	E502650

Features

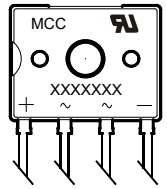
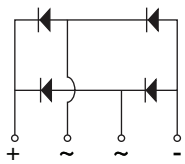
- Glass Passivated Chip Junction
- High Surge Forward Current Capability
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant (Note 1)("P" Suffix Designates RoHS Compliant. See Ordering Information)
- Halogen Free. "Green" Device (Note 2)

3 Amp Bridge Rectifier 50 to 1000 Volts

Maximum Ratings @ 25°C (Unless Otherwise Specified)

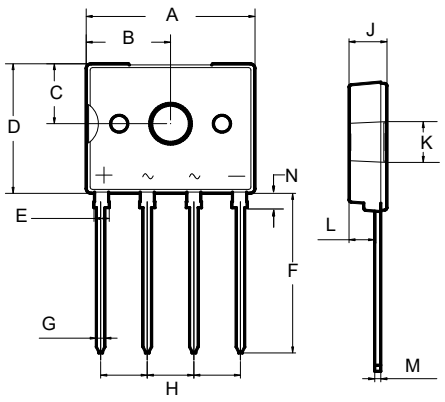
Parameter	Symbol	Value							Unit
		UD3KB05	UD3KB10	UD3KB20	UD3KB40	UD3KB60	UD3KB80	UD3KB100	
Peak Repetitive Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Working Peak Reverse Voltage	V_{RWM}								
DC Blocking Voltage	V_R								
RMS Reverse Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Average Rectified Forward Current @ T_C=140°C	$I_{F(AV)}$	3							A
Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave	I_{FSM}	90							A
Non-Repetitive Peak Surge Current @ 1ms Square Wave		180							
I^2t Rating for Fusing @1ms≤t≤8.3ms	I^2t	35							A^2s
Dielectric strength @Terminals to Case, AC 1 Minute	V_{dis}	2							KV

Part Number	Marking Code
UD3KB05	UD3KB05
UD3KB10	UD3KB10
UD3KB20	UD3KB20
UD3KB40	UD3KB40
UD3KB60	UD3KB60
UD3KB80	UD3KB80
UD3KB100	UD3KB100

Marking Diagram	Internal Structure
 XXXXXXX: Marking Code	

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

D3K



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.524	0.563	13.30	14.30	
B	0.252	0.291	6.40	7.40	
C	0.177	0.217	4.50	5.50	
D	0.406	0.445	10.30	11.30	
E	0.041	0.057	1.05	1.45	
F	0.516	0.531	13.10	13.50	
G	0.024	0.033	0.60	0.85	
H	0.146	0.154	3.70	3.90	
J	0.102	0.142	2.60	3.60	
K	0.122	0.134	3.10	3.40	
L	0.079	0.087	2.00	2.20	
M	0.016	0.024	0.40	0.60	
N	0.035	0.059	0.90	1.50	

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
$Rth_{(J-C)}$	Thermal Resistance from Junction to Case	Note 1		1.5		°C/W
$Rth_{(J-A)}$	Thermal Resistance from Junction to Ambient	Without Heatsink		55		°C/W

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

Mechanical Data

Recommended Mounting Torque: 0.5 N•m

Electrical Characteristics @ 25°C Unless Otherwise Specified

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage	V_F	I_F=1.5A;T_J=25°C			1.0	V
Reverse Current	I_R	at Rated V_R;T_J=25°C at Rated V_R;T_J=125°C			5 100	μA
Junction Capacitance	C_J	V_R=4V;f=1MHz;T_J=25°C		25		pF

