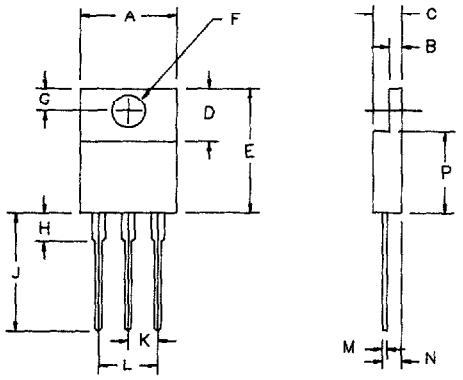
20 Amp Schottky Barrier Rectifiers
FST2050 – FST2060



PLASTIC TO220

Dim.	Inches		Millimeter		
	Minimum	Maximum	Minimum	Maximum	Notes
A	.390	.415	9.90	10.5	
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	Dia.
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	

Microsemi Catalog Number	Repetitive Peak Reverse Voltage	Transient Peak Reverse Voltage
FST2050	50V	50V
FST2060	60V	60V

- Schottky barrier rectifier
- Guard ring for reverse protection
- Low power loss, high efficiency
- High surge capacity
- V_{RRM} 50 to 60 Volts

Electrical Characteristics

Average Forward Current per pkg.	$I_{F(AV)}$ 20 Amps	T_C = 137°C, Square wave, $R_{\theta JC}$ = 2.8°C/W
Average Forward Current per leg	$I_{F(AV)}$ 10 Amps	T_C = 137°C, Square wave, $R_{\theta JC}$ = 5.6°C/W
Maximum Surge Current per leg	I_{FSM} 500 Amps	8.3ms, half sine, T_J = 175°C
Max. Peak Forward Voltage per leg	V_{FM} .53 Volts	I_{FM} = 10A, T_J = 175°C *
Max. Peak Forward Voltage per leg	V_{FM} .67 Volts	I_{FM} = 10A, T_J = 25°C *
Max. Peak Reverse Current per leg	I_{RM} 10 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 570 pF	V_R = 5.0V, T_J = 25°C

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

Thermal and Mechanical Characteristics

Storage temp range	TSTG	−40°C to + 175°C
Operating junction temp range	TJ	−40°C to + 175°C
Max thermal resistance per leg	$R_{\theta JC}$	5.6°C/W
Max thermal resistance per pkg.	$R_{\theta JC}$	2.8°C/W
Typical thermal resistance per leg	$R_{\theta JC}$	4.67°C/W
Typical Weight		.08 ounces (2.3 grams) typical

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FST2050, FST2060

C

Figure 1
Typical Forward Characteristics – per leg

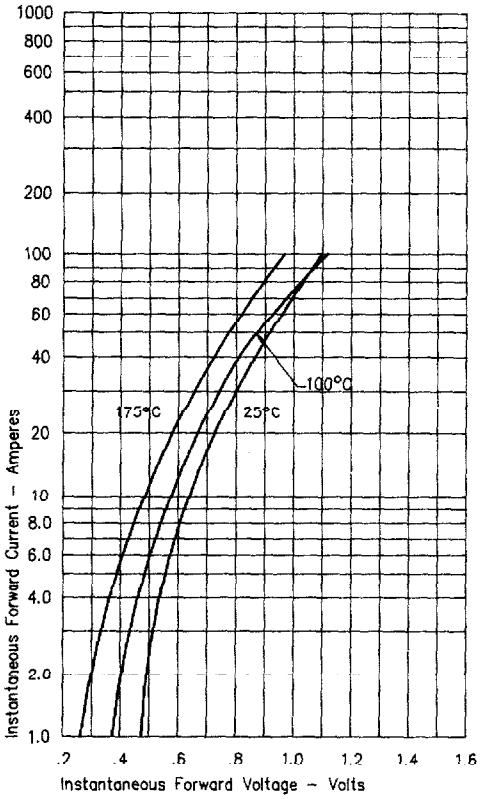

Figure 2
Typical Reverse Characteristics – per leg

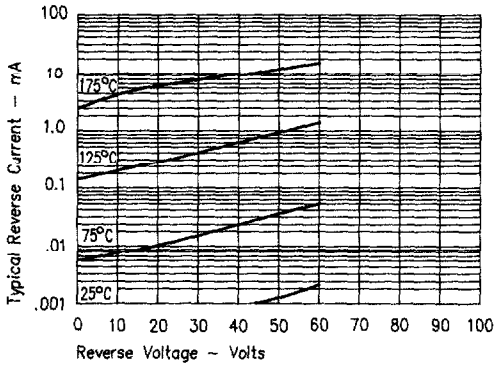

Figure 3
Typical Junction Capacitance – per leg

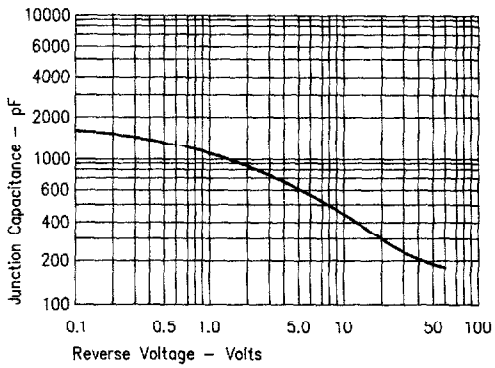

Figure 4
Forward Current Derating – per leg

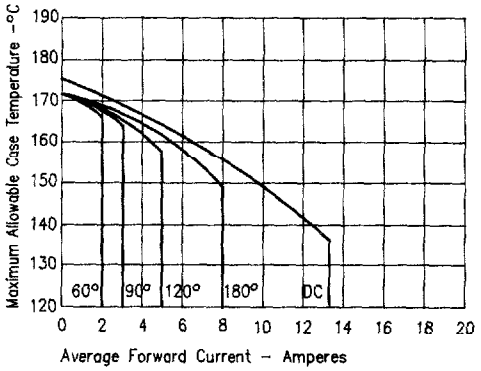

Figure 5
Maximum Forward Power Dissipation – per leg