To our customers,

Old Company Name in Catalogs and Other Documents

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Renesas Electronics website: http://www.renesas.com

April 1st, 2010
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (http://www.renesas.com)

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RKZ-KD Series

Silicon Planar Zener Diode for Stabilized Power Supply

REJ03G1264-0200
Rev.2.00
May 09, 2008

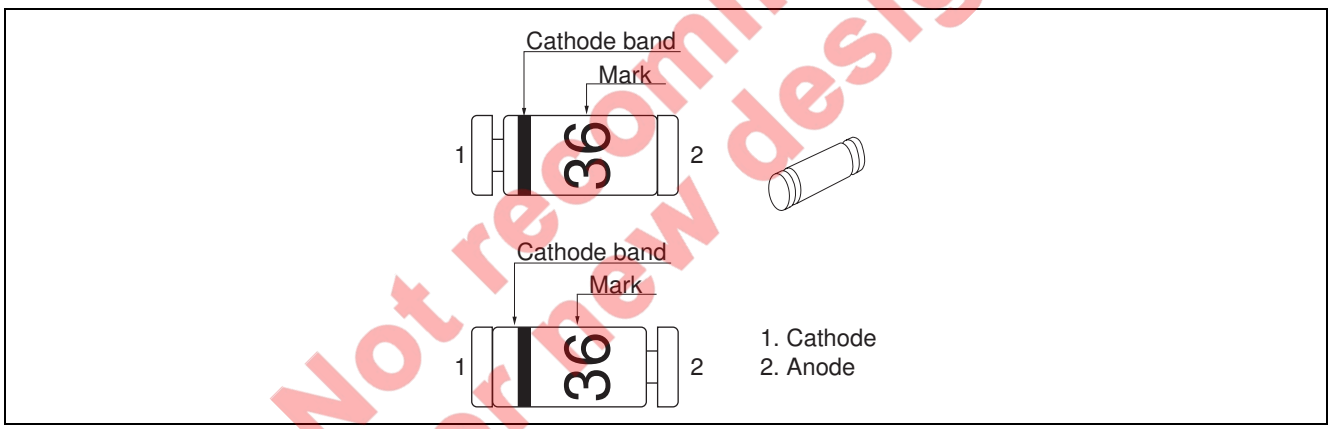
Features

- Low leakage, low zener impedance and maximum power dissipation of 500 mW.
- Wide spectrum from 1.9 V through 38 V of zener voltage provide flexible application.
- LLD Package is suitable for high density surface mounting and high speed assembly.

Ordering Information

Part No.	Cathode band	Character Mark	Package Name	Package Code
RKZ-KD Series	Same Color as Character Mark	Refer to Mark Code	LLD	GLZZ0002ZA-A

Pin Arrangement



Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Power dissipation	Pd	500	mW
Junction temperature	Tj	175	℃
Storage temperature	Tstg	–55 to +175	℃

Electrical Characteristics

(Ta = 25°C)

Part No.	Zener Voltage			Reverse Current		Dynamic Resistance	
	V_Z (V)*[1]		Test Condition	I_R (μA)	Test Condition	r_d (Ω)	Test Condition
	Min	Max	I_Z (mA)	Max	V_R (V)	Max	I_Z (mA)
RKZ2B1KD	1.9	2.1	5	5	0.5	100	5
RKZ2B2KD	2.0	2.2					
RKZ2B3KD	2.1	2.3					
RKZ2C1KD	2.2	2.4					
RKZ2C2KD	2.3	2.5					
RKZ2C3KD	2.4	2.6					
RKZ3A1KD	2.5	2.7	5	5	0.5	100	5
RKZ3A2KD	2.6	2.8					
RKZ3A3KD	2.7	2.9					
RKZ3B1KD	2.8	3.0					
RKZ3B2KD	2.9	3.1					
RKZ3B3KD	3.0	3.2					
RKZ3C1KD	3.1	3.3					
RKZ3C2KD	3.2	3.4					
RKZ3C3KD	3.3	3.5					
RKZ4A1KD	3.4	3.6	5	5	1.0	100	5
RKZ4A2KD	3.5	3.7					
RKZ4A3KD	3.6	3.8					
RKZ4B1KD	3.7	3.9					
RKZ4B2KD	3.8	4.0					
RKZ4B3KD	3.9	4.1					
RKZ4C1KD	4.0	4.2					
RKZ4C2KD	4.1	4.3					
RKZ4C3KD	4.2	4.4					
RKZ5A1KD	4.3	4.5	5	5	1.5	100	5
RKZ5A2KD	4.4	4.6					
RKZ5A3KD	4.5	4.7					
RKZ5B1KD	4.6	4.8					
RKZ5B2KD	4.7	4.9					
RKZ5B3KD	4.8	5.0					
RKZ5C1KD	4.9	5.1					
RKZ5C2KD	5.0	5.2					
RKZ5C3KD	5.1	5.3					

