



E502650

## Features

- Halogen Free Available Upon Request By Adding Suffix "-HF"
- 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)

## Maximum Ratings @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Value							Unit
		UD2K B05	UD2K B10	UD2K B20	UD2K B40	UD2K B60	UD2K B80	UD2K B100	
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Working Peak Reverse Voltage	V <sub>RWM</sub>								
DC Blocking Voltage	V <sub>R</sub>								
RMS Reverse Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Average Rectified Forward Current @ T <sub>C</sub> =140°C	I <sub>F(AV)</sub>	2							A
Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave	I <sub>FSM</sub>	60							A
Non-Repetitive Peak Surge Current @ 1ms Square Wave		120							
I <sup>2</sup> t Rating for Fusing @1ms≤t≤8.3ms	I <sup>2</sup> t	15							A <sup>2</sup> s
Dielectric strength @Terminals to Case, AC 1 Minute	V <sub>dis</sub>	2							KV

## Marking Code

Part Number	Marking Code
UD2KB05	UD2KB05
UD2KB10	UD2KB10
UD2KB20	UD2KB20
UD2KB40	UD2KB40
UD2KB60	UD2KB60
UD2KB80	UD2KB80
UD2KB100	UD2KB100

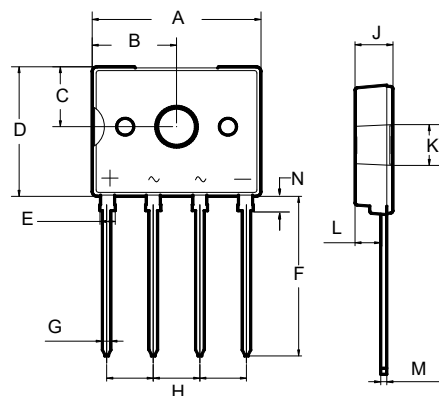
## Internal Structure

Simplified Outline	Graphic Symbol
<p>XXXXXXX: Marking Code</p>	

Note: 1. High Temperature Solder Exemption Applied, see EU Directive Annex 7a.

# 2 Amp Bridge Rectifier 50 to 1000 Volts

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
$R_{th(J-C)}$	Thermal Resistance from Junction to Case	Note 1		1.5		°C/W
$R_{th(J-A)}$	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	$V_F$	$I_F=1A; T_J=25^{\circ}C$			1.0	V
Reverse Current	$I_R$	at Rated $V_R; T_J=25^{\circ}C$ at Rated $V_R; T_J=125^{\circ}C$			5 100	uA
Junction Capacitance	$C_J$	$V_R=4V; f=1MHz; T_J=25^{\circ}C$		19		pF

