

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-KG Series

## Silicon Planar Zener Diode for Surge Absorption and Stabilizer

REJ03G1512-0300

Rev.3.00

Feb 02, 2009

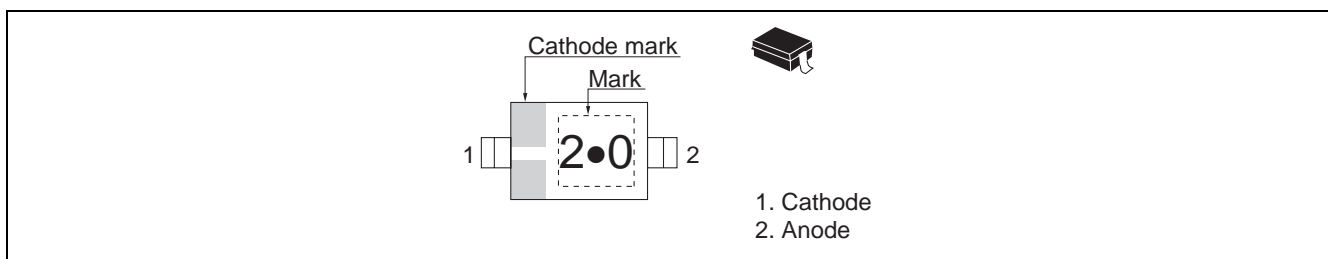
### Features

- These diodes are delivered taped.
- Lineup of environmental friendly Halogen free type (RKZ-KG-P6 Series 6:Pb free & Halogen free).
- Ultra small Resin Package (URP) is suitable for compact and high-density surface mount design.

### Ordering Information

Part No.	Laser Mark	Package Name	Package Code	Taping Abbreviation (Quantity)
RKZ-KG Series	Let to Mark Code	URP	PTSP0002ZA-A	P (3,000 pcs / reel)
RKZ-KG P6 Series (Halogen-free type)				

### Pin Arrangement



## Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Power dissipation	Pd *1	200	mW
Junction temperature	Tj	150	°C
Storage temperature	Tstg	-55 to +150	°C

Note: 1. With P.C. Board.

## 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
RKZ2.0BKG	1.90	2.20	5	120	0.5	100	5	30
RKZ2.2BKG	2.10	2.40	5	120	0.7	100	5	30
RKZ2.4BKG	2.30	2.60	5	120	1.0	100	5	30
RKZ2.7B2KG	2.65	2.90	5	120	1.0	110	5	30
RKZ3.0B2KG	2.95	3.20	5	50	1.0	120	5	30
RKZ3.3B2KG	3.25	3.50	5	20	1.0	130	5	30
RKZ3.6B2KG	3.55	3.80	5	10	1.0	130	5	30
RKZ3.9B2KG	3.87	4.10	5	10	1.0	130	5	30
RKZ4.3B2KG	4.15	4.34	5	10	1.0	130	5	30
RKZ4.7B2KG	4.55	4.75	5	10	1.0	130	5	30
RKZ5.1B2KG	4.98	5.20	5	5	1.5	130	5	30
RKZ5.6B2KG	5.49	5.73	5	5	2.5	80	5	30
RKZ6.2B2KG	6.06	6.33	5	2	3.0	50	5	30
RKZ6.8B2KG	6.65	6.93	5	2	3.5	30	5	30
RKZ7.5B2KG	7.28	7.60	5	2	4.0	30	5	30
RKZ8.2B2KG	8.02	8.36	5	2	5.0	30	5	30
RKZ9.1B2KG	8.85	9.23	5	2	6.0	30	5	30
RKZ10B2KG	9.77	10.21	5	2	7.0	30	5	30
RKZ11B2KG	10.76	11.22	5	2	8.0	30	5	30
RKZ12B2KG	11.74	12.24	5	2	9.0	35	5	30
RKZ13B2KG	12.91	13.49	5	2	10.0	35	5	30
RKZ15B2KG	14.34	14.98	5	2	11.0	40	5	25
RKZ16B2KG	15.85	16.51	5	2	12.0	40	5	25
RKZ18B2KG	17.56	18.35	5	2	13.0	45	5	25
RKZ20B2KG	19.52	20.39	5	2	15.0	50	5	20
RKZ22B2KG	21.54	22.47	5	2	17.0	55	5	20
RKZ24B2KG	23.72	24.78	5	2	19.0	60	5	15
RKZ27BKG	25.10	28.90	2	2	21.0	70	2	15
RKZ30BKG	28.00	32.00	2	2	23.0	80	2	13
RKZ33BKG	31.00	35.00	2	2	25.0	80	2	8
RKZ36BKG	34.00	38.00	2	2	27.0	90	2	8

