

# RKR0505BKH

## Silicon Schottky Barrier Diode for Rectifying

REJ03G1494-0100

Rev.1.00

Jan 09, 2007

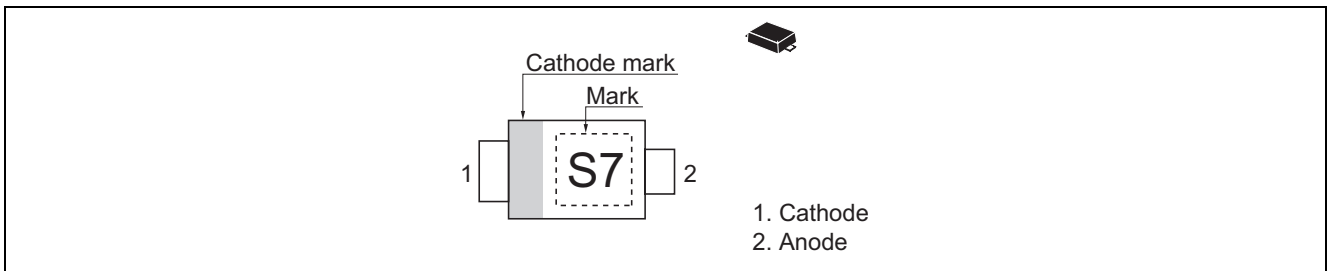
### Features

- Low forward voltage drop and suitable for high efficiency rectifying.
- Thin Ultra small Resin Package (TURP) is suitable for high density surface mounting and high speed assembly.

### Ordering Information

Type No.	Laser Mark	Package Name	Package Code
RKR0505BKH	S7	TURP	PUSF0002ZC-A

### Pin Arrangement



## Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Repetitive peak reverse voltage	$V_{RRM}$	50	V
Reverse voltage	$V_R$	40	V
Average rectified current	$I_o^{*1*2}$	0.5	A
Non-Repetitive peak forward surge current	$I_{FSM}^{*3}$	3	A
Junction temperature	$T_j$	150	°C
Storage temperature	$T_{stg}$	-55 to +150	°C

Notes: 1. See from Fig.6 with Glass epoxy board.

2. Ta = 41°C, With Glass epoxy board (board size: 50mm × 50 mm, Land size 6mm × 6 mm)  
Short form wave (θ180°C),  $V_R = 25$  V.

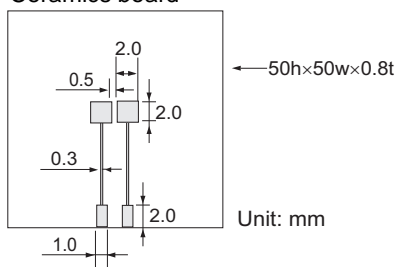
3. 10 ms sine wave 1 pulse.

## Electrical Characteristics

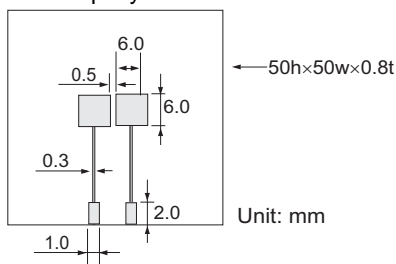
(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Forward voltage	$V_F$	—	—	0.6	V	$I_F = 500$ mA
Reverse current	$I_{R1}$	—	—	20	μA	$V_R = 10$ V
	$I_{R2}$	—	—	40		$V_R = 30$ V
Capacitance	$C$	—	—	20	pF	$V_R = 10$ V, $f = 1$ MHz
Thermal resistance	$R_{th(j-a)}$	—	100	—	°C/W	Ceramics board <sup>*1</sup>
		—	200	—		Glass epoxy board <sup>*2</sup>

