

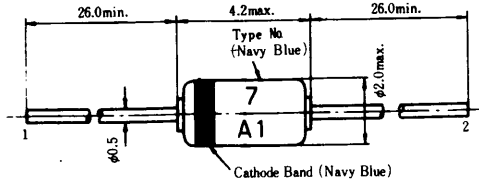
ツェナーダイオード ZENER DIODES

HZ, HZ[Ⓜ] SERIES

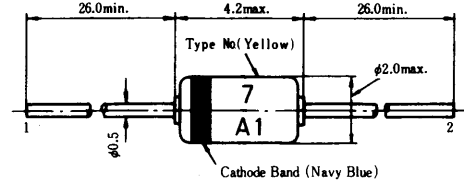
シリコンエピタキシャルプレーナ形
安定化電源用

SILICON EPITAXIAL PLANAR
STABILIZED POWER SUPPLY

HZ SERIES



HZ[Ⓜ] SERIES



1. カソード: Cathode
 2. アノード: Anode
- (Dimensions in mm)

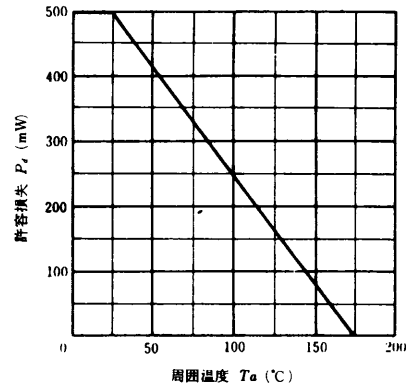
(JEDEC DO-35)

(JEDEC DO-35)

■絶対最大定格 ABSOLUTE MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

項	目	Symbol	HZ, HZ [Ⓜ] Series	Unit
順	電	I_F	200	mA
許	容	P_d	500	mW
接	合	T_j	175	$^\circ\text{C}$
保	存	T_{stg}	-55 ~ +175	$^\circ\text{C}$

許容損失の周囲温度による変化 MAXIMUM POWER DISSIPATION CURVE



■品名の呼び方

本品の呼び方は、下記によります。

HZ 2 A1
|
形名 区分記号

HZ 2 [Ⓜ]A1
|
形名 区分記号

■電気的特性 ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

Type	Suffix Grade	Zener Voltage V_Z (V)						Condition	I_R		r_d		γ_Z	
		Suffix-1		Suffix-2		Suffix-3			max.	Condition	max.	Condition	typ.	Condition
		min.	max.	min.	max.	min.	max.		(μA)		(Ω)		($\text{mV}/^\circ\text{C}$)	
HZ1	C	—	—	—	—	1.5	1.7	$I_Z = 5\text{mA}$	25	$V_R = 0.5\text{V}$	100	$I_Z = 5\text{mA}$	-1.5	$I_Z = 5\text{mA}$
HZ2 HZ2 [Ⓜ]	A	1.6	1.8	1.7	1.9	1.8	2.0	$I_Z = 5\text{mA}$	25	$V_R = 0.5\text{V}$	100	$I_Z = 5\text{mA}$	-1.5	$I_Z = 5\text{mA}$
	B	1.9	2.1	2.0	2.2	2.1	2.3							
	C	2.2	2.4	2.3	2.5	2.4	2.6							
HZ3 HZ3 [Ⓜ]	A	2.5	2.7	2.6	2.8	2.7	2.9	$I_Z = 5\text{mA}$	1	$V_R = 0.5\text{V}$	100	$I_Z = 5\text{mA}$	-2.0	$I_Z = 5\text{mA}$
	B	2.8	3.0	2.9	3.1	3.0	3.2							
	C	3.1	3.3	3.2	3.4	3.3	3.5							
HZ4 HZ4 [Ⓜ]	A	3.4	3.6	3.5	3.7	3.6	3.8	$I_Z = 5\text{mA}$	5	$V_R = 1.0\text{V}$	100	$I_Z = 5\text{mA}$	-2.0	$I_Z = 5\text{mA}$
	B	3.7	3.9	3.8	4.0	3.9	4.1							
	C	4.0	4.2	4.1	4.3	4.2	4.4							
HZ5 HZ5 [Ⓜ]	A	4.3	4.5	4.4	4.6	4.5	4.7	$I_Z = 5\text{mA}$	5	$V_R = 1.5\text{V}$	100	$I_Z = 5\text{mA}$	-0.3	$I_Z = 5\text{mA}$
	B	4.6	4.8	4.7	4.9	4.8	5.0							
	C	4.9	5.1	5.0	5.2	5.1	5.3							

