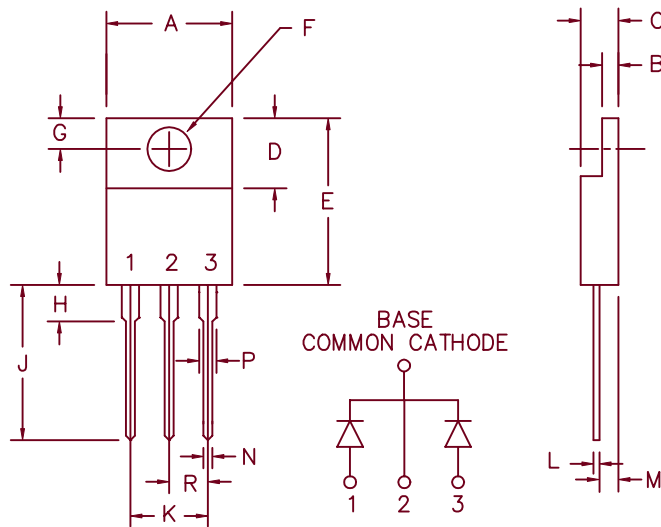


40 Amp Schottky OR'ing Rectifier FST4520



Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
A	.390	.415	9.91	10.54	
B	.045	.055	1.14	1.40	
C	.180	.190	4.57	4.83	
D	.245	.260	6.22	6.60	
E	.550	.650	13.97	16.51	
F	.139	.161	3.53	4.09	Dia.
G	.100	.135	2.54	3.43	
H	---	.250	---	6.35	
J	.500	.580	12.70	14.73	
K	.190	.210	4.83	5.33	
L	.014	.022	.357	.559	
M	.080	.115	2.03	2.92	
N	.015	.040	.380	1.02	
P	.045	.070	1.14	1.78	
R	.090	.110	2.29	2.79	

PLASTIC TO-220AB

Microsemi Catalog Number	Industry Part Number	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
FST4520	47CTQ020	20V	20V

- Schottky barrier rectifier
- $V_F @ 20A, 125^\circ C = 0.29V$
- $125^\circ C$ Junction temperature
- High surge capacity
- Guard ring for reverse protection

Electrical Characteristics

Average Forward Current per leg	$I_{F(AV)} 20$ Amps	$T_C = 102^\circ C$
Average Forward Current per pkg.	$I_{F(AV)} 40$ Amps	$T_C = 102^\circ C$
Maximum Surge Current per leg	$I_{FSM} 250$ Amps	8.3ms, half sine
Max. repetitive reverse current	$I_{R(OV)} 2$ Amps	$f = 1KHZ, 25^\circ C, 1\mu s$ square wave
Max. Peak Forward Voltage per leg	$V_{FM} 0.40$ Volts	$I_{FM} = 20A, T_J = 25^\circ C^*$
Typ. Peak Forward Voltage per leg	$V_{FM} 0.29$ Volts	$I_{FM} = 20A, T_J = 125^\circ C^*$
Max. Peak Reverse Current per leg	$I_{RM} 10$ mA	$V_{RRM, T_J} = 25^\circ C$
Typ. Peak Reverse Current per leg	$I_{RM} 425$ mA	$V_{RRM, T_J} = 100^\circ C^*$
Typ. Reverse Current per leg	$I_{RM} 175$ mA	$V_R = 5.0V, T_J = 100^\circ C^*$
Typical junction capacitance per leg	$C_J 1550$ pF	$V_R = 5.0V, T_J = 25^\circ C$

*Pulse test: Pulse width 300 μ sec. Duty cycle 2%

Thermal and Mechanical Characteristics

Storage temp range	TSTG	$-55^\circ C$ to $+150^\circ C$
Operating junction temp range	T_J	$-55^\circ C$ to $+125^\circ C$
Max thermal resistance per leg	$R_{\theta JC}$	1.5 $^\circ C/W$ Junction to case
Max thermal resistance per pkg	$R_{\theta JC}$	0.8 $^\circ C/W$ Junction to case
Mounting torque		8-12 inch pounds (6-32 screw)
Weight		.06 ounces (1.8 grams) typical