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

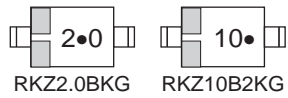
2. C =150 pF, R = 330 Ω, Both forward and reverse direction 10 pulse  
Failure criterion ; According to IR spec

Mark Code

Part No.	Mark No.
RKZ2.0BKG	2 • 0
RKZ2.2BKG	2 • 2
RKZ2.4BKG	2 • 4
RKZ2.7B2KG	2 • 7
RKZ3.0B2KG	3 • 0
RKZ3.3B2KG	3 • 3
RKZ3.6B2KG	3 • 6
RKZ3.9B2KG	3 • 9
RKZ4.3B2KG	4 • 3
RKZ4.7B2KG	4 • 7
RKZ5.1B2KG	5 • 1
RKZ5.6B2KG	5 • 6
RKZ6.2B2KG	6 • 2
RKZ6.8B2KG	6 • 8
RKZ7.5B2KG	7 • 5
RKZ8.2B2KG	8 • 2

Part No.	Mark No.
RKZ9.1B2KG	9 • 1
RKZ10B2KG	1 0 •
RKZ11B2KG	1 1 •
RKZ12B2KG	1 2 •
RKZ13B2KG	1 3 •
RKZ15B2KG	1 5 •
RKZ16B2KG	1 6 •
RKZ18B2KG	1 8 •
RKZ20B2KG	2 0 •
RKZ22B2KG	2 2 •
RKZ24B2KG	2 4 •
RKZ27BKG	2 7 •
RKZ30BKG	3 0 •
RKZ33BKG	3 3 •
RKZ36BKG	3 6 •

