RKR0505AKH

Silicon Schottky Barrier Diode for Rectifying

REJ03G1493-0200
Rev.2.00
Apr 22, 2008

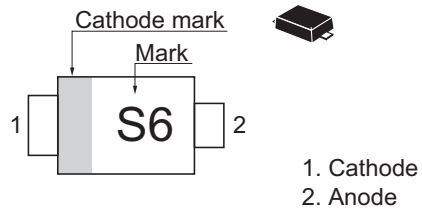
Features

- 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

Part No.	Laser Mark	Package Name	Package Code
RKR0505AKH	S6	TURP	PUSF0002ZC-A

Pin Arrangement



1. Cathode
2. Anode

Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Repetitive peak reverse voltage	V_{RRM}	50	V
Reverse voltage	V_R	20	V
Average rectified current	I_O *1 *2	0.5	A
Non-Repetitive peak forward surge current	I_{FSM} *3	3	A
Junction temperature	Tj	125	°C
Storage temperature	Tstg	–55 to +125	°C

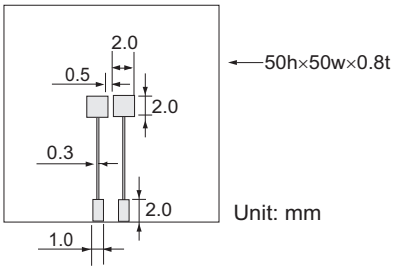
Notes: 1. See from Fig.6 with Glass epoxy board.
2. Ta = 40°C, With Glass epoxy board (board size: 50 mm × 50 mm, Land size 6 mm × 6 mm)
Short form wave (θ180°C), V_R = 10 V.
3. 10 ms sine wave 1 pulse.

Electrical Characteristics

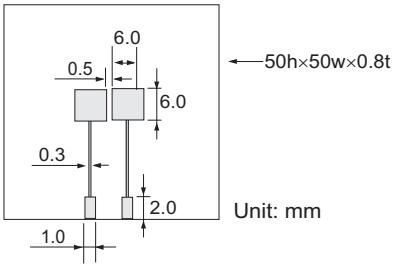
(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Forward voltage	V_{F1}	—	—	0.25	V	I_F = 10 mA
	V_{F2}	—	—	0.46		I_F = 500 mA
Reverse current	I_{R1}	—	—	200	μA	V_R = 10 V
	I_{R2}	—	—	400		V_R = 20 V
Capacitance	C	—	—	20	pF	V_R = 10 V, f = 1 MHz
Thermal resistance	Rth(j-a)	—	100	—	°C/W	Ceramics board *1
		—	200	—		Glass epoxy board *2