FST4520

Figure 1
Typical Forward Characteristics – Per Leg

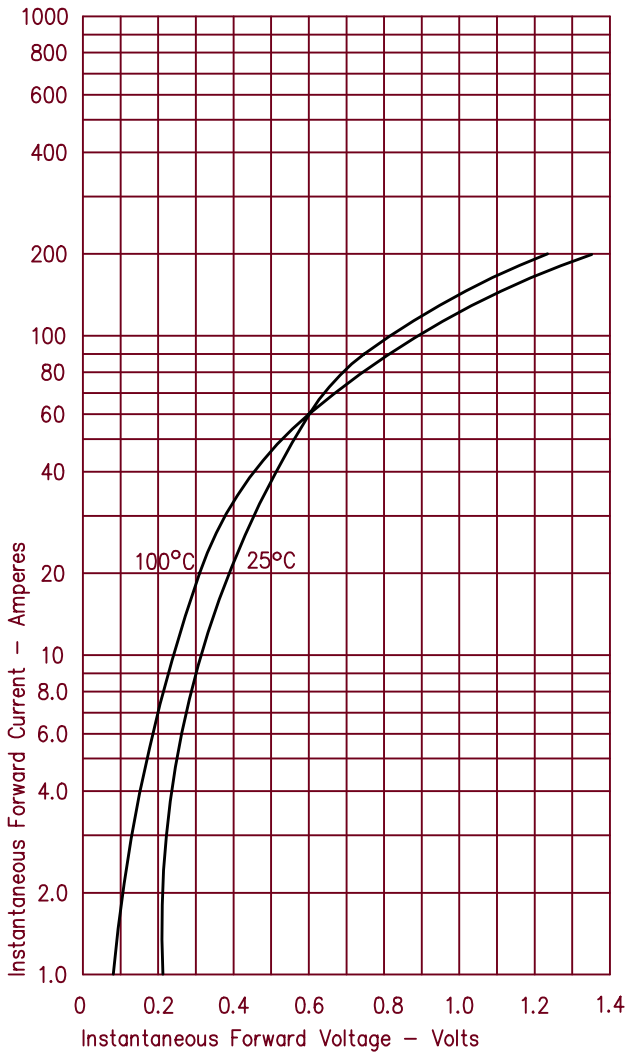


Figure 3
Typical Junction Capacitance – Per Leg

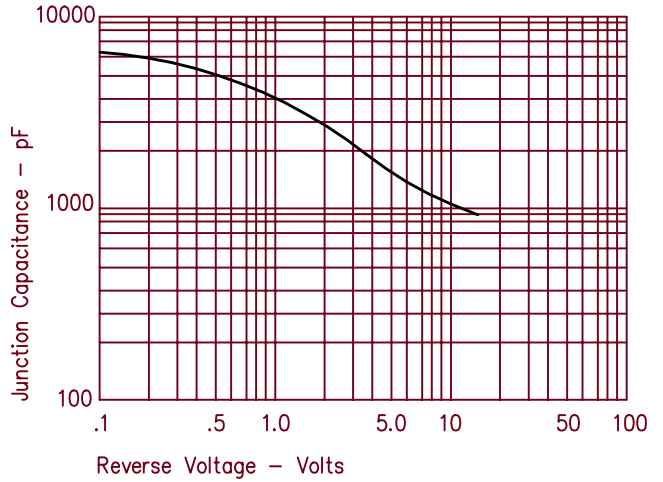


Figure 4
Forward Current Derating – Per Leg

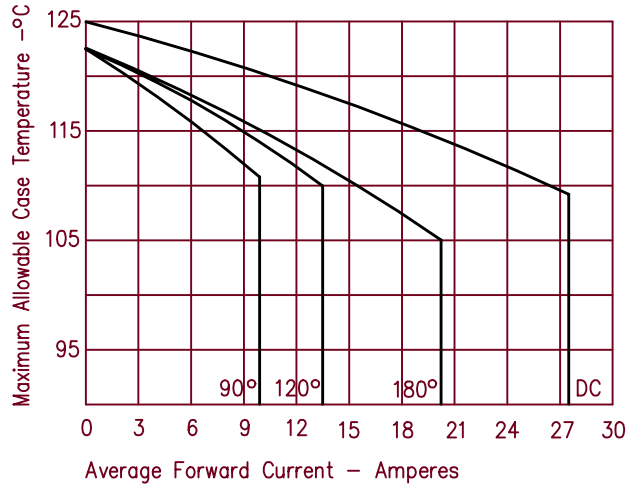


Figure 2
Typical Reverse Characteristics – Per Leg

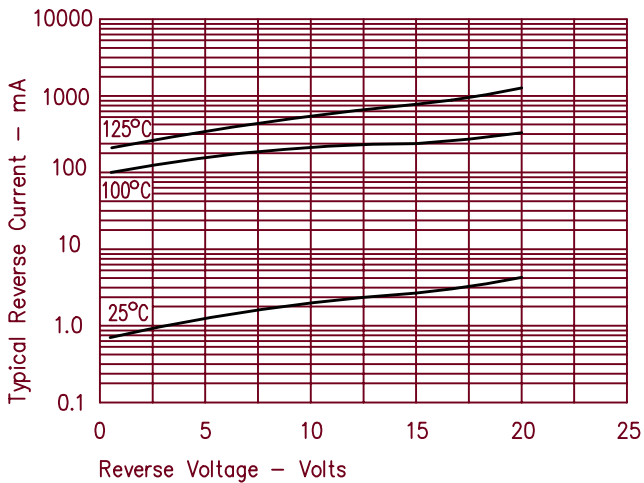
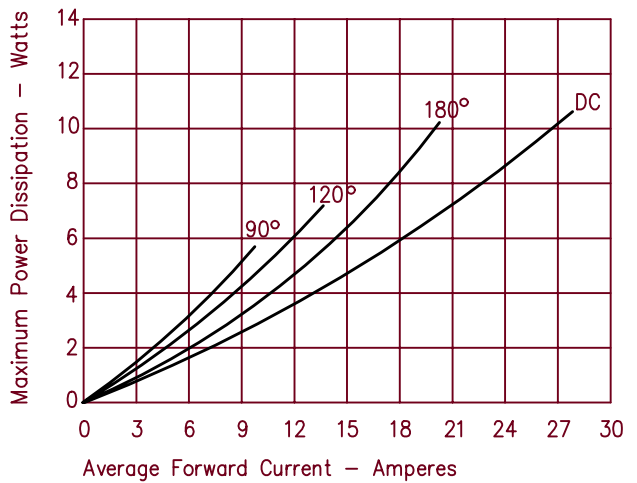


Figure 5
Maximum Forward Power Dissipation – Per Leg



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