

To our customers,

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## Old Company Name in Catalogs and Other Documents

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April 1<sup>st</sup>, 2010  
Renesas Electronics Corporation

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# RKZ-KV Series

Silicon Planar Zener Diode for Constant voltage regulator

REJ03G1700-0100

Rev.1.00

Feb 10, 2010

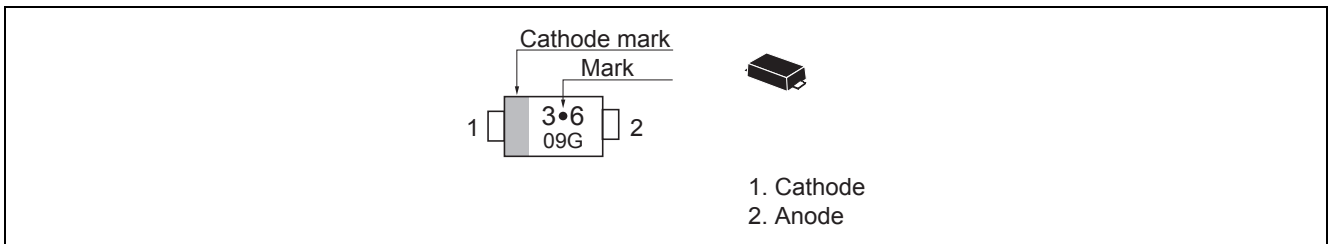
## Features

- These diodes are delivered taped.
- Small Resin Package Flat lead type (SRP-F) is suitable for compact and high-density surface mount design.

## Ordering Information

Part No	Laser Mark	Package Name	Package Code	Taping Abbreviation (Quantity)
RKZ-KV Series	Let to Mark Code	SRP-F	PWSF0002ZB-A	P (3,000 pcs / reel)

## Pin Arrangement



## Absolute Maximum Ratings

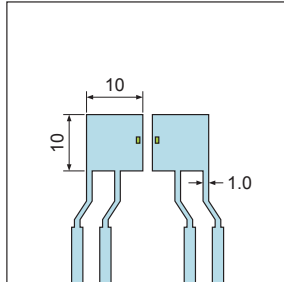
(Ta = 25°C)

Item	Symbol	Value	Unit
Power dissipation	Pd *1	700	mW
Junction temperature	Tj	150	°C
Storage temperature	Tstg	-55 to +150	°C

Note: 1. Device mounted on glass-epoxy board (50 × 50mm, t = 1.6mm)

2. Solder land (10 × 10 mm)

50h × 50w × 1.6t (mm)



## Electrical Characteristics

(Ta = 25°C)

Part No.	Zener Voltage		Reverse Current		Dynamic Resistance		ESD-Capability *2	
	Vz (V) *1		Test Condition	I <sub>R</sub> (μA)	Test Condition	r <sub>d</sub> (Ω)	Test Condition	(kV) *2
	Min	Max	I <sub>Z</sub> (mA)	Max	V <sub>R</sub> (V)	Max	I <sub>Z</sub> (mA)	Min
RKZ3.6BKV	3.40	3.80	10	10	1	130	10	30
RKZ3.9BKV	3.70	4.10	10	10	1	130	10	30
RKZ4.3BKV	4.01	4.48	10	10	1	130	10	30
RKZ4.7BKV	4.42	4.90	10	10	1	130	10	30
RKZ5.1BKV	4.84	5.37	10	5	1.5	130	10	30
RKZ5.6BKV	5.31	5.92	10	5	2.5	80	10	30
RKZ6.2BKV	5.86	6.53	10	2	3	50	10	30
RKZ6.8BKV	6.47	7.14	10	2	3.5	30	10	30
RKZ7.5BKV	7.06	7.84	10	2	4	30	10	30
RKZ8.2BKV	7.76	8.64	10	2	5	30	10	30
RKZ9.1BKV	8.56	9.55	10	2	6	30	10	30
RKZ10BKV	9.45	10.55	10	2	7	30	10	30
RKZ11BKV	10.44	11.56	10	2	8	30	10	30
RKZ12BKV	11.42	12.60	10	2	9	35	10	30
RKZ13BKV	12.47	13.96	10	2	10	35	10	30
RKZ15BKV	13.84	15.52	5	2	11	40	5	30
RKZ16BKV	15.37	17.09	5	2	12	40	5	30
RKZ18BKV	16.94	19.03	5	2	13	45	5	30
RKZ20BKV	18.86	21.08	5	2	15	50	5	30
RKZ22BKV	20.88	23.17	5	2	17	55	5	30
RKZ24BKV	22.93	25.57	5	2	19	60	5	30
RKZ27BKV	25.10	28.90	2	2	21	70	2	30
RKZ30BKV	28.00	32.00	2	2	23	80	2	30
RKZ33BKV	31.00	35.00	2	2	25	80	2	30
RKZ36BKV	34.00	38.00	2	2	27	90	2	30

Notes: 1. Tested with pulse (Pw = 40 ms).