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

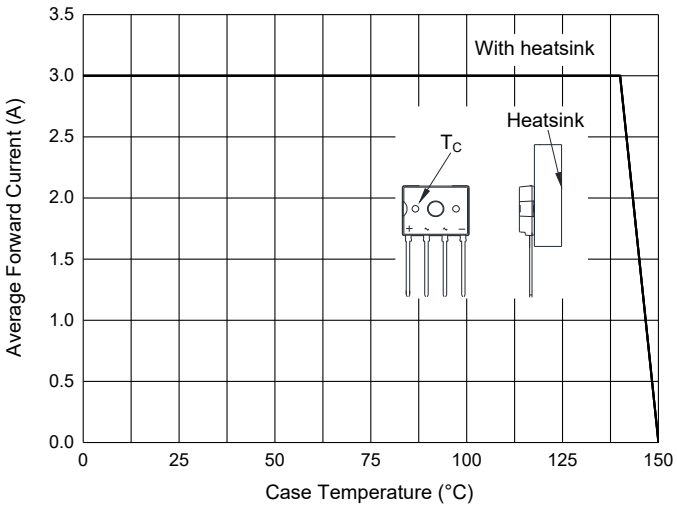


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

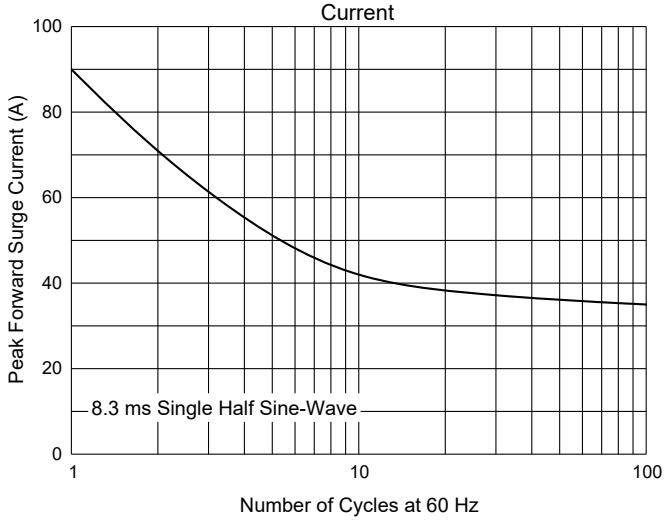


Fig. 3 - Typical Forward Characteristics

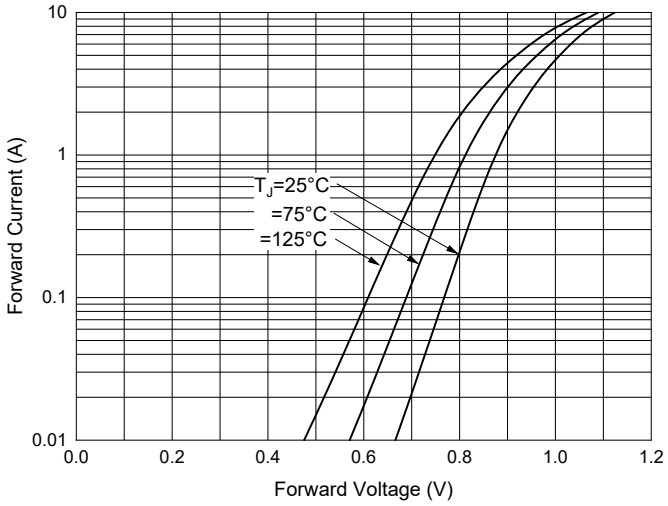


Fig. 4 - Typical Reverse Leakage Characteristics

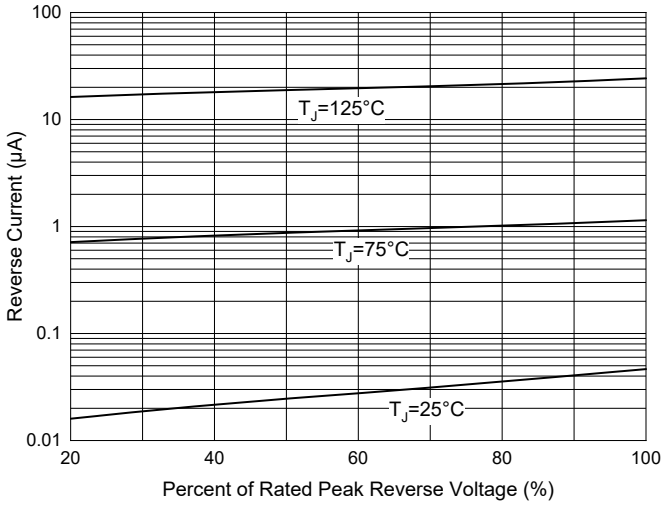
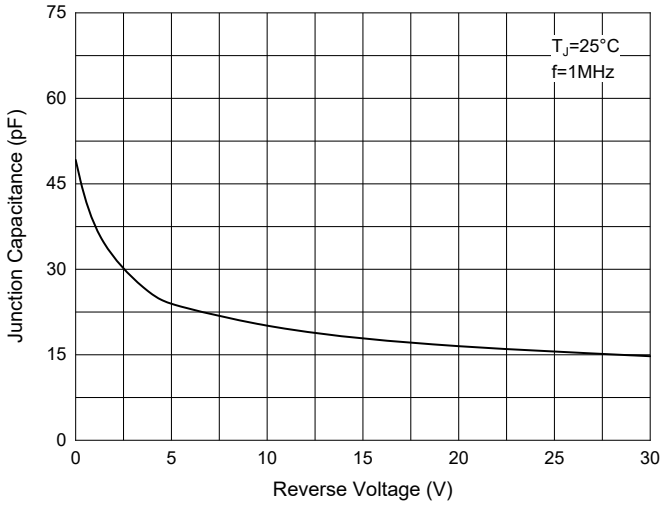


Fig. 5 - Typical Capacitance Characteristics



Ordering Information

Device	Packing
Part Number-BP	Bulk:25pcs/Tube,1500pcs/Box,6Kpcs/Carton