Note: 1. Example of Marking



Main Characteristic

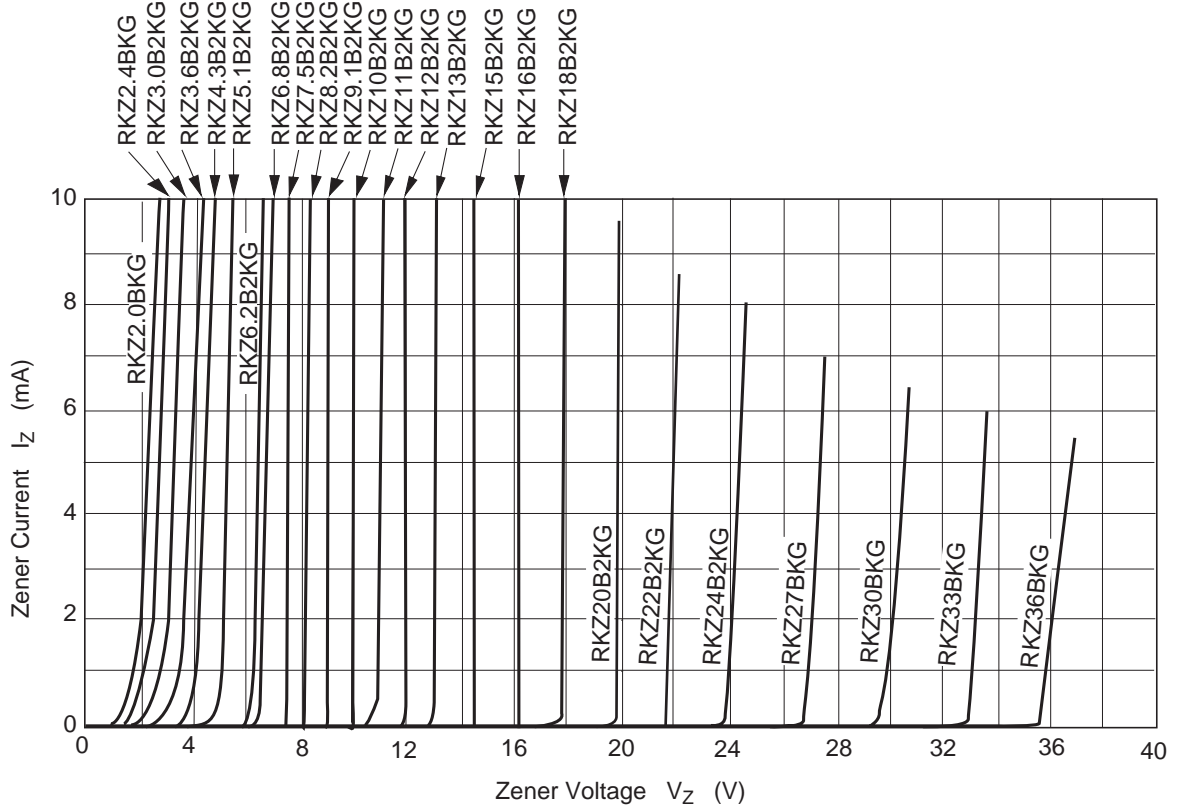


Fig.1 Zener current vs. Zener voltage

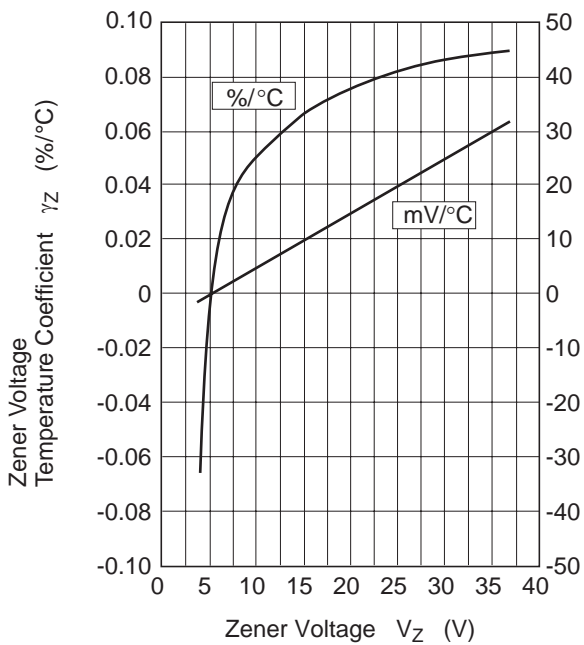


Fig.2 Temperature Coefficient vs. Zener voltage

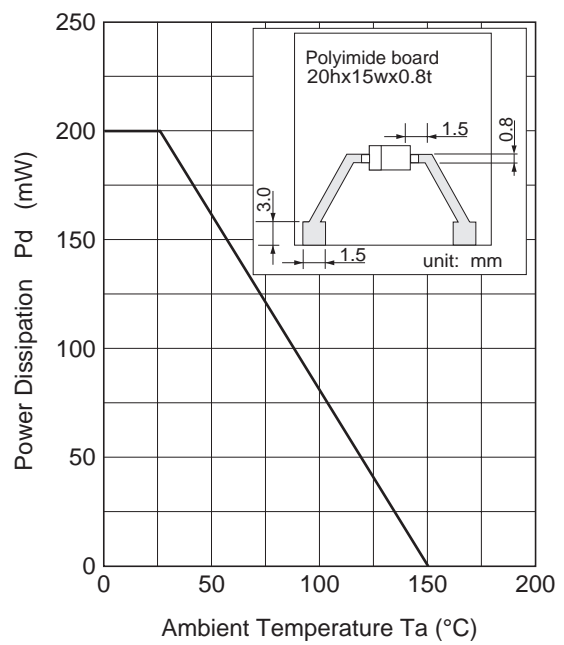