次ページに続く (to be Continued)

Type	Grade	Suffix Value	Zener Voltage V_Z (V)						Condition	I_R		r_a		γ_Z^{**}																																											
			Suffix-1		Suffix-2		Suffix-3			max.	Condition	max.	Condition	typ.	Condition																																										
			min.	max.	min.	max.	min.	max.		(μA)		(Ω)		(mV/°C)																																											
HZ6 HZ6 [Ⓜ]	A	5.2	5.5	5.3	5.6	5.4	5.7	$I_Z = 5mA$	5	$V_R = 2V$	35	$I_Z = 5mA$	0.4	$I_Z = 5mA$																																											
	B	5.5	5.8	5.6	5.9	5.7	6.0								5	$V_R = 3.5V$	15	3.0																																							
	C	5.8	6.1	6.0	6.3	6.1	6.4												5	$V_R = 5V$	20	5.0																																			
HZ7 HZ7 [Ⓜ]	A	6.3	6.6	6.4	6.7	6.6	6.9		5	$V_R = 7.5V$	25		7.5																																												
	B	6.7	7.0	6.9	7.2	7.0	7.3								5	$V_R = 9.5V$	35	8.2																																							
	C	7.2	7.6	7.3	7.7	7.5	7.9												5	$V_R = 11V$	40	11.0																																			
HZ9 HZ9 [Ⓜ]	A	7.7	8.1	7.9	8.3	8.1	8.5		5	$V_R = 12V$	45		12.0																																												
	B	8.3	8.7	8.5	8.9	8.7	9.1								5	$V_R = 13V$	55	15.0																																							
	C	8.9	9.3	9.1	9.5	9.3	9.7												5	$V_R = 15V$	60	16.3																																			
HZ11 HZ11 [Ⓜ]	A	9.5	9.9	9.7	10.1	9.9	10.3		1	$V_R = 17V$	65		18.6																																												
	B	10.2	10.6	10.4	10.8	10.7	11.1								1	$V_R = 19V$	70	20.3																																							
	C	10.9	11.3	11.1	11.6	11.4	11.9												1	$V_R = 21V$	80	24.0																																			
HZ12 HZ12 [Ⓜ]	A	11.6	12.1	11.9	12.4	12.2	12.7		1	$V_R = 23V$	100		26.0																																												
	B	12.4	12.9	12.6	13.1	12.9	13.4								1	$V_R = 25V$	120	28.0																																							
	C	13.2	13.7	13.5	14.0	13.8	14.3												1	$V_R = 27V$	140	31.0																																			
HZ15, HZ15 [Ⓜ]		14.1	14.7	14.5	15.1	14.9	15.5	$I_Z = 2mA$	1		$I_Z = 2mA$	16.3																																													
HZ16, HZ16 [Ⓜ]		15.3	15.9	15.7	16.5	16.3	17.1						$I_Z = 2mA$	1		$I_Z = 2mA$	18.6																																								
HZ18, HZ18 [Ⓜ]		16.9	17.7	17.5	18.3	18.1	19.0											$I_Z = 2mA$	1		$I_Z = 2mA$	20.3																																			
HZ20, HZ20 [Ⓜ]		18.8	19.7	19.5	20.4	20.2	21.1																$I_Z = 2mA$	1		$I_Z = 2mA$	24.0																														
HZ22, HZ22 [Ⓜ]		20.9	21.9	21.6	22.6	22.3	23.3																					$I_Z = 2mA$	1		$I_Z = 2mA$	26.0																									
HZ24, HZ24 [Ⓜ]		22.9	24.0	23.6	24.7	24.3	25.5																										$I_Z = 2mA$	1		$I_Z = 2mA$	28.0																				
HZ27, HZ27 [Ⓜ]		25.2	26.6	26.2	27.6	27.2	28.6																															$I_Z = 2mA$	1		$I_Z = 2mA$	31.0															
HZ30, HZ30 [Ⓜ]		28.2	29.6	29.2	30.6	30.2	31.6																																				$I_Z = 2mA$	1		$I_Z = 2mA$	31.0										
HZ33, HZ33 [Ⓜ]		31.2	32.6	32.2	33.6	33.2	34.6																																									$I_Z = 2mA$	1		$I_Z = 2mA$	31.0					
HZ36, HZ36 [Ⓜ]		34.2	35.7	35.3	36.8	36.4	38.0																																														$I_Z = 2mA$	1		$I_Z = 2mA$	31.0

