RKR0503AKJ

Silicon Schottky Barrier Diode for Rectifying

REJ03G1890-0100
Rev.1.00
Jan 20, 2010

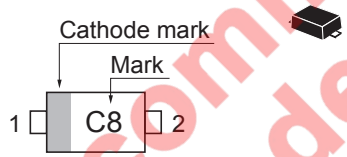
Features

- Low forward voltage drop and suitable for high efficiency rectifying.
- Ultra small Flat Lead Package (UFP) is suitable for compact and high-density surface mount design.

Ordering Information

Part No	Laser Mark	Package Name	Package Code	Taping Abbreviation (Quantity)
RKR0503AKJ P RKR0503AKJ R	C8	UFP	PWSF0002ZA-A	P (4,000 pcs / reel) R (8,000 pcs / reel)

Pin Arrangement



1. Cathode
2. Anode

Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Repetitive peak reverse voltage	V_{RRM}	30	V
Average rectified current	Io *[1]	0.5	A
Non-Repetitive peak forward surge current	I_{FSM} *[2]	2	A
Junction temperature	Tj	125	°C
Storage temperature	Tstg	–55 to +125	°C

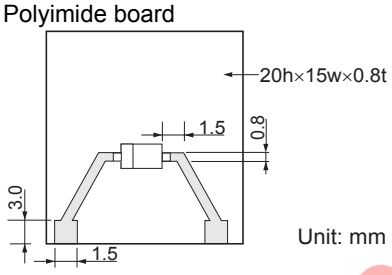
Notes: 1. See from Fig.4 to Fig.7.
2. 10 ms sine wave 1 pulse.

Electrical Characteristics

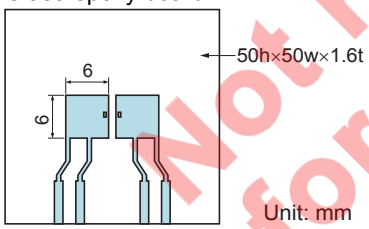
(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Forward voltage	V_F	—	—	0.54	V	I_F = 500 mA
Reverse current	I_R	—	—	200	μA	V_R = 30 V
Thermal resistance	Rth(j-a)	—	600	—	°C/W	Polyimide board *[1]
Thermal resistance	Rth(j-L)	—	150	—	°C/W	Glass-epoxy board *[2]

Notes: 1. Polyimide board



2. Glass-epoxy board



Note: In the UFP package, some lead is exposed because the tip of the lead is used as the cutting plane. Therefore, the solderability of the lead tip has been ignored. Please test and confirm before use.