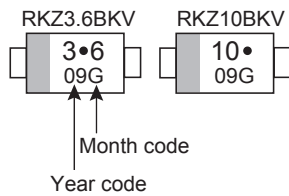
2. C = 150 pF, R = 330 Ω, Both forward and reverse direction 10 pulse

Failure criterion ; According to IR spec

### Mark Code

Part No.	Mark No.	Part No.	Mark No.
RKZ3.6BKV	3 · 6	RKZ12BKV	12 ·
RKZ3.9BKV	3 · 9	RKZ13BKV	13 ·
RKZ4.3BKV	4 · 3	RKZ15BKV	15 ·
RKZ4.7BKV	4 · 7	RKZ16BKV	16 ·
RKZ5.1BKV	5 · 1	RKZ18BKV	18 ·
RKZ5.6BKV	5 · 6	RKZ20BKV	20 ·
RKZ6.2BKV	6 · 2	RKZ22BKV	22 ·
RKZ6.8BKV	6 · 8	RKZ24BKV	24 ·
RKZ7.5BKV	7 · 5	RKZ27BKV	27 ·
RKZ8.2BKV	8 · 2	RKZ30BKV	30 ·
RKZ9.1BKV	9 · 1	RKZ33BKV	33 ·
RKZ10BKV	10 ·	RKZ36BKV	36 ·
RKZ11BKV	11 ·		

Note: 1. Example of Marking



Year code: Last two digits of the year ex: 2009→09

Month code

Jan.	Feb.	Mar.	Apr.	May	Jun	July	Aug.	Sep.	Oct.	Nov.	Dec.
A	B	C	D	E	F	G	H	J	K	L	M