Fig.3 Power Dissipation vs. Ambient Temperature

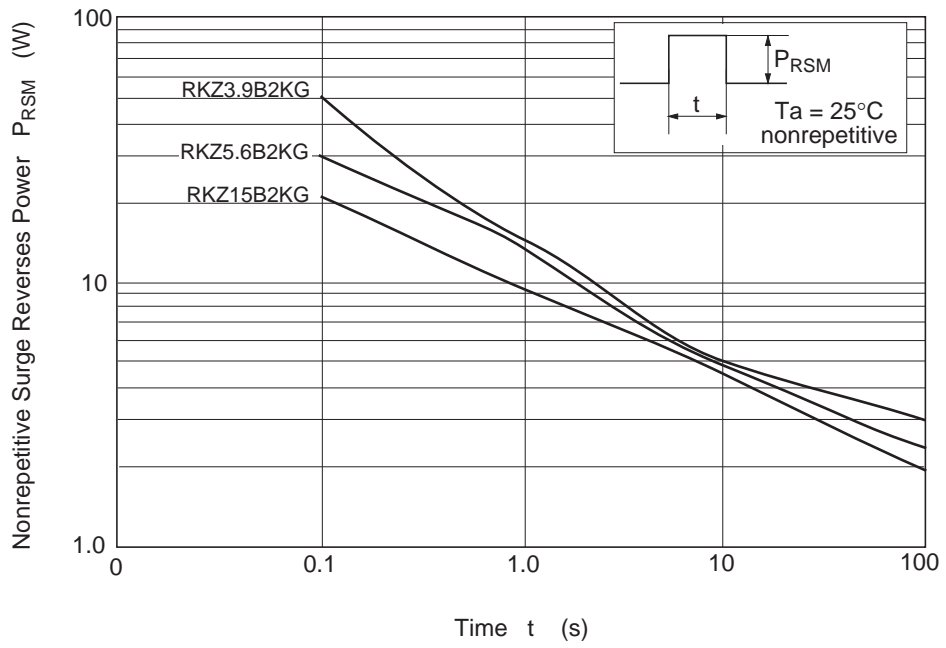
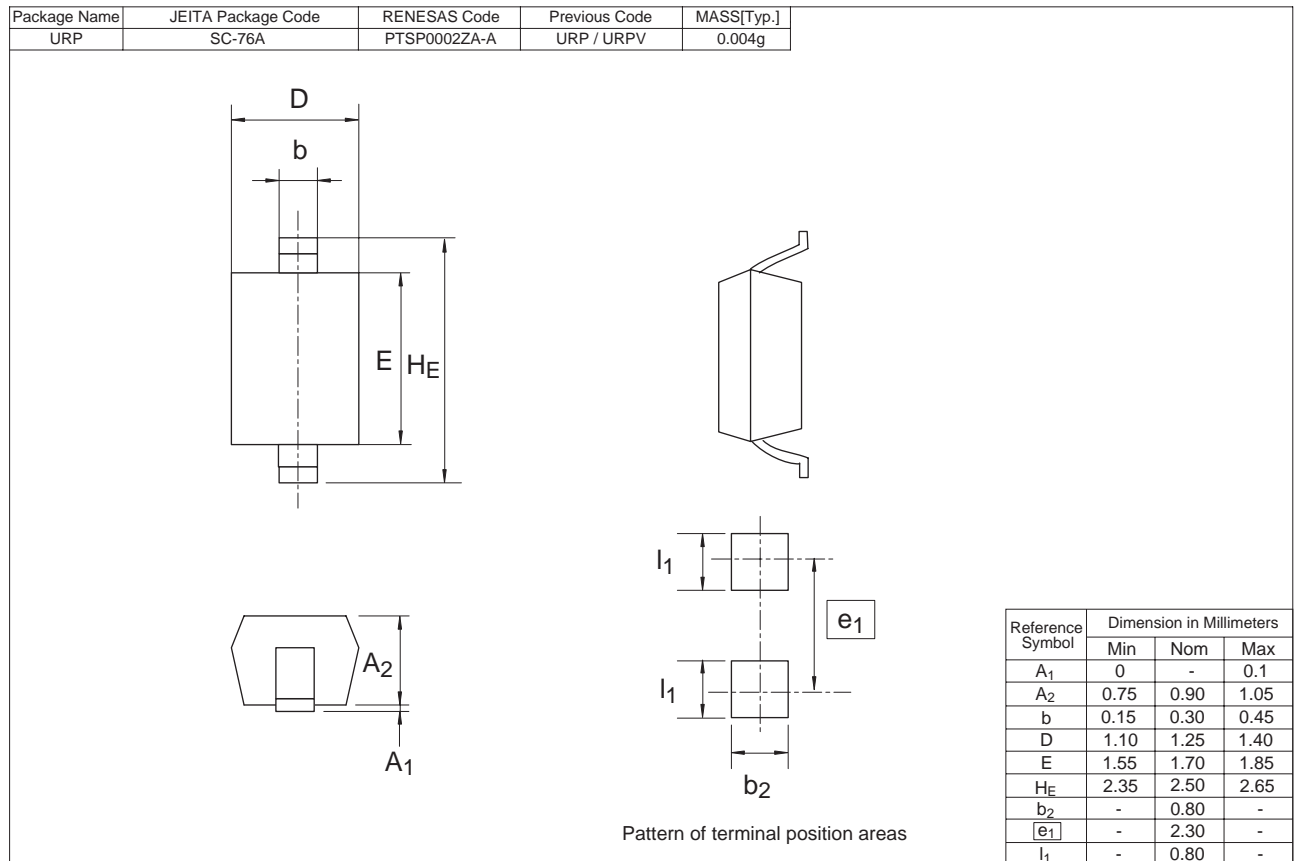


Fig.4 Surge Reverse Power Ratings(Reference data)

### Package Dimensions





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