Main Characteristics

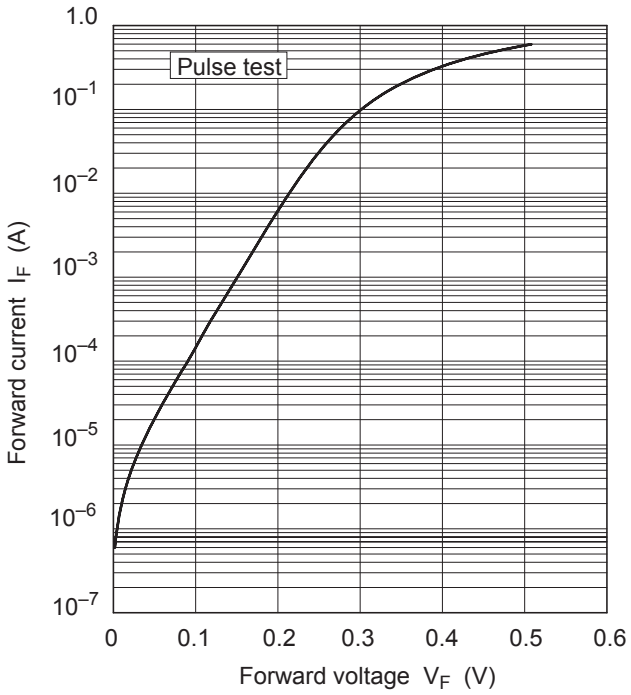


Fig.1 Forward current vs. Forward voltage

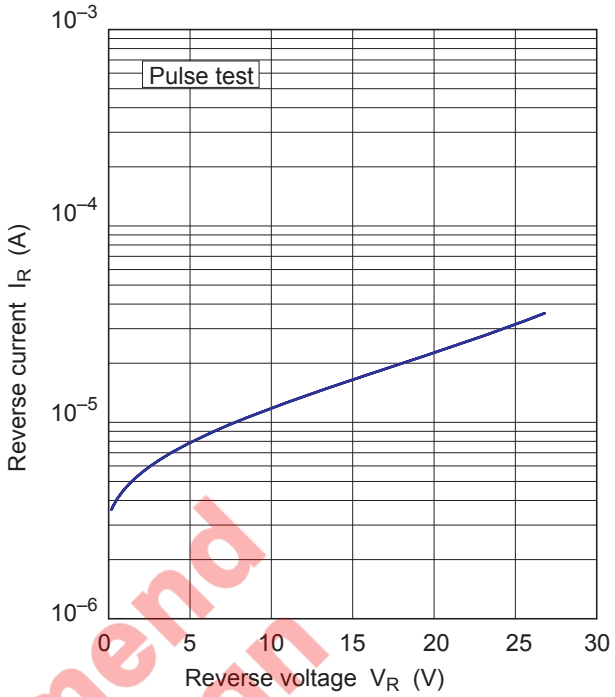


Fig.2 Reverse current vs. Reverse voltage

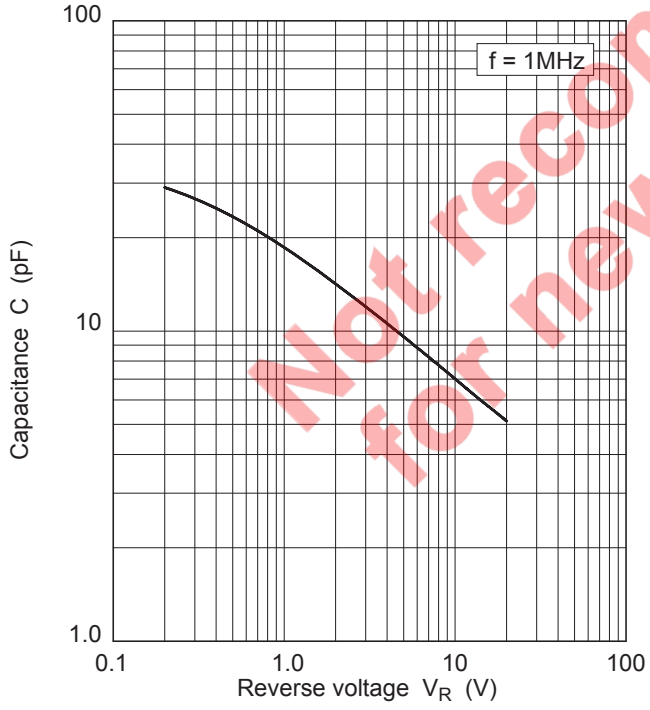


Fig.3 Capacitance vs. Reverse voltage

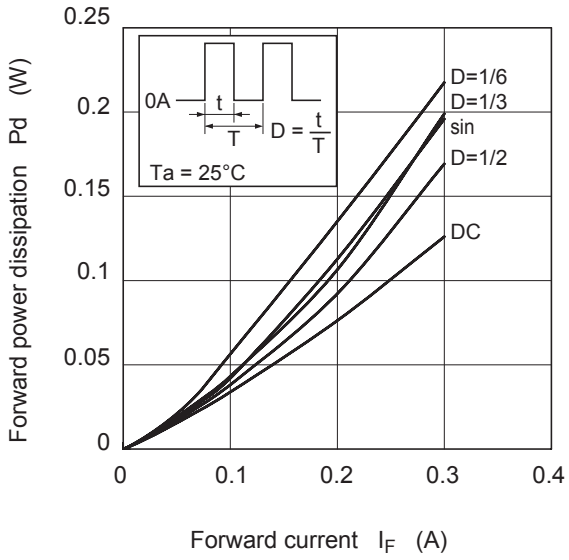


Fig.4 Forward power dissipation vs. Forward current

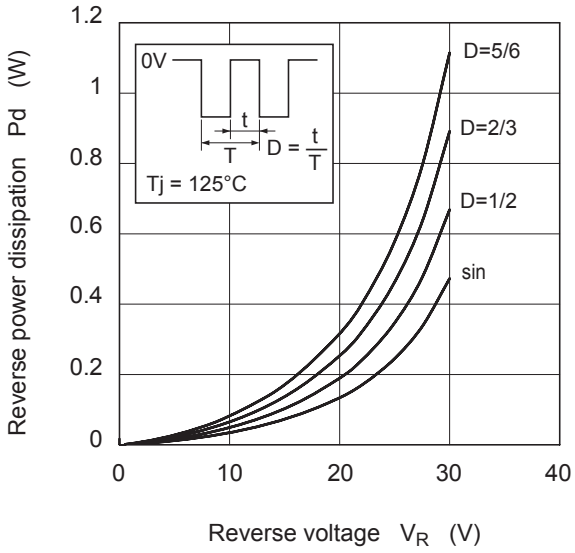


Fig.5 Reverse power dissipation vs. Reverse voltage

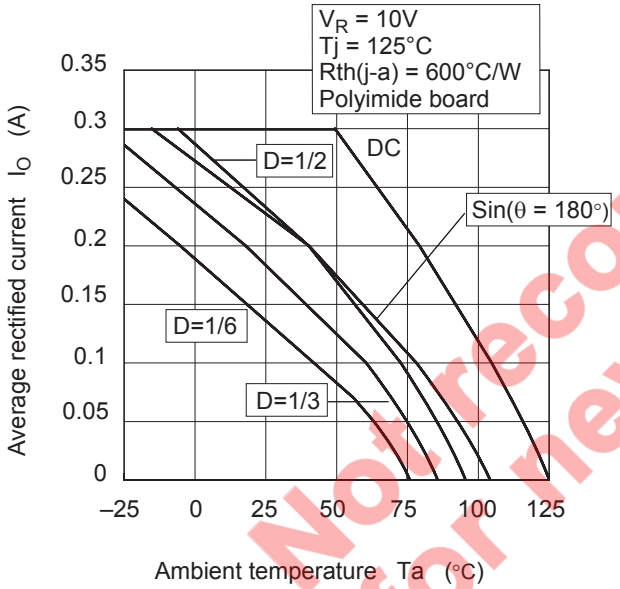


Fig.6 Average rectified current vs. Ambient temperature

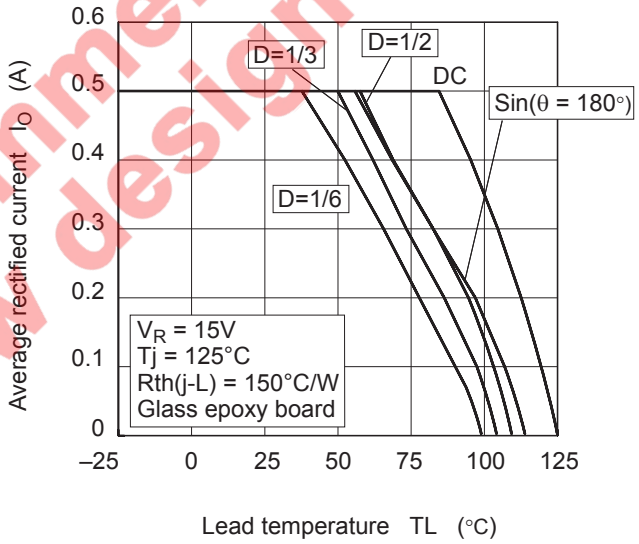