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 Characteristic

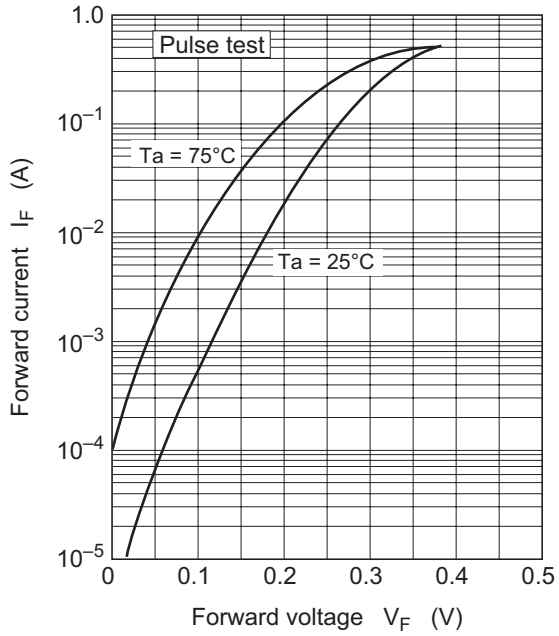


Fig.1 Forward current vs. Forward voltage

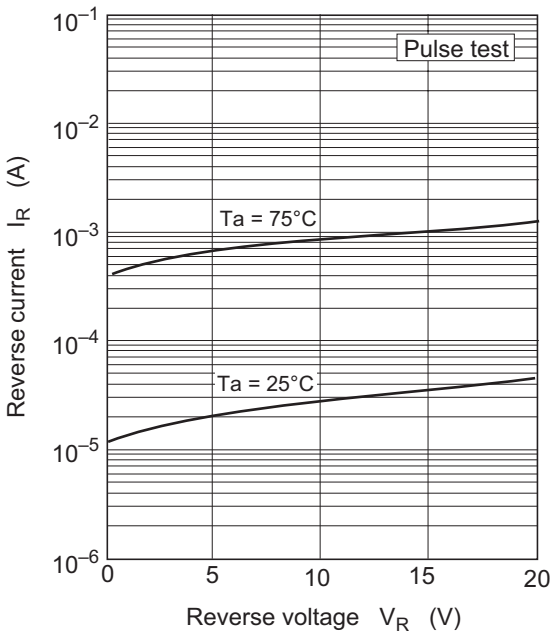


Fig.2 Reverse current vs. Reverse voltage

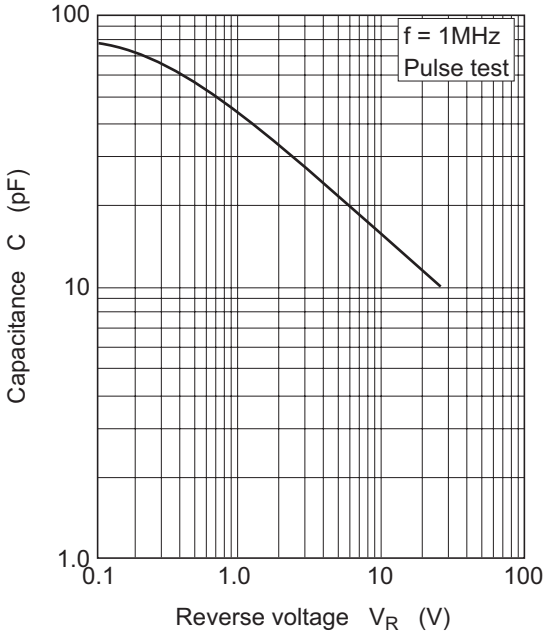


Fig.3 Capacitance vs. Reverse voltage

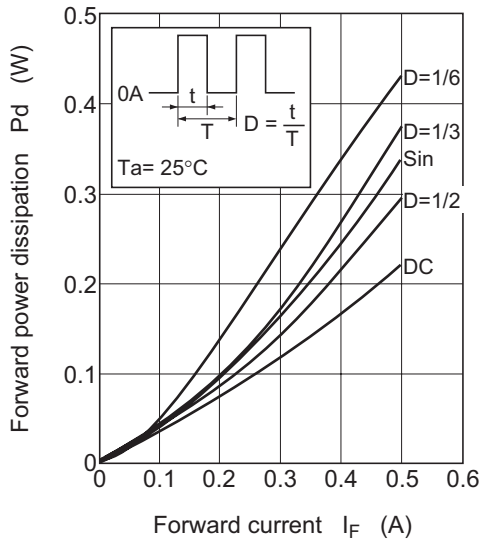


Fig.4 Forward power dissipation vs. Forward current

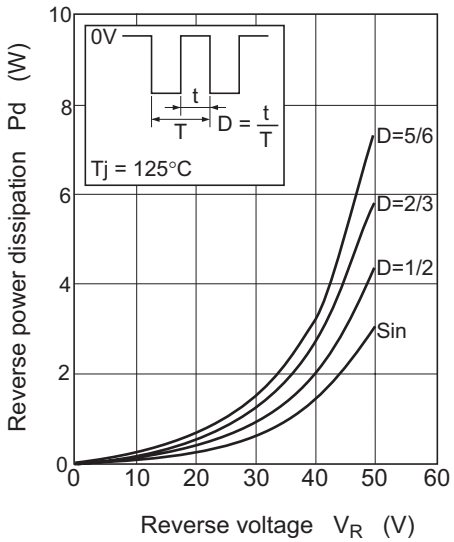


Fig.5 Reverse power dissipation vs. Reverse voltage

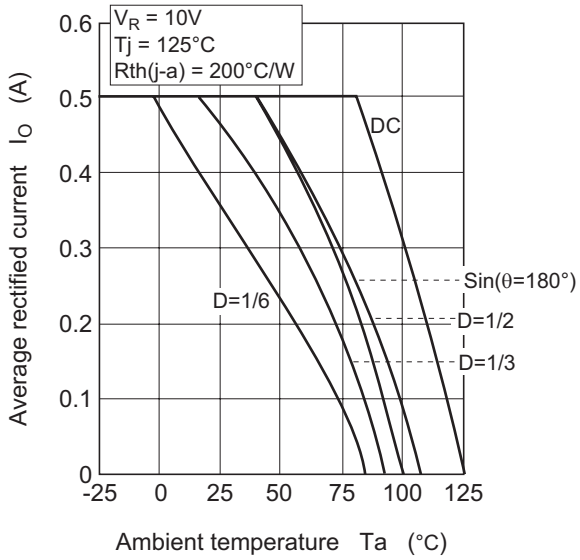
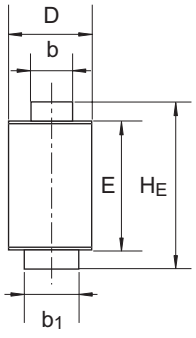
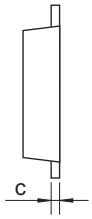


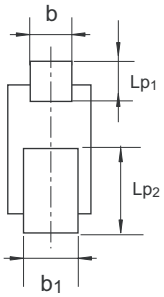
Fig.6 Average rectified current vs. Ambient temperature

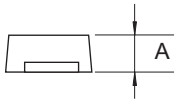
Package Dimensions

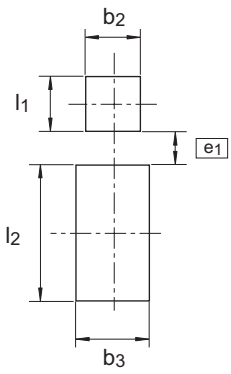
Package Name	JEITA Package Code	RENESAS Code	Previous Code	MASS[Typ.]
TURP	—	PUSF0002ZC-A	TURP/TURPV	0.004g











Pattern of terminal position areas

Reference Symbol	Dimension in Millimeters		
	Min	Nom	Max
A	—	—	0.55
b	0.55	0.60	0.65
b_1	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
H_E	2.40	2.50	2.60
Lp_1	0.40	0.50	0.60
Lp_2	1.30	1.40	1.50
b_2	—	0.8	—
b_3	—	1.1	—
e_1	—	0.5	—
l_1	—	0.8	—
l_2	—	2.0	—

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