Note: 1. Tested with DC.

(Ta = 25°C)

Part No.	Zener Voltage			Reverse Current		Dynamic Resistance	
	V_Z (V)*[1]		Test Condition	I_R (μA)	Test Condition	r_d (Ω)	Test Condition
	Min	Max	I_Z (mA)	Max	V_R (V)	Max	I_Z (mA)
RKZ6A1KD	5.2	5.5	5	5	2.0	40	5
RKZ6A2KD	5.3	5.6					
RKZ6A3KD	5.4	5.7					
RKZ6B1KD	5.5	5.8					
RKZ6B2KD	5.6	5.9					
RKZ6B3KD	5.7	6.0					
RKZ6C1KD	5.8	6.1					
RKZ6C2KD	6.0	6.3					
RKZ6C3KD	6.1	6.4					
RKZ7A1KD	6.3	6.6	5	1	3.5	15	5
RKZ7A2KD	6.4	6.7					
RKZ7A3KD	6.6	6.9					
RKZ7B1KD	6.7	7.0					
RKZ7B2KD	6.9	7.2					
RKZ7B3KD	7.0	7.3					
RKZ7C1KD	7.2	7.6					
RKZ7C2KD	7.3	7.7					
RKZ7C3KD	7.5	7.9					
RKZ9A1KD	7.7	8.1	5	1	5.0	20	5
RKZ9A2KD	7.9	8.3					
RKZ9A3KD	8.1	8.5					
RKZ9B1KD	8.3	8.7					
RKZ9B2KD	8.5	8.9					
RKZ9B3KD	8.7	9.1					
RKZ9C1KD	8.9	9.3					
RKZ9C2KD	9.1	9.5					
RKZ9C3KD	9.3	9.7					
RKZ11A1KD	9.5	9.9	5	1	7.5	25	5
RKZ11A2KD	9.7	10.1					
RKZ11A3KD	9.9	10.3					
RKZ11B1KD	10.2	10.6					
RKZ11B2KD	10.4	10.8					
RKZ11B3KD	10.7	11.1					
RKZ11C1KD	10.9	11.3					
RKZ11C2KD	11.1	11.6					
RKZ11C3KD	11.4	11.9					

Note: 1. Tested with DC.

(Ta = 25°C)

