

RKH0145AKU

R07DS0513EJ0100

Rev.1.00

Silicon Epitaxial Planar Diode for High Voltage Switching

Sep 13, 2011

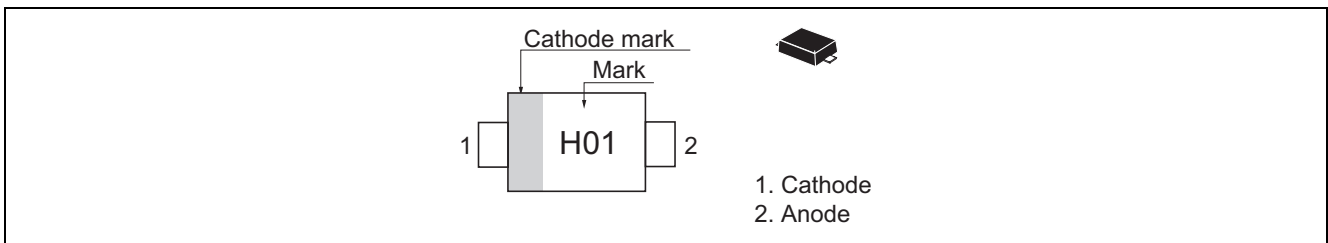
Features

- Short reverse recovery time enable fast switching.
- Ultra small Resin Package (TURP-FM) is suitable for compact and high-density surface mount design.

Ordering Information

Part No	Laser Mark	Package Name	Package Code	Taping Abbreviation (Quantity)
RKH0145AKU P	H01	TURP-FM	PUSF0002ZD-A	P (4,000 pcs / reel)

Pin Arrangement



Absolute Maximum Ratings *1

(Ta = 25°C)

Item	Symbol	Value	Unit
Peak reverse voltage	V_{RM}	450	V
Reverse voltage	V_R	400	V
Peak forward current	I_{FM}	300	mA
Non-Repetitive peak forward surge current	I_{FSM}^{*1}	2	A
Average rectified current	I_o	100	mA
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55 to +150	°C

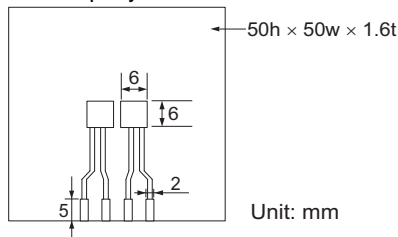
- Notes: 1. Forward surge within 10msec duration.
 2. See from Fig.4 to Fig.7

Electrical Characteristics

(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Forward voltage	V_F	—	—	1.5	V	$I_F = 100 \text{ mA}$
Reverse current	I_R	—	—	10	μA	$V_R = 400 \text{ V}$
Capacitance	C	—	—	3	pF	$V_R = 0 \text{ V}, f = 1 \text{ MHz}$
Reverse recovery time	t_{rr}	—	—	100	ns	$I_F = I_R = 30 \text{ mA}, I_{rr} = 3 \text{ mA}, R_L = 50 \Omega$
Thermal resistance	$R_{th(j-a)}$	—	250	—	°C/W	Glass epoxy board *1