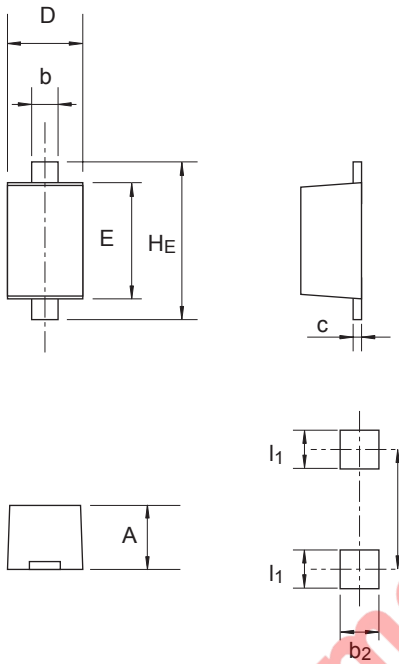


Fig.7 Average rectified current vs. Lead temperature

Package Dimensions

Package Name	JEITA Package Code	RENESAS Code	Previous Code	MASS[Typ.]
UFP	SC-79	PWSF0002ZA-A	UFP / UFPV	0.0016g



Pattern of terminal position areas

Reference Symbol	Dimension in Millimeters		
	Min	Nom	Max
A	0.50	0.60	0.70
b	0.25	0.30	0.35
c	0.08	0.13	0.18
D	0.70	0.80	0.90
E	1.10	1.20	1.30
H_E	1.50	1.60	1.70
b_2	—	0.80	—
e_1	—	1.70	—
l_1	—	0.60	—

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April 1st, 2010
Renesas Electronics Corporation

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