## Curve Characteristics

Fig. 1 - Forward Current Derating Curve

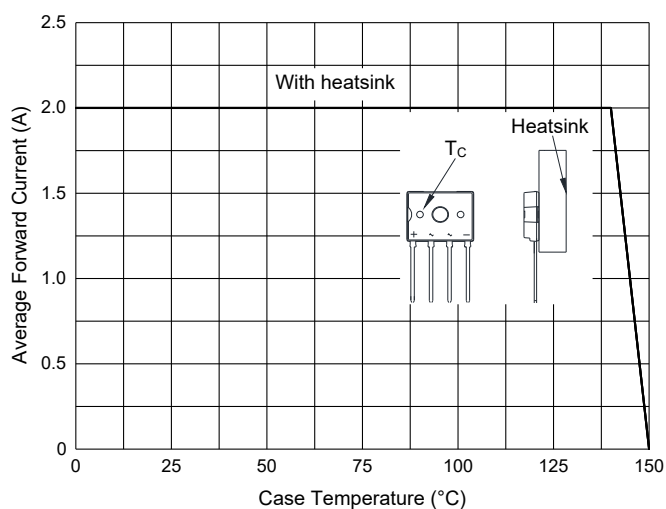


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

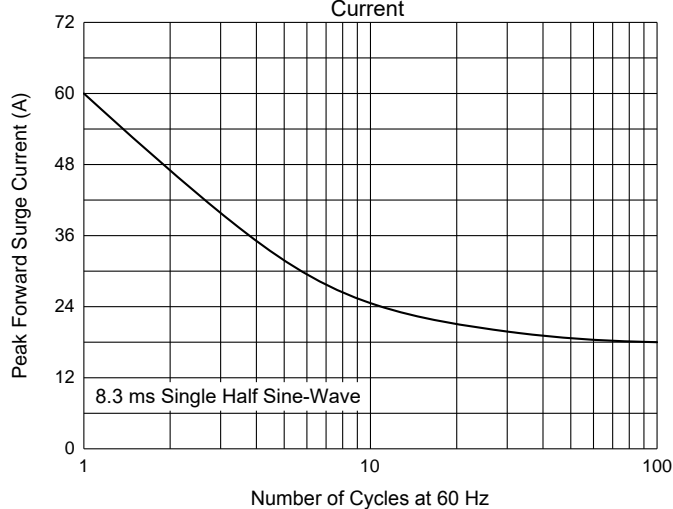


Fig. 3 - Typical Forward Characteristics

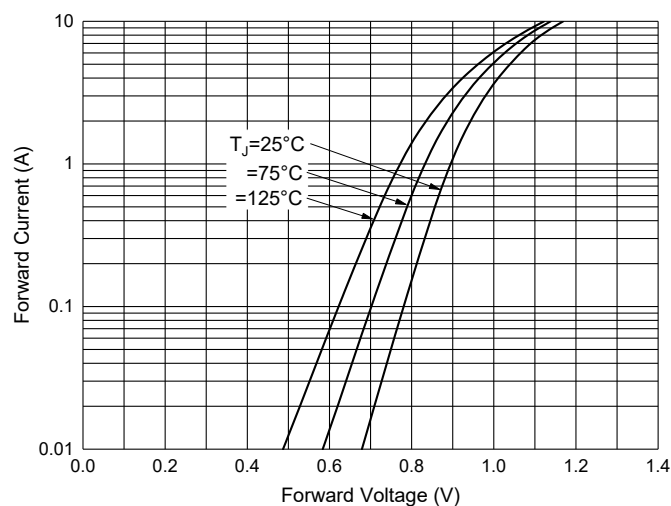


Fig. 4 - Typical Reverse Leakage Characteristics

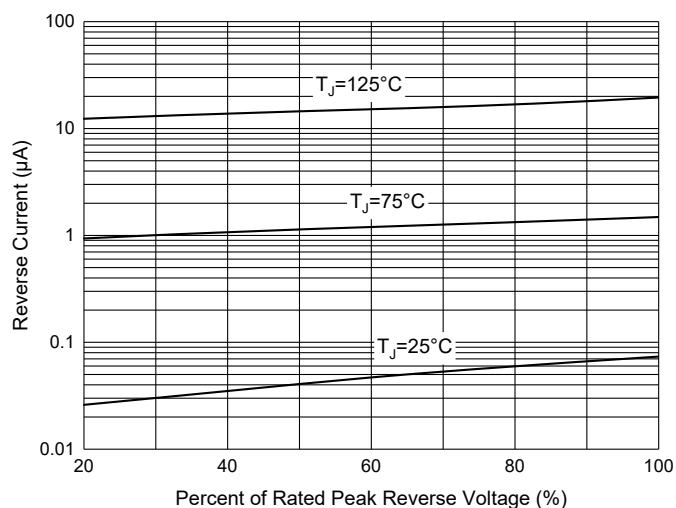
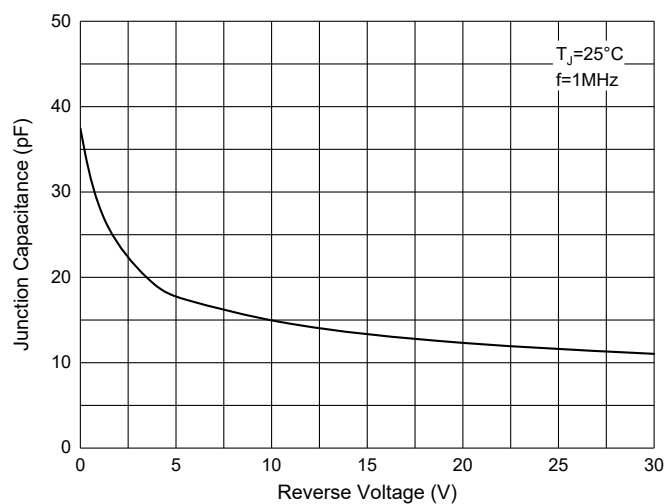


Fig. 5 - Typical Capacitance Characteristics



## Ordering Information

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

Note : Adding "-HF" Suffix For Halogen Free, eg. Part Number-BP-HF

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