

	E502650
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Features

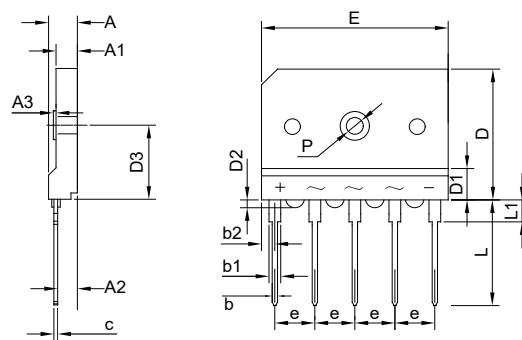
- Halogen Free. "Green" Device (Note 1)
- Glass Passivated Chip Junction
- High Surge Forward Current Capability
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant (Note 2)("P" Suffix Designates RoHS Compliant. See Ordering Information)

Maximum Ratings @ 25°C (Unless Otherwise Specified)

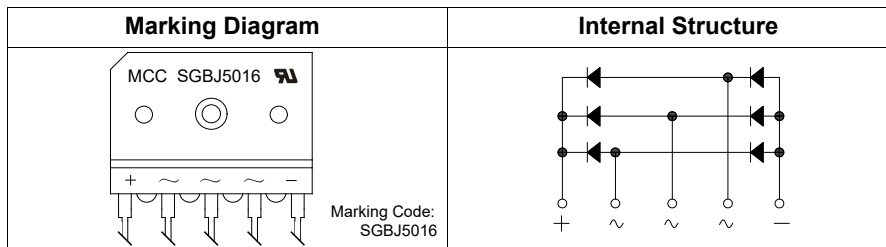
Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	1600	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_R		
RMS Reverse Voltage	V_{RMS}	1120	V
Average Rectified Forward Current @ $T_C=100^\circ\text{C}$ (With Heatsink)	$I_{F(AV)}$	50	A
Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave	I_{FSM}	500	A
Non-Repetitive Peak Surge Current @ 1ms Square Wave		1000	
I^2t Rating for Fusing @ $1\text{ms} \leq t \leq 8.3\text{ms}$	I^2t	1037.5	A^2s
Dielectric strength @ Terminals to Case, AC 1 Minute	V_{dis}	2.5	KV

**50 Amp
Bridge Rectifier
1600 Volts**

SGBJ



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.205	0.220	5.20	5.60	
A1	0.150	0.165	3.80	4.20	
A2	0.138	0.154	3.50	3.90	
A3	0.016	0.024	0.40	0.60	
b	0.035	0.043	0.90	1.10	
b1	0.083	0.091	2.10	2.30	
b2	0.087	0.102	2.20	2.60	
c	0.024	0.031	0.60	0.80	
D	0.972	0.996	24.70	25.30	
D1	0.201	0.220	5.10	5.60	
D2	0.051	0.075	1.30	1.90	
D3	0.547	0.571	13.90	14.50	
E	1.366	1.390	34.70	35.30	
e	0.283	0.307	7.20	7.80	
L	0.768	0.791	19.50	20.10	
L1	0.154	0.177	3.90	4.50	
P	0.106	0.146	2.70	3.70	∅



Note:
 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
 2. High temperature solder exemption applied, see EU directive annex 7a.

Thermal characteristics

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
T_J	Operating Junction Temperature Range		-55		150	°C
T_{stg}	Storage Temperature Range		-55		150	°C
$R_{th(J-C)}$	Thermal Resistance from Junction to Case	Note 1		0.5		°C/W
$R_{th(J-A)}$	Thermal Resistance from Junction to Ambient	Without Heatsink		18		°C/W

Note:

1. Device mounted on 75mm x 45mm x 5.5mm Aluminum Plate Heatsink.

Mechanical Data

Mounting Torque: 5 kg·cm(Recommended); 8 kg·cm(Max.)

Electrical Characteristics @ 25°C Unless Otherwise Specified(Per Diode)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage	V_F	$I_F=25A; T_J=25^\circ C$			1.1	V
Reverse Current	I_R	at Rated $V_R; T_J=25^\circ C$ at Rated $V_R; T_J=125^\circ C$			5 1000	μA
Junction Capacitance	C_J	$V_R=4V; f=1MHz; T_J=25^\circ C$		200		pF

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

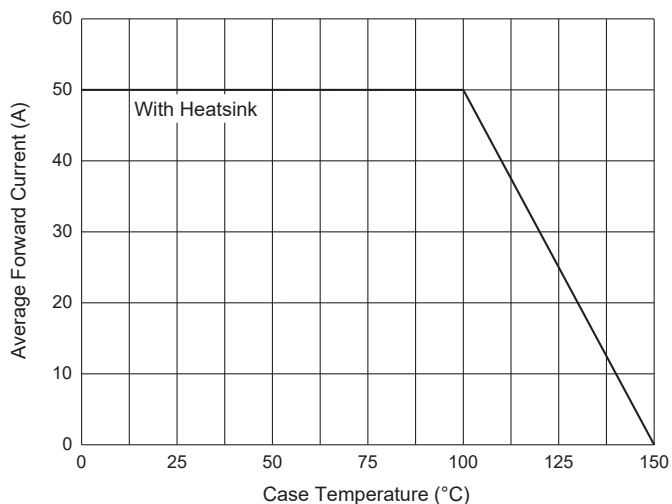


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current (Per Diode)