Part No.	Zener Voltage			Reverse Current		Dynamic Resistance	
	V_Z (V)*[1]		Test Condition	I_R (μA)	Test Condition	r_d (Ω)	Test Condition
	Min	Max	I_Z (mA)	Max	V_R (V)	Max	I_Z (mA)
RKZ12A1KD	11.6	12.1	5	1	9.5	35	5
RKZ12A2KD	11.9	12.4					
RKZ12A3KD	12.2	12.7					
RKZ12B1KD	12.4	12.9					
RKZ12B2KD	12.6	13.1					
RKZ12B3KD	12.9	13.4					
RKZ12C1KD	13.2	13.7					
RKZ12C2KD	13.5	14.0					
RKZ12C3KD	13.8	14.3					
RKZ15-1KD	14.1	14.7	5	1	11.0	40	5
RKZ15-2KD	14.5	15.1					
RKZ15-3KD	14.9	15.5					
RKZ16-1KD	15.3	15.9	5	1	12.0	45	5
RKZ16-2KD	15.7	16.5					
RKZ16-3KD	16.3	17.1					
RKZ18-1KD	16.9	17.7	5	1	13.0	55	5
RKZ18-2KD	17.5	18.3					
RKZ18-3KD	18.1	19.0					
RKZ20-1KD	18.8	19.7	2	1	15.0	60	2
RKZ20-2KD	19.5	20.4					
RKZ20-3KD	20.2	21.1					
RKZ22-1KD	20.9	21.9	2	1	17.0	65	2
RKZ22-2KD	21.6	22.6					
RKZ22-3KD	22.3	23.3					
RKZ24-1KD	22.9	24.0	2	1	19.0	70	2
RKZ24-2KD	23.6	24.7					
RKZ24-3KD	24.3	25.5					
RKZ27-1KD	25.2	26.6	2	1	21.0	80	2
RKZ27-2KD	26.2	27.6					
RKZ27-3KD	27.2	28.6					
RKZ30-1KD	28.2	29.6	2	1	23.0	100	2
RKZ30-2KD	29.2	30.6					
RKZ30-3KD	30.2	31.6					
RKZ33-1KD	31.2	32.6	2	1	25.0	120	2
RKZ33-2KD	32.2	33.6					
RKZ33-3KD	33.2	34.6					
RKZ36-1KD	34.2	35.7	2	1	27.0	140	2
RKZ36-2KD	35.3	36.8					
RKZ36-3KD	36.4	38.0					

Note: 1. Tested with DC.

Mark Code

Part No.	Character Mark	Color
RKZ2B1KD	2B	Pink
RKZ2B2KD	2B	Blue
RKZ2B3KD	2B	White
RKZ2C1KD	2C	Pink
RKZ2C2KD	2C	Blue
RKZ2C3KD	2C	White
RKZ3A1KD	3A	Pink
RKZ3A2KD	3A	Blue
RKZ3A3KD	3A	White
RKZ3B1KD	3B	Pink
RKZ3B2KD	3B	Blue
RKZ3B3KD	3B	White
RKZ3C1KD	3C	Pink
RKZ3C2KD	3C	Blue
RKZ3C3KD	3C	White
RKZ4A1KD	4A	Pink
RKZ4A2KD	4A	Blue
RKZ4A3KD	4A	White
RKZ4B1KD	4B	Pink
RKZ4B2KD	4B	Blue
RKZ4B3KD	4B	White
RKZ4C1KD	4C	Pink
RKZ4C2KD	4C	Blue
RKZ4C3KD	4C	White
RKZ5A1KD	5A	Pink
RKZ5A2KD	5A	Blue
RKZ5A3KD	5A	White
RKZ5B1KD	5B	Pink
RKZ5B2KD	5B	Blue
RKZ5B3KD	5B	White
RKZ5C1KD	5C	Pink
RKZ5C2KD	5C	Blue
RKZ5C3KD	5C	White
RKZ6A1KD	6A	Pink
RKZ6A2KD	6A	Blue
RKZ6A3KD	6A	White