Main Characteristics

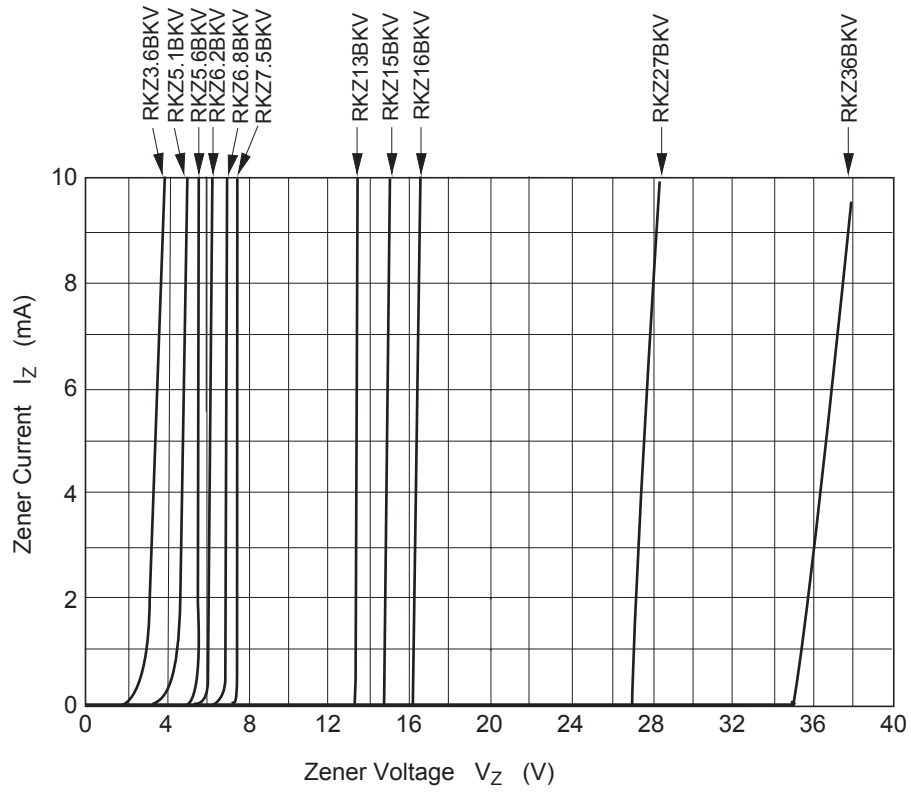


Fig.1 Zener current vs. Zener voltage

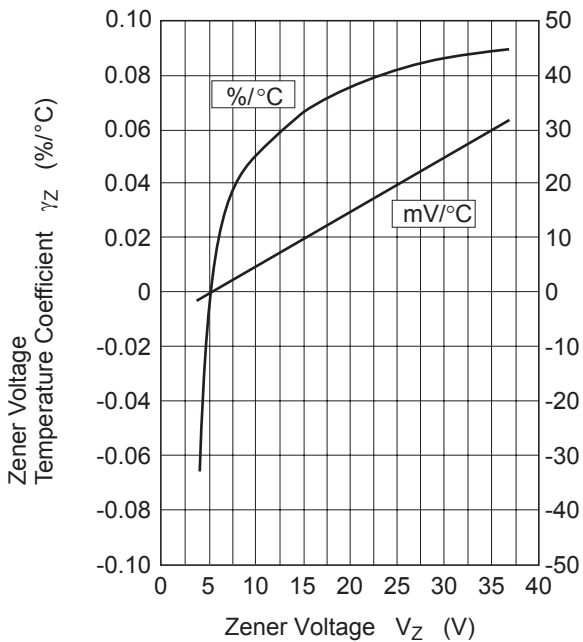


Fig.2 Temperature Coefficient vs. Zener voltage

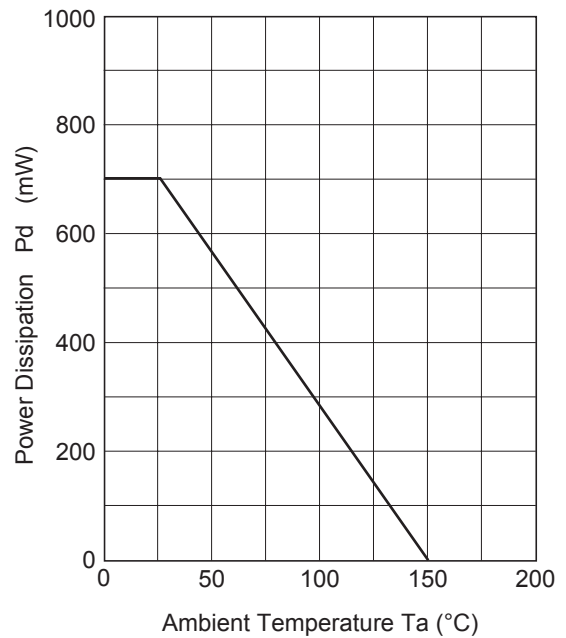
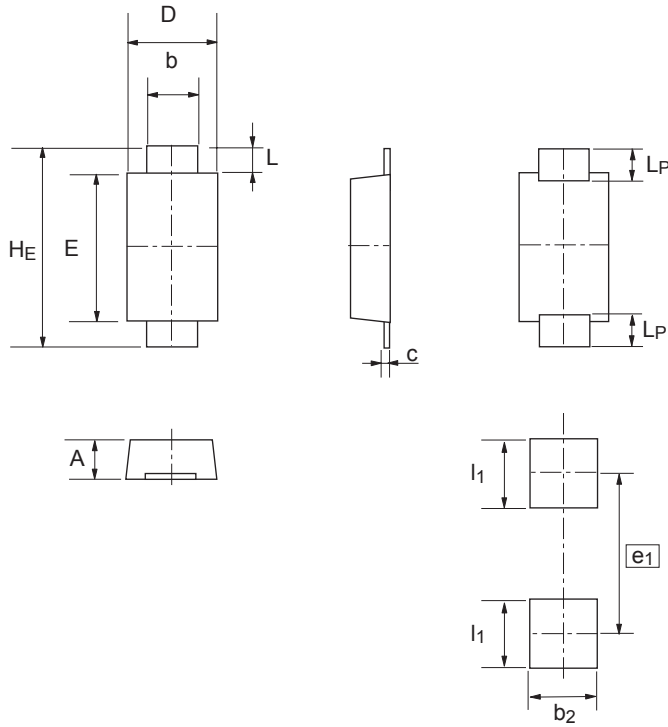


Fig.3 Power Dissipation vs. Ambient Temperature

Package Dimensions

Package Name	JEITA Package Code	RENESAS Code	Previous Code	MASS[Typ.]
SRP-F	—	PWSF0002ZB-A	SRP-FV	0.0084g



Pattern of terminal position areas

Reference Symbol	Dimension in Millimeters		
	Min	Nom	Max
A	0.6	0.7	0.8
b	0.8	0.9	1.0
c	0.08	0.13	0.18
D	1.5	1.6	1.7
E	2.5	2.6	2.7
HE	3.3	3.5	3.7
L	0.35	0.45	0.55
LP	—	0.600	—
b2	—	1.2	—
e1	—	2.8	—
l1	—	1.2	—

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