Notes: 1. Ceramics board



2. Glass epoxy board



3. TURP is the structure which radiates heat to a substrate, please perform mounting to a substrate by reflow.

Main Characteristics

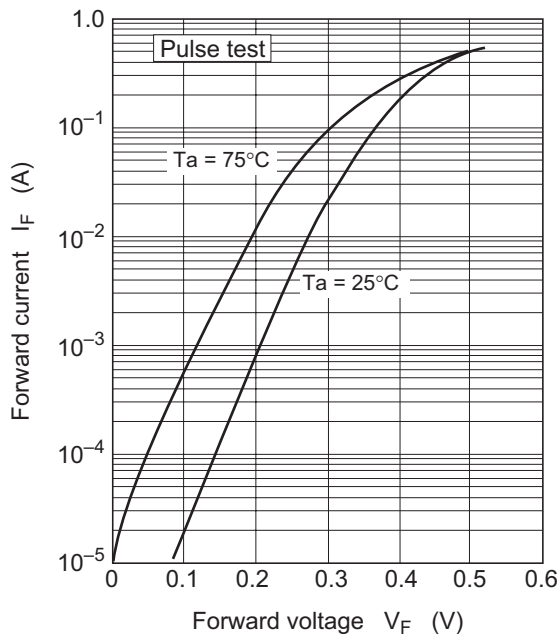


Fig.1 Forward current vs. Forward voltage

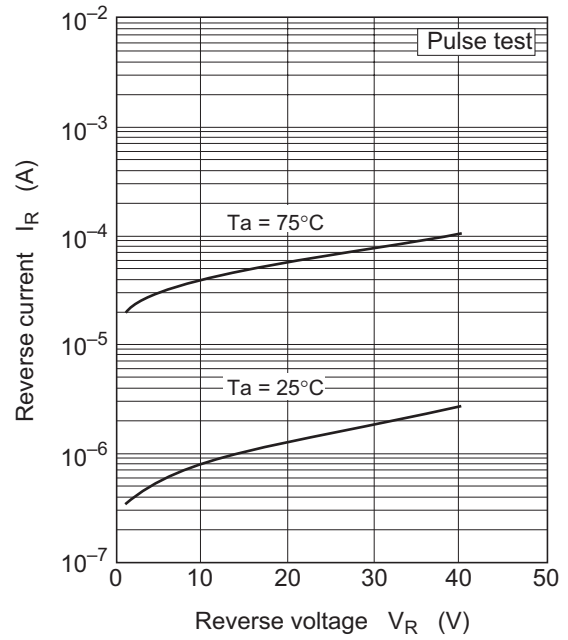


Fig.2 Reverse current vs. Reverse voltage

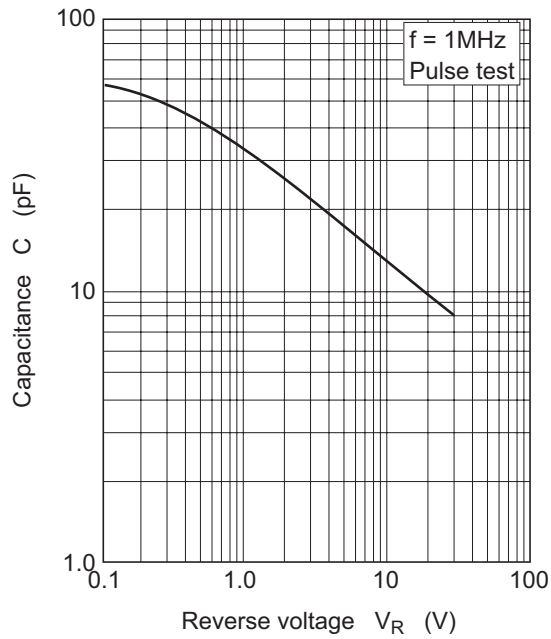


Fig.3 Capacitance vs. Reverse voltage

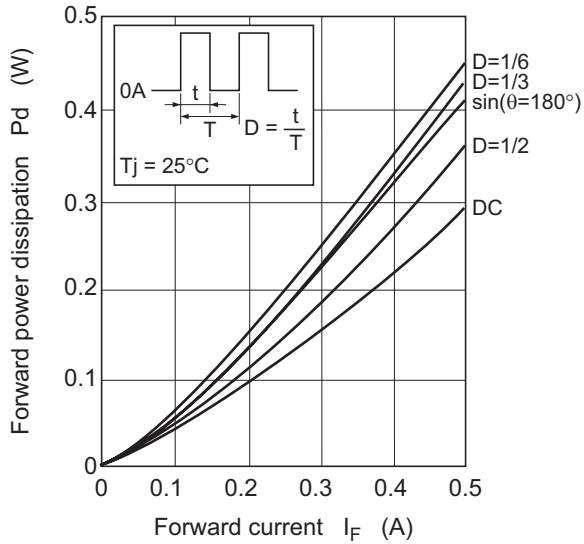


Fig.4 Forward power dissipation vs. Forward current

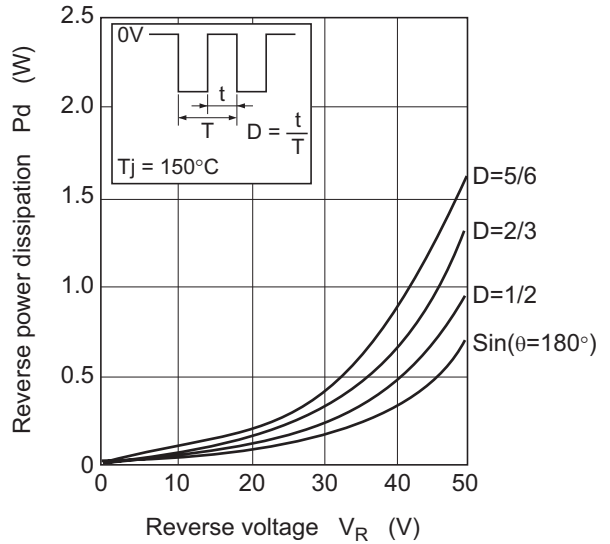


Fig.5 Reverse power dissipation vs. Reverse voltage

