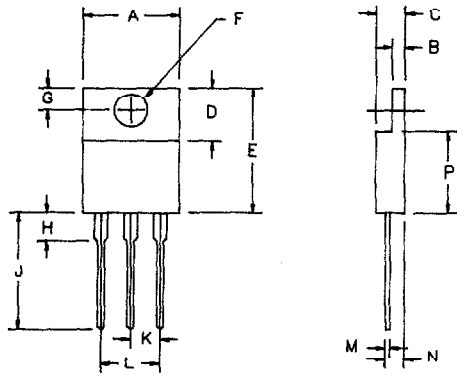


20 Amp Schottky Barrier Rectifiers FST2025 - FST2045



PLASTIC TO220

Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
A	.390	.415	9.90	10.5	Dia.
B	.050	.055	1.27	1.40	
C	.180	.185	4.57	4.70	
D	.248	.260	6.30	6.60	
E	.590	.605	14.98	15.40	
F	.145	.150	3.68	3.81	
G	.108	.120	2.74	3.05	
H	.163	.170	4.14	4.32	
J	.540	.570	13.72	14.5	
K	.087	.091	2.20	2.31	
L	.200	.205	5.08	5.21	
M	.021	.025	.533	.635	
N	.125	.140	3.18	3.56	
P	.335	.342	8.50	8.69	

Technical Bulletin

Microsemi Catalog Number	Repetitive Peak Reverse Voltage	Transient Peak Reverse Voltage
FST2025	25V	25V
FST2035	35V	35V
FST2040	40V	40V
FST2045	45V	45V

- Schottky barrier rectifier
- Guard ring for reverse protection
- Low power loss, high efficiency
- High surge capacity
- V_{RRM} 25 to 45 Volts

Electrical Characteristics

Average Forward Current per pkg.	$I_F(AV)$ 20 Amps	$T_C = 139^\circ C$, Square wave, $R_{\theta JC} = 2.8^\circ C/W$
Average Forward Current per leg	$I_F(AV)$ 10 Amps	$T_C = 139^\circ C$, Square wave, $R_{\theta JC} = 5.6^\circ C/W$
Maximum Surge Current per leg	I_{FSM} 500 Amps	8.3ms, half sine, $T_J = 175^\circ C$
Max. Peak Forward Voltage per leg	V_{FM} .48 Volts	$I_{FM} = 10A$, $T_J = 175^\circ C^*$
Max. Peak Forward Voltage per leg	V_{FM} .65 Volts	$I_{FM} = 10A$, $T_J = 25^\circ C^*$
Max. Peak Reverse Current per leg	I_{RM} 10 mA	V_{RRM} , $T_J = 125^\circ C^*$
Max. Peak Reverse Current per leg	I_{RM} 250 μA	V_{RRM} , $T_J = 25^\circ C$
Typical Junction Capacitance	C_J 660 pF	$VR = 5.0V$, $T_J = 25^\circ C$

*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	$R_{\theta JC}$	$5.6^\circ C/W$
Max thermal resistance per pkg.	$R_{\theta JC}$	$2.8^\circ C/W$
Typical thermal resistance per leg	$R_{\theta JC}$	$4.7^\circ C/W$
Mounting torque		15 inch pounds maximum (6-32 screw)
Typical Weight		.08 ounces (2.3 grams) typical

Microsemi Corp.
Colorado

FST2025 - FST2045



Figure 1
Typical Forward Characteristics - Per Leg

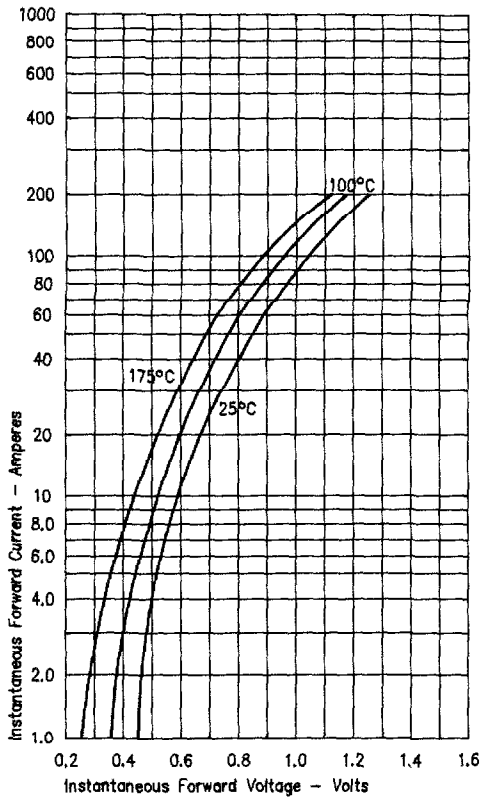


Figure 3
Typical Junction Capacitance - Per Leg

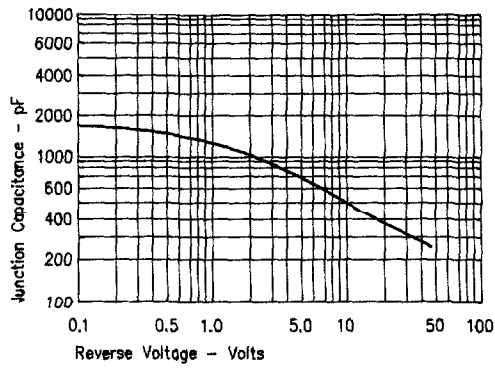


Figure 4
Forward Current Derating - Per Leg

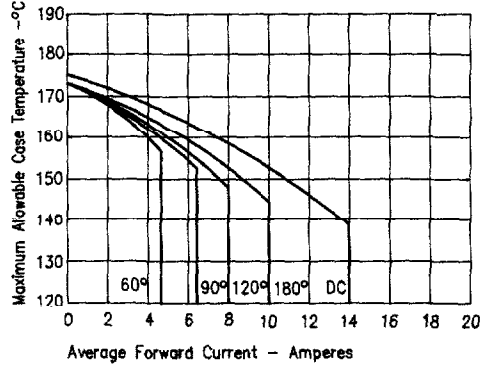


Figure 2
Typical Reverse Characteristics - Per Leg

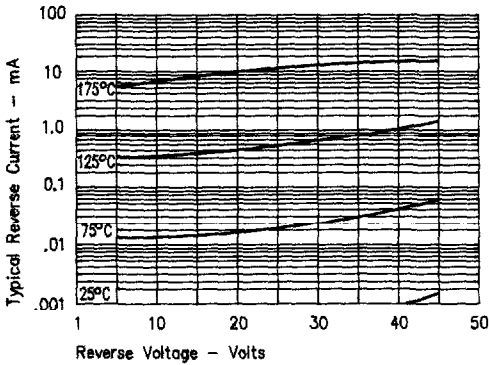


Figure 5
Maximum Forward Power Dissipation - Per Leg