Part No.	Character Mark	Color
RKZ6B1KD	6B	Pink
RKZ6B2KD	6B	Blue
RKZ6B3KD	6B	White
RKZ6C1KD	6C	Pink
RKZ6C2KD	6C	Blue
RKZ6C3KD	6C	White
RKZ7A1KD	7A	Pink
RKZ7A2KD	7A	Blue
RKZ7A3KD	7A	White
RKZ7B1KD	7B	Pink
RKZ7B2KD	7B	Blue
RKZ7B3KD	7B	White
RKZ7C1KD	7C	Pink
RKZ7C2KD	7C	Blue
RKZ7C3KD	7C	White
RKZ9A1KD	9A	Pink
RKZ9A2KD	9A	Blue
RKZ9A3KD	9A	White
RKZ9B1KD	9B	Pink
RKZ9B2KD	9B	Blue
RKZ9B3KD	9B	White
RKZ9C1KD	9C	Pink
RKZ9C2KD	9C	Blue
RKZ9C3KD	9C	White
RKZ11A1KD	AA	Pink
RKZ11A2KD	AA	Blue
RKZ11A3KD	AA	White
RKZ11B1KD	AB	Pink
RKZ11B2KD	AB	Blue
RKZ11B3KD	AB	White
RKZ11C1KD	AC	Pink
RKZ11C2KD	AC	Blue
RKZ11C3KD	AC	White
RKZ12A1KD	BA	Pink
RKZ12A2KD	BA	Blue
RKZ12A3KD	BA	White

Part No.	Character Mark	Color
RKZ12B1KD	BB	Pink
RKZ12B2KD	BB	Blue
RKZ12B3KD	BB	White
RKZ12C1KD	BC	Pink
RKZ12C2KD	BC	Blue
RKZ12C3KD	BC	White
RKZ15-1KD	15	Pink
RKZ15-2KD	15	Blue
RKZ15-3KD	15	White
RKZ16-1KD	16	Pink
RKZ16-2KD	16	Blue
RKZ16-3KD	16	White
RKZ18-1KD	18	Pink
RKZ18-2KD	18	Blue
RKZ18-3KD	18	White
RKZ20-1KD	20	Pink
RKZ20-2KD	20	Blue
RKZ20-3KD	20	White
RKZ22-1KD	22	Pink
RKZ22-2KD	22	Blue
RKZ22-3KD	22	White
RKZ24-1KD	24	Pink
RKZ24-2KD	24	Blue
RKZ24-3KD	24	White
RKZ27-1KD	27	Pink
RKZ27-2KD	27	Blue
RKZ27-3KD	27	White
RKZ30-1KD	30	Pink
RKZ30-2KD	30	Blue
RKZ30-3KD	30	White
RKZ33-1KD	33	Pink
RKZ33-2KD	33	Blue
RKZ33-3KD	33	White
RKZ36-1KD	36	Pink
RKZ36-2KD	36	Blue
RKZ36-3KD	36	White