- Note: 1. Glass epoxy board



Main Characteristics

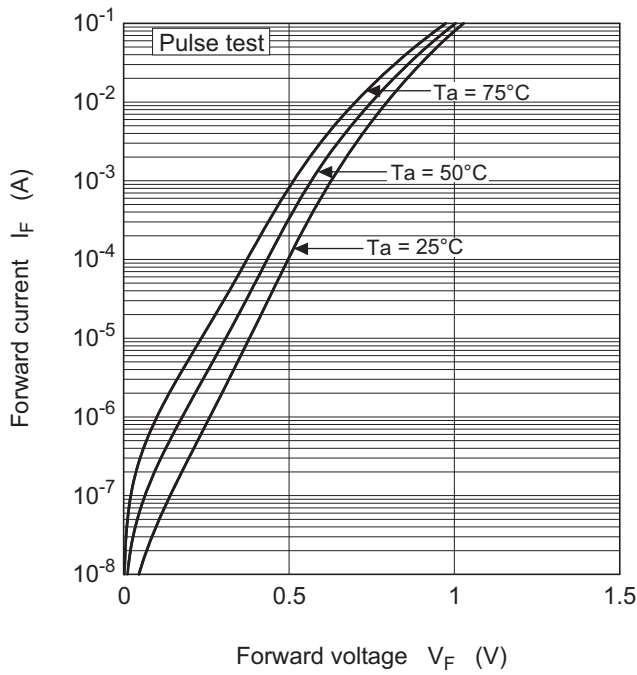


Fig.1 Forward current vs. Forward voltage

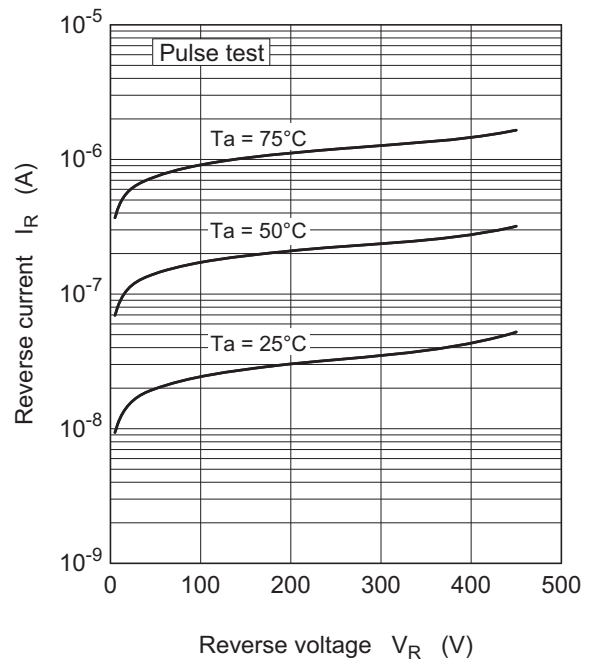


Fig.2 Reverse current vs. Reverse voltage

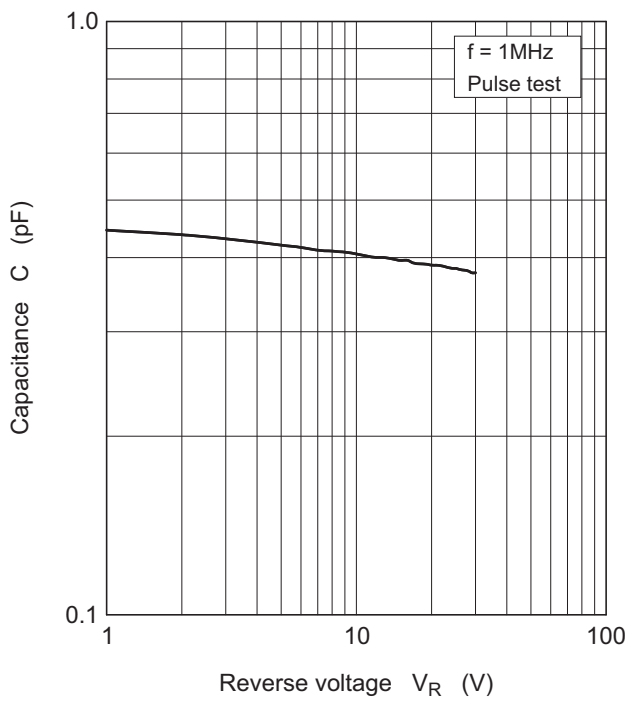


Fig.3 Capacitance vs. Reverse voltage

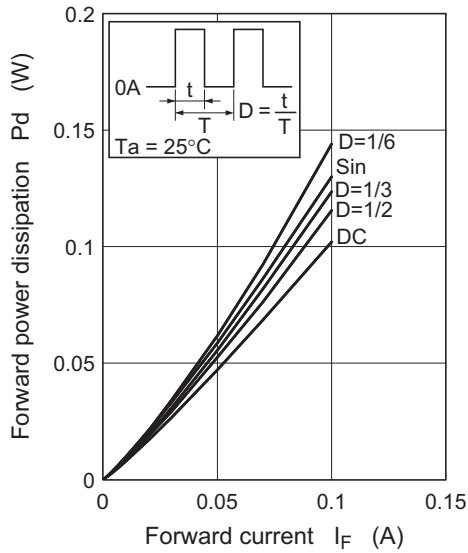


Fig.4 Forward power dissipation vs. Forward current

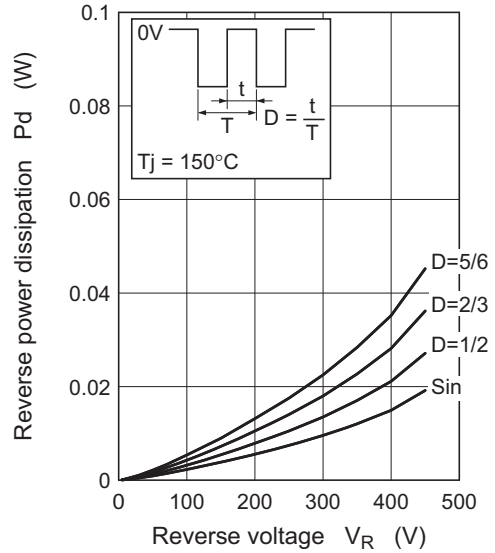


Fig.5 Reverse power dissipation vs. Reverse voltage

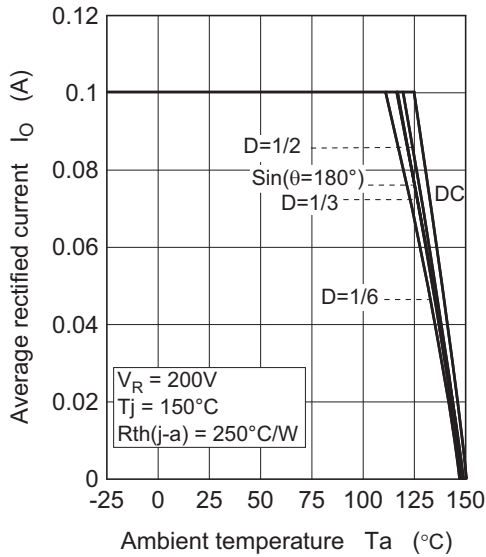


Fig.6 Average rectified current vs. Ambient temperature