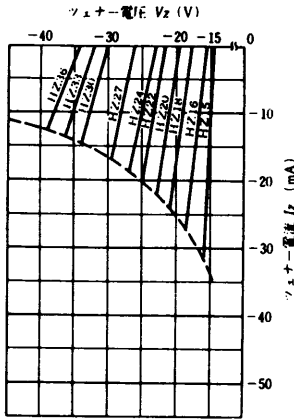
* Non Suffixは-1のmin~-3のmax.

* The non-suffix types have value from -1 min. to -3 max.

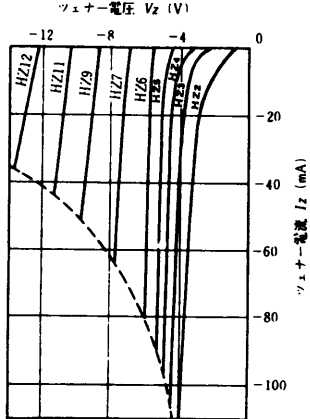
** γ_Z : 参考値

** γ_Z : Reference only

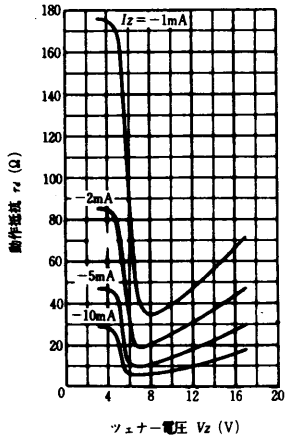
ツェナー特性(1)
ZENER CHARACTERISTICS



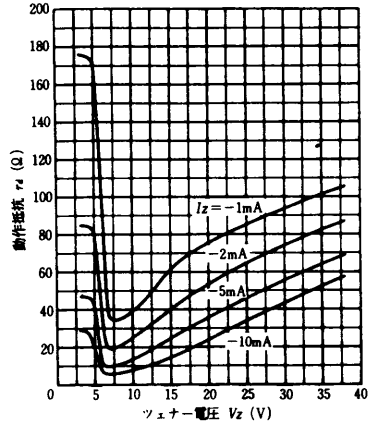
ツェナー特性(2)
ZENER CHARACTERISTICS



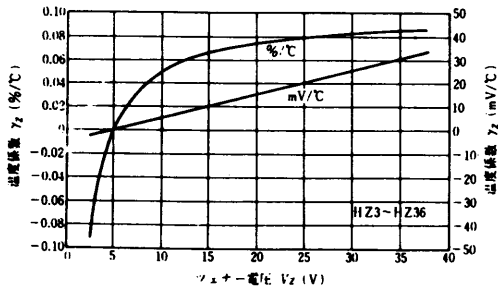
動作抵抗対ツェナー電圧特性(1)
DYNAMIC RESISTANCE VS. ZENER VOLTAGE



動作抵抗対ツェナー電圧特性(2)
DYNAMIC RESISTANCE VS. ZENER VOLTAGE



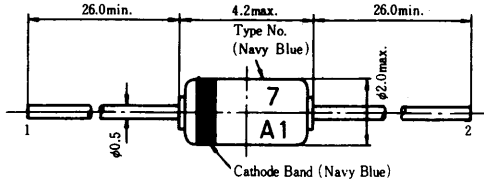
温度係数対ツェナー電圧特性
TEMPERATURE COEFFICIENT VS.
ZENER VOLTAGE



HZ-L SERIES

シリコンエピタキシャルプレーナ形
低電流動作, 低雑音用

SILICON EPITAXIAL PLANAR
LOW CURRENT OPERATION AND
LOW NOISE APPLICATION



注) 本体はオレンジ塗装
Note) Body is all orange.

