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 (<u>http://www.renesas.com</u>)

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HZS Series

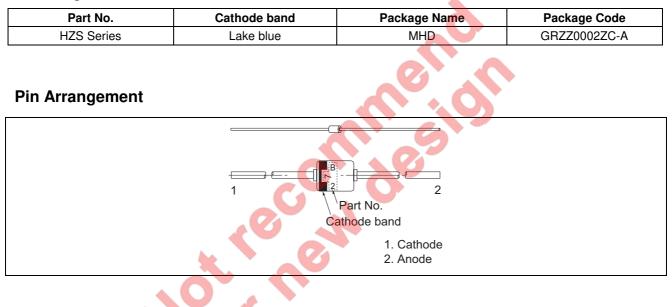
Silicon Planar Zener Diode for Stabilized Power Supply

REJ03G0184-0500 Rev.5.00 Oct 29, 2007

Features

- Low leakage, low zener impedance and maximum power dissipation of 400 mW are ideally suited for stabilized power supply, etc.
- Wide spectrum from 1.6 V through 38 V of zener voltage provide flexible application.
- Suitable for 5mm-pitch high speed automatic insertion.

Ordering Information



Absolute Maximum Ratings

 $(Ta = 25^{\circ}C)$

Item	Symbol	Value	Unit
Power dissipation	Pd	400	mW
Junction temperature	Tj	200	°C
Storage temperature	Tstg	–55 to +175	°C

Electrical Characteristics

		1						$(Ta = 25^{\circ}C)$
		Zener Voltage			Reverse	Current	Dynamic F	Resistance
				Test		Test		Test
		V _z (-	Condition	Ι _R (μΑ)	Condition	r _d (Ω)	Condition
Туре	Grade	Min	Max	l _z (mA)	Max	V _R (V)	Max	I _z (mA)
HZS2	A1	1.6	1.8	5	25	0.5	100	5
	A2	1.7	1.9					
	A3	1.8	2.0					
	B1	1.9	2.1	5	5	0.5	100	5
	B2	2.0	2.2		0			
	B3	2.1	2.3					
	C1	2.2	2.4					
	C2	2.3	2.5					
	C3	2.4	2.6					
HZS3	A1	2.5	2.7	5	5	0.5	100	5
	A2	2.6	2.8					
	A3	2.7	2.9					
	B1	2.8	3.0					
	B2	2.9	3.1					
	B3	3.0	3.2					
	C1	3.1	3.3					
	C2	3.2	3.4					
	C3	3.3	3.5 🌘					
HZS4	A1	3.4	3.6	5	5	1.0	100	5
	A2	3.5	3.7					
	A3	3.6	3.8					
	B1	3.7	3.9					
	B2	3.8	4.0					
	B3	3.9	4.1					
	C1	4.0	4.2					
	C2	4.1	4.3					
	C3	4.2	4.4					
HZS5	A1	4.3	4.5	5	5	1.5	100	5
	A2	4.4	4.6]				
	A3	4.5	4.7	1				
	B1	4.6	4.8	1				
	B2	4.7	4.9	1				
	B3	4.8	5.0	1				

Note: 1. Tested with DC.

(\mathbf{T}_{n})		25°C)	
(1a	=	25°C)	

		Zener Voltage			Reverse	Current	(Ta = 25°C) Dynamic Resistance		
		Test		Tieverse	Test	Test			
Туре		V _Z (V)* ¹		Condition	Ι _R (μΑ)	Condition	r _d (Ω)	Condition	
	Grade	Min	Max	I _z (mA)	Max	V _R (V)	Max	Iz (mA)	
HZS5	C1	4.9	5.1	5	5	1.5	100	5	
	C2	5.0	5.2						
	C3	5.1	5.3						
HZS6	A1	5.2	5.5	5	5	2.0	40	5	
	A2	5.3	5.6						
	A3	5.4	5.7						
	B1	5.5	5.8						
	B2	5.6	5.9						
	B3	5.7	6.0						
	C1	5.8	6.1						
	C2	6.0	6.3						
	C3	6.1	6.4						
HZS7	A1	6.3	6.6	5	1	3.5	15	5	
	A2	6.4	6.7						
	A3	6.6	6.9						
	B1	6.7	7.0						
	B2	6.9	7.2						
	B3	7.0	7.3						
	C1	7.2	7.6						
	C2	7.3	7.7						
	C3	7.5	7.9			2			
HZS9	A1	7.7	8.1	5		5.0	20	5	
	A2	7.9	8.3						
	A3	8.1	8.5						
	B1	8.3	8.7						
	B2	8.5	8.9						
	B3	8.7	9.1						
	C1	8.9	9.3						
	C2	9.1	9.5						
117011	C3	9.3	9.7		4	7 5	05		
HZS11	A1	9.5	9.9	5	1	7.5	25	5	
	A2	9.7	10.1						
	A3	9.9	10.3						
	B1	10.2	10.6	-					
	B2	10.4	10.8						
	B3	10.7	11.1						
	C1	10.9	11.3						
	C2	11.1	11.6						
	C3	11.4	11.9						
HZS12	A1	11.6	12.1	5	1	9.5	35	5	
	A2	11.9	12.4						
	A3	12.2	12.7						
	B1	12.4	12.9						
	B2	12.6	13.1	ļ					
	B3	12.9	13.4						

Note: 1. Tested with DC.