Main Characteristic

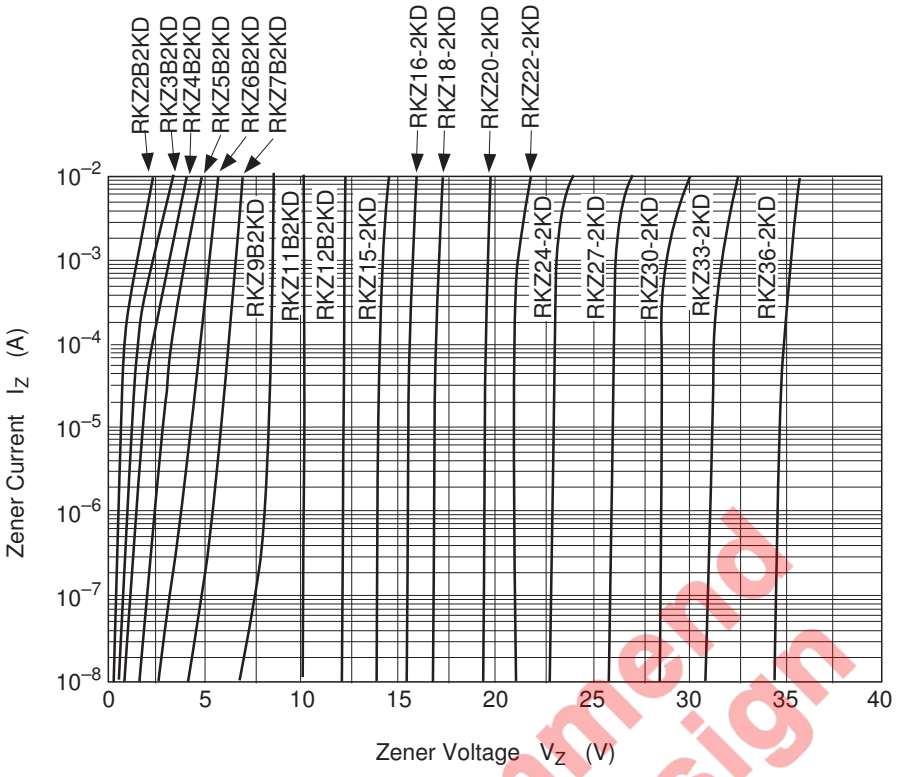


Fig.1 Zener current vs. Zener voltage

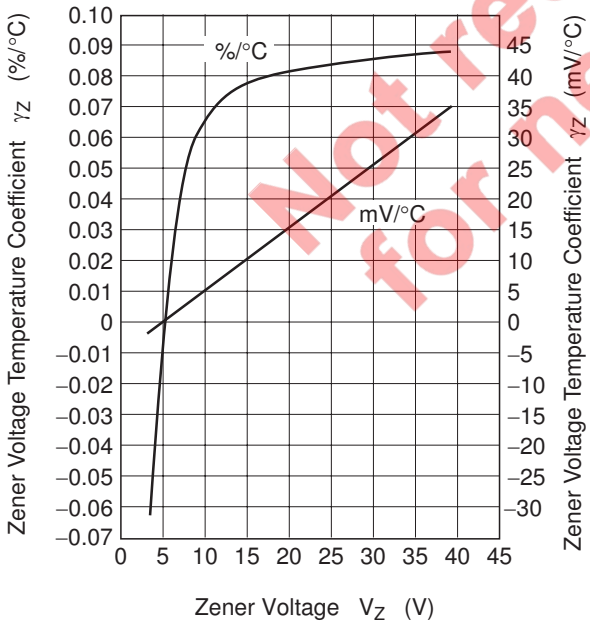


Fig.2 Temperature Coefficient vs. Zener voltage

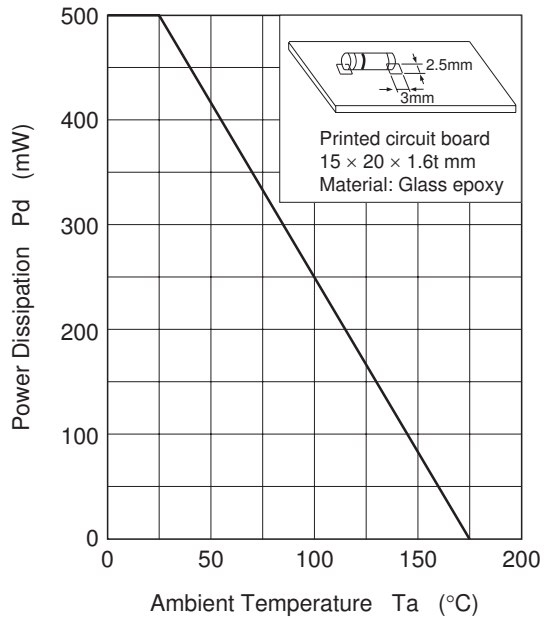
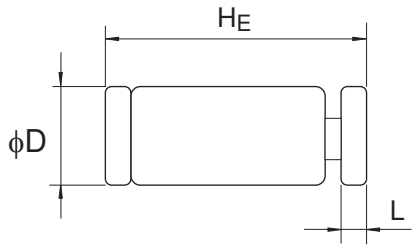


Fig.3 Power Dissipation vs. Ambient Temperature

Package Dimensions

Package Name	JEITA Package Code	RENESAS Code	Previous Code	MASS[Typ.]
LLD	—	GLZZ0002ZA-A	LLD / LLDV	0.027g



Reference Symbol	Dimension in Millimeters		
	Min	Nom	Max
ϕD	1.25	1.35	1.45
H_E	3.30	3.50	3.60
L	-	0.35	-

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