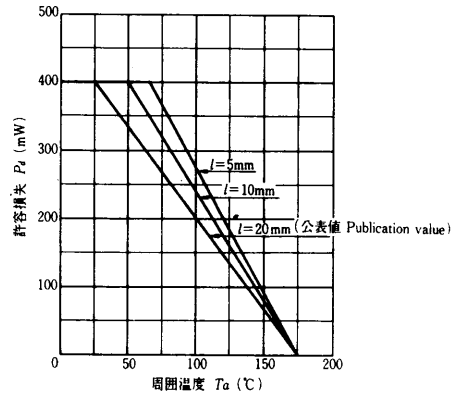
1. カソード: Cathode
 2. アノード: Anode
- (Dimensions in mm)

(JEDEC DO-35)

■絶対最大定格 ABSOLUTE MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

項	目	Symbol	HZ-L Series	Unit
順	電 流	I_F	200	mA
許	容 損 失	P_d	400	mW
接	合 部 温 度	T_j	175	$^\circ\text{C}$
保	存 温 度	T_{stg}	-55 ~ +175	$^\circ\text{C}$

許容損失の周囲温度による変化
MAXIMUM POWER DISSIPATION
CURVE



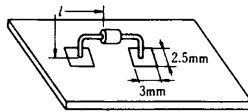
Pd試験条件 Pd Test Condition

■品名の呼び方

本品の呼び方は, 下記によります。

HZ 6 A2L

形名 区分記号



プリント板: 板大さき
Printed board
100×180×1.6mm
材質: 紙フェノール
Quality: Paper phenol

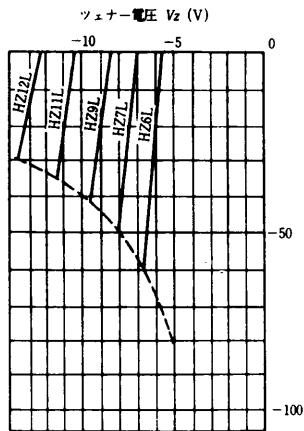
■電気的特性 ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

Type	Zener Voltage Suffix Value Grade	V_Z						COND	I_Z (mA)	I_R		r_d	
		-1		-2		-3				COND	V_R (V)	max. (Ω)	COND
		min. (V)	max. (V)	min. (V)	max. (V)	min. (V)	max. (V)						
HZ6L	A	5.2	5.5	5.3	5.6	5.4	5.7	0.5	1	2.0	150	0.5	
	B	5.5	5.8	5.6	5.9	5.7	6.0						80
	C	5.8	6.1	6.0	6.3	6.1	6.4						
HZ7L	A	6.3	6.6	6.4	6.7	6.6	6.9	0.5	1	3.5	60	0.5	
	B	6.7	7.0	6.9	7.2	7.0	7.3						
	C	7.2	7.6	7.3	7.7	7.5	7.9						
HZ9L	A	7.7	8.1	7.9	8.3	8.1	8.5	0.5	1	6.0	60	0.5	
	B	8.3	8.7	8.5	8.9	8.7	9.1						
	C	8.9	9.3	9.1	9.5	9.3	9.7						
HZ11L	A	9.5	9.9	9.7	10.1	9.9	10.3	0.5	1	8.0	80	0.5	
	B	10.2	10.6	10.4	10.8	10.7	11.1						
	C	10.9	11.3	11.1	11.6	11.4	11.9						
HZ12L	A	11.6	12.1	11.9	12.4	12.2	12.7	0.5	1	10.5	80	0.5	
	B	12.4	12.9	12.6	13.1	12.9	13.4						
	C	13.2	13.7	13.5	14.0	13.8	14.3						

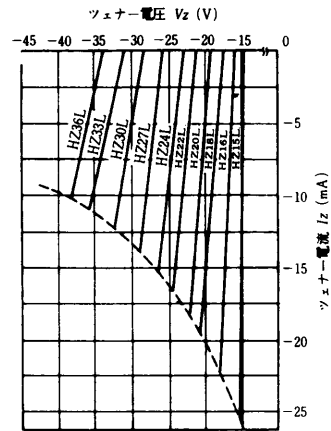
(次頁に続く)(to be continued)