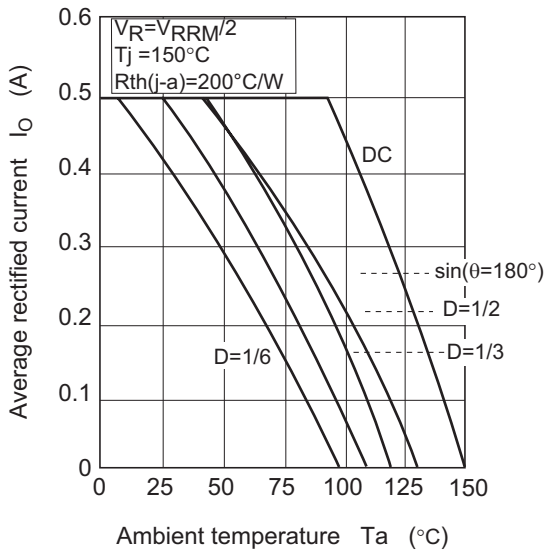
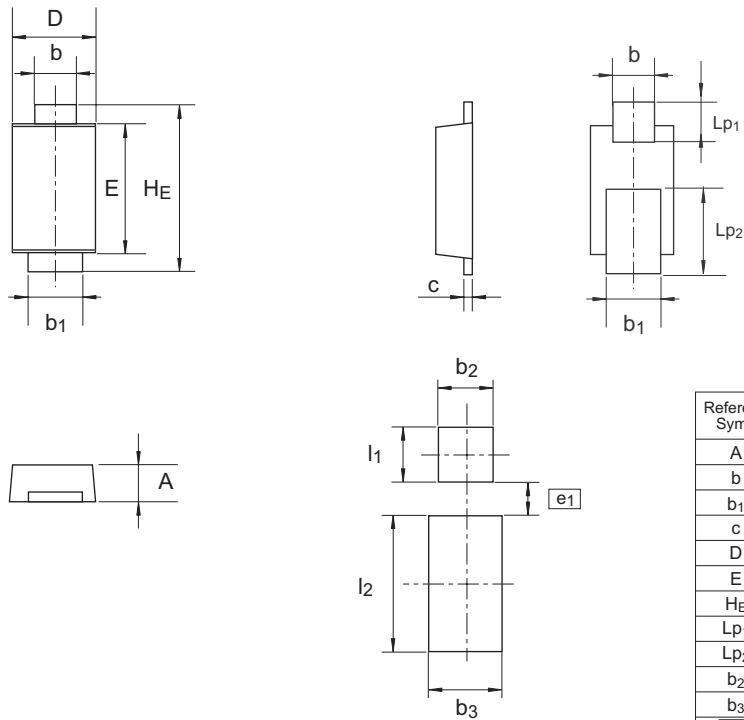


Fig.6 Average rectified current vs. Ambient temperature

### Package Dimensions

Package Name	JEITA Package Code	RENESAS Code	Previous Code	MASS[Typ.]
TURP	—	PUSF0002ZC-A	TURP/TURPV	0.004g



Reference Symbol	Dimension in Millimeters		
	Min	Nom	Max
A	—	—	0.55
b	0.55	0.60	0.65
b1	0.75	0.80	0.85
c	0.08	0.13	0.18
D	1.15	1.25	1.45
E	1.80	1.90	2.00
HE	2.40	2.50	2.60
Lp1	0.40	0.50	0.60
Lp2	1.30	1.40	1.50
b2	—	0.8	—
b3	—	1.1	—
e1	—	0.5	—
l1	—	0.8	—
l2	—	2.0	—

Pattern of terminal position areas

Notes:

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