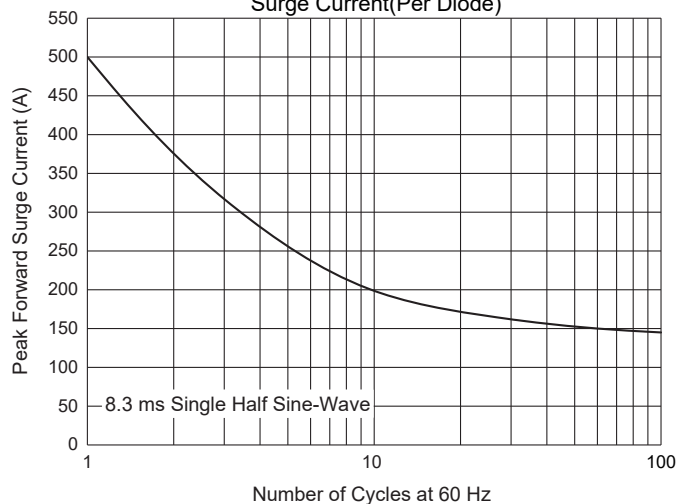


Fig. 3 - Typical Forward Characteristics (Per Diode)

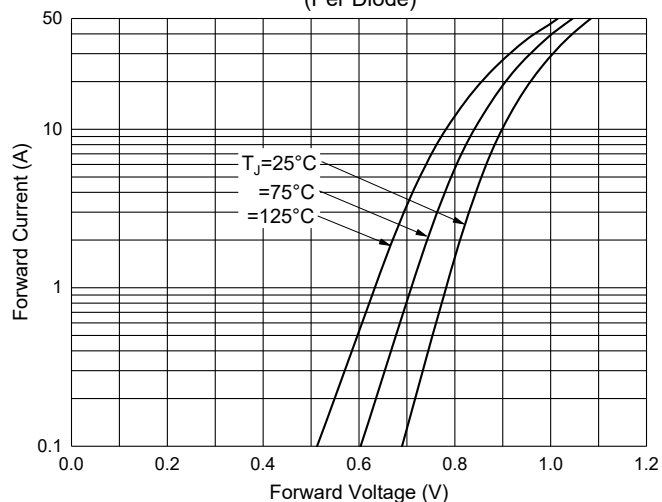


Fig. 4 - Typical Reverse Leakage Characteristics (Per Diode)

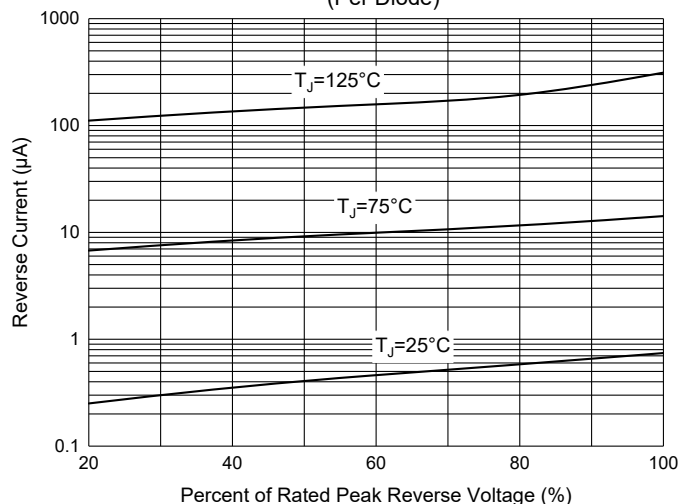
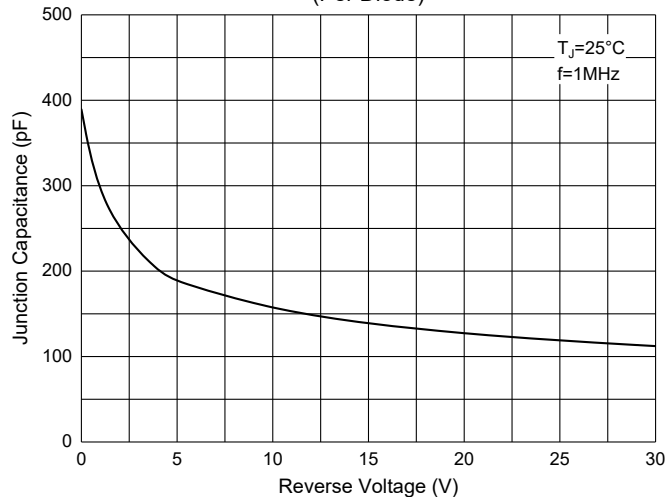


Fig. 5 - Typical Capacitance Characteristics (Per Diode)



Ordering Information

Device	Packing
Part Number-BP	Bulk:10pcs/Tube,1000pcs/Carton

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