Zener Voltage Suffix Value Type	V_Z						I_Z (mA)	I_R		r_d	
	-1		-2		-3			COND	COND	max. (Ω)	COND
	min. (V)	max. (V)	min. (V)	max. (V)	min. (V)	max. (V)					
HZ15L	14.1	14.7	14.5	15.1	14.9	15.5	0.5	1	13	80	0.5
HZ16L	15.3	15.9	15.7	16.5	16.3	17.1	0.5	1	14	80	0.5
HZ18L	16.9	17.7	17.5	18.3	18.1	19.0	0.5	1	15	80	0.5
HZ20L	18.8	19.7	19.5	20.4	20.2	21.1	0.5	1	18	100	0.5
HZ22L	20.9	21.9	21.6	22.6	22.3	23.3	0.5	1	20	100	0.5
HZ24L	22.9	24.0	23.6	24.7	24.3	25.5	0.5	1	22	120	0.5
HZ27L	25.2	26.6	26.2	27.6	27.2	28.6	0.5	1	24	150	0.5
HZ30L	28.2	29.6	29.2	30.6	30.2	31.6	0.5	1	27	200	0.5
HZ33L	31.2	32.6	32.2	33.6	33.2	34.6	0.5	1	30	250	0.5
HZ36L	34.2	35.7	35.3	36.8	36.4	38.0	0.5	1	33	300	0.5

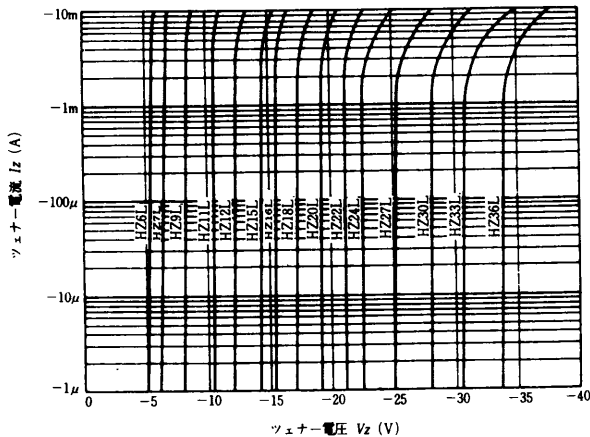
ツェナー特性 (1)
ZENER CHARACTERISTICS



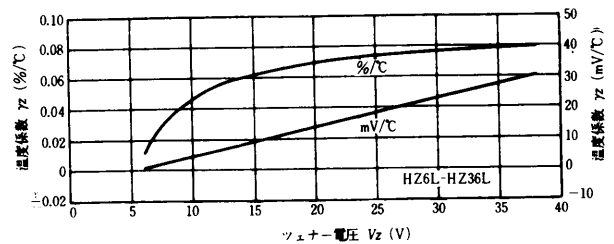
ツェナー特性 (2)
ZENER CHARACTERISTICS



ツェナー特性 (3)
ZENER CHARACTERISTICS



温度係数対ツェナー電圧特性
TEMPERATURE COEFFICIENT VS.
ZENER VOLTAGE



低雑音, 低動作抵抗ツェナーダイオード

LOW NOISE AND LOW DYNAMIC RESISTANCE ZENER DIODES

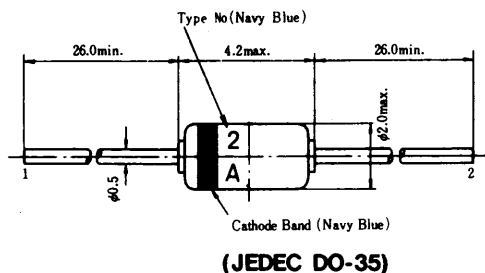
HZ-LL SERIES

シリコンエピタキシャルプレーナ形

低電流動作, 低雑音用

SILICON EPITAXIAL PLANAR

LOW CURRENT OPERATION AND LOW NOISE APPLICATION



注) 本体は草緑色塗装
Note) Body is all verdure.