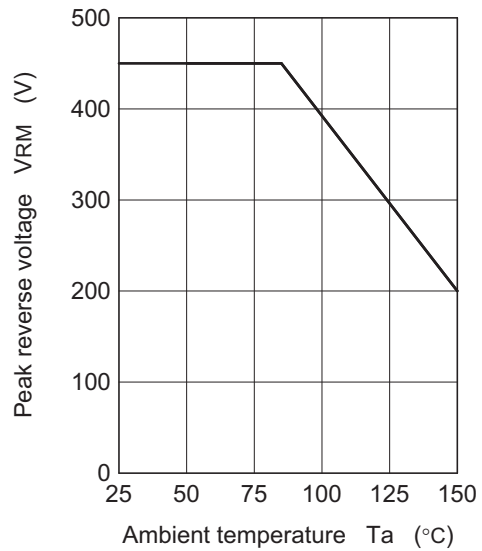
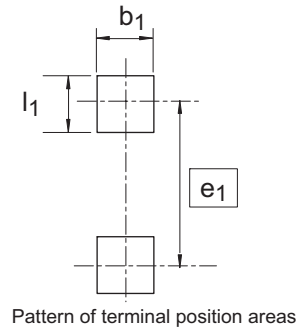
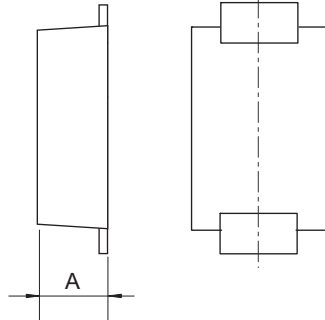
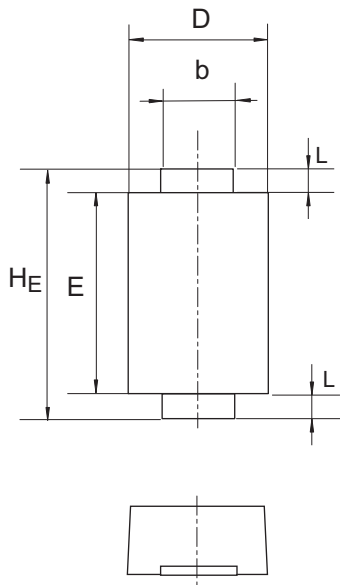


Fig.7 Peak reverse voltage vs. Ambient temperature

Package Dimensions

Package Name	JEITA Package Code	RENESAS Code	Previous Code	MASS[Typ.]
TURP-FM	—	PUSF0002ZD-A	TURP-FM	0.004g



Pattern of terminal position areas

Reference Symbol	Dimension in Millimeters		
	Min	Nom	Max
A	0.55	0.60	0.65
b	0.55	0.60	0.65
D	1.20	1.30	1.40
E	1.80	1.90	2.00
L	0.25	0.30	0.35
HE	2.40	2.50	2.60
b ₁	-	0.90	-
e ₁	-	2.30	-
l ₁	-	0.80	-

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