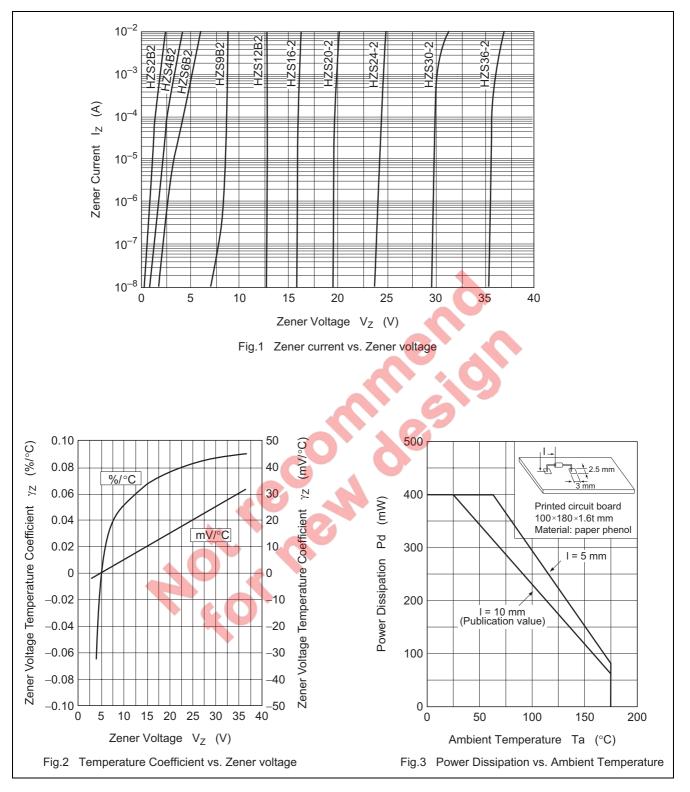
 $(Ta = 25^{\circ}C)$

			Zener Volta	ige	Reverse Current		(Ta = 25°C) Dynamic Resistance	
		V _z (V)* ¹		Test	Ι _R (μΑ)	Test Condition	r _d (Ω)	Test Condition
				Condition				
Туре	Grade	Min	Max	Iz (mA)	Max	V _R (V)	Max	I _Z (mA)
HZS12	C1	13.2	13.7	5	1	9.5	35	5
	C2	13.5	14.0					
	C3	13.8	14.3					
HZS15	-1	14.1	14.7	5	1	11.0	40	5
	-2	14.5	15.1					
	-3	14.9	15.5					
HZS16	-1	15.3	15.9	5	1	12.0	45	5
	-2	15.7	16.5					
	-3	16.3	17.1					
HZS18	-1	16.9	17.7	5	1	13.0	55	5
	-2	17.5	18.3					
	-3	18.1	19.0					
HZS20	-1	18.8	19.7	2	1	15.0	60	2
	-2	19.5	20.4					
	-3	20.2	21.1					
HZS22	-1	20.9	21.9	2	1 👩	17.0	65	2
	-2	21.6	22.6					
	-3	22.3	23.3					
HZS24	-1	22.9	24.0	2	1	19.0	70	2
	-2	23.6	24.7					
	-3	24.3	25.5		~ . 0			
HZS27	-1	25.2	26.6	2	1	21.0	80	2
	-2	26.2	27.6					
	-3	27.2	28.6					
HZS30	-1	28.2	29.6	2	1	23.0	100	2
	-2	29.2	30.6					
	-3	30.2	31.6					
HZS33	-1	31.2	32.6	2	1	25.0	120	2
	-2	32.2	33.6					
	-3	33.2	34.6					
HZS36	-1	34.2	35.7	2	1	27.0	140	2
	-2	35.3	36.8]				
	-3	36.4	38.0]				

Notes: 1. Tested with DC.

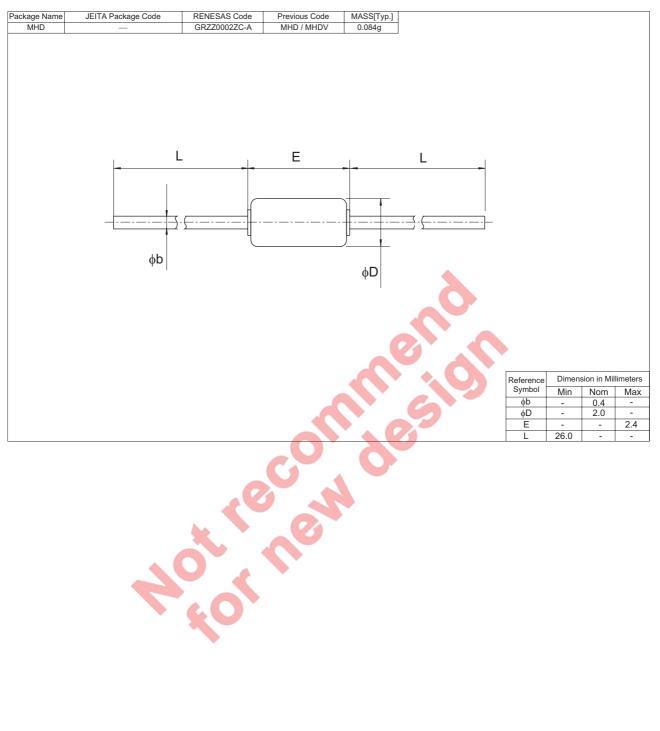
2. Type No. is as follows; HZS2B1, HZS2B2, HZS36-3.

Main Characteristic



RENESAS

Package Dimensions



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