1. カソード : Cathode
 2. アノード : Anode
- (Dimensions in mm)

■絶対最大定格 ABSOLUTE MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

項	目	Symbol	HZ-LL Series	Unit
順	電	I_F	50	mA
許	容	P_d	250	mW
接	合	T_j	175	$^\circ\text{C}$
保	存	T_{stg}	-55 ~ +175	$^\circ\text{C}$

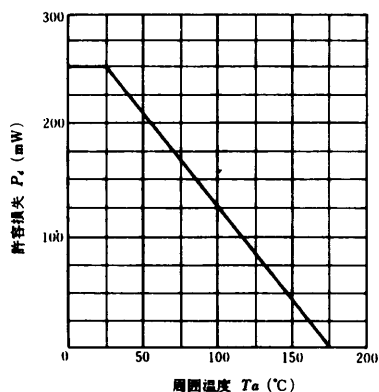
■品名の呼び方

本品の呼び方は, 下記によります。

HZ 2 ALL

形名 区分記号

許容損失の周囲温度による変化 MAXIMUM POWER DISSIPATION CURVE

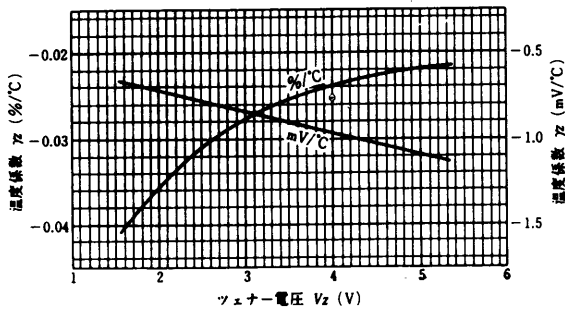


■ 電気的特性 ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$)

Type	Zener Voltage Grade Value	V_z			I_R		Z_{zr}		Z_{zk}^*		ΔV_{z1}^{**} max. (V)	ΔV_{z1}^{***} max. (V)
		(V)		Condition	max.	Condition	max.	Condition	typ.	Condition		
		min.	max.	I_z (mA)	(nA)	V_R (V)	(Ω)	I_{zr} (mA)	(k Ω)	I_{zk} (μA)		
HZ2LL	A	1.6	2.0	0.5	100	0.5	350	0.5	(1.2)	50	0.5	0.6
	B	1.9	2.3	0.5	100	0.5	350	0.5	(1.2)	50	0.5	0.6
	C	2.2	2.6	0.5	100	0.5	350	0.5	(1.2)	50	0.5	0.6
HZ3LL	A	2.5	2.9	0.5	100	1.0	360	0.5	(1.2)	50	0.5	0.6
	B	2.8	3.2	0.5	100	1.0	360	0.5	(1.2)	50	0.5	0.6
	C	3.1	3.5	0.5	100	1.0	360	0.5	(1.2)	50	0.5	0.6
HZ4LL	A	3.4	3.8	0.5	100	2.0	370	0.5	(1.5)	50	0.5	0.6
	B	3.7	4.1	0.5	100	2.0	370	0.5	(1.5)	50	0.5	0.6
	C	4.0	4.4	0.5	100	2.0	370	0.5	(1.5)	50	0.5	0.6
HZ5LL	A	4.3	4.7	0.5	100	3.0	380	0.5	(1.5)	50	0.5	0.6
	B	4.6	5.0	0.5	100	3.0	380	0.5	(1.5)	50	0.5	0.6
	C	4.9	5.3	0.5	100	3.0	380	0.5	(1.5)	50	0.5	0.6

* 参考値
 * Reference only
 ** $\Delta V_{z1} = V_z(I_z=0.5\text{mA}) - V_{z1}(I_z=0.05\text{mA})$
 *** $\Delta V_{z1} = V_{z1}(I_z=0.05\text{mA}) - V_{z1}(I_z=0.001\text{mA})$

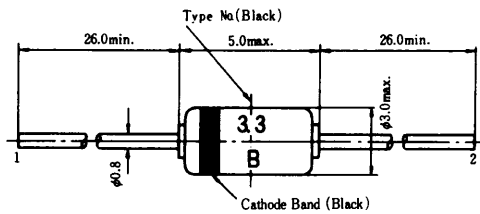
温度係数对ツェナー電圧特性
 TEMPERATURE COEFFICIENT VS.
 ZENER VOLTAGE



HZ-P SERIES

シリコンエピタキシャルプレーナ形
電圧制御, 電圧リミッティング用

SILICON EPITAXIAL PLANAR
VOLTAGE CONTROLLER AND VOLTAGE LIMITTER



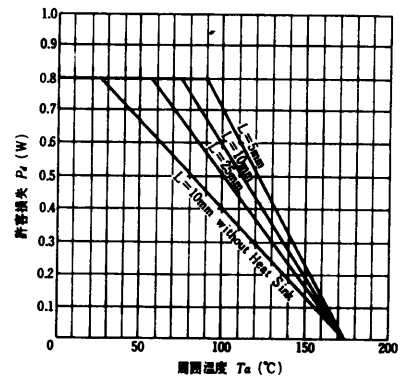
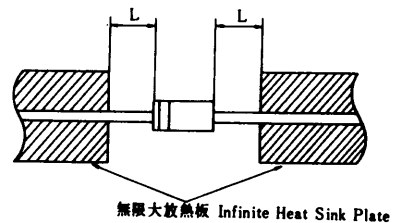
(JEDEC DO-41)

1. カソード: Cathode
 2. アノード: Anode
- (Dimensions in mm)

■絶対最大定格 ABSOLUTE MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

項	目	Symbol	HZ-P Series	Unit
許	容	P_d	0.8	W
換	合	T_j	175	$^\circ\text{C}$
保	存	T_{stg}	-55~+175	$^\circ\text{C}$

許容損失の周囲温度による変化
MAXIMUM POWER DISSIPATION
CURVE



■品名の呼び方

本品の呼び方は、下記によります。

HZ2.0 BP

形名 区分記号

■電気的特性 ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

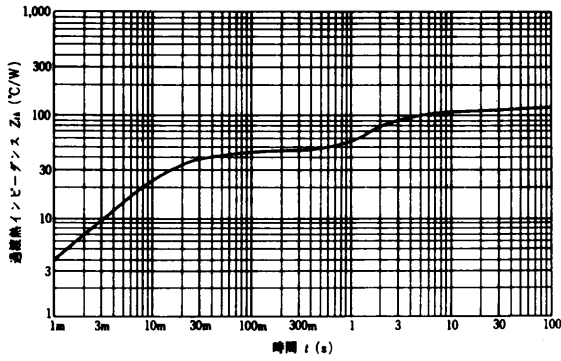
Type	Grade	Zener Voltage Value	V_z (V)		Condition I_z (mA)	r_d max. (Ω)	Condition I_z (mA)	I_R max. (μA)	Condition V_R (V)
			min.	max.					
HZ2.0P	B	2.00	1.88	2.12	40	25	40	200	0.5
	C		2.00	2.24					
HZ2.2P	B	2.20	2.08	2.33	40	20	40	200	0.7
	C		2.20	2.45					
HZ2.4P	B	2.40	2.28	2.56	40	15	40	200	1.0
	C		2.40	2.70					
HZ2.7P	B	2.70	2.50	2.90	40	15	40	200	1.0
	C		2.70	3.10					
HZ3.0P	B	3.00	2.80	3.20	40	15	40	100	1.0
	C		3.00	3.40					
HZ3.3P	B	3.30	3.10	3.50	40	15	40	80	1.0
	C		3.30	3.70					

(次頁に続く)(to be continued)

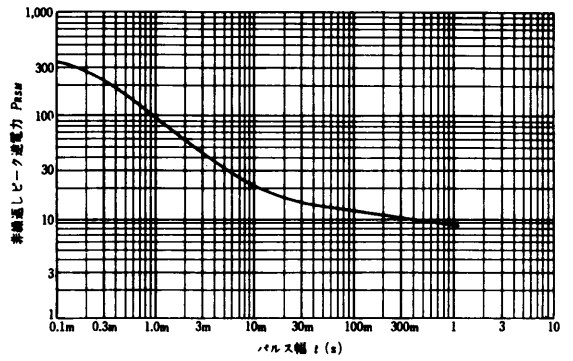
HZ-P SERIES

Type	Zener Voltage Grade Value	V _Z (V)		Condition	r _s max. (Ω)	Condition	I _R max. (μA)	Condition
		min.	max.	I _Z (mA)		I _Z (mA)		V _R (V)
HZ3.6P	B	3.4	3.8	40	15	40	60	1.0
	C	3.6	4.0					
HZ3.9P	B	3.7	4.1	40	15	40	40	1.0
	C	3.9	4.4					
HZ4.3P	B	4.0	4.5	40	15	40	20	1.0
	C	4.3	4.8					
HZ4.7P	B	4.4	4.9	40	10	40	20	1.0
	C	4.7	5.2					
HZ5.1P	B	4.8	5.4	40	8	40	20	1.0
	C	5.1	5.7					
HZ5.6P	B	5.3	6.0	40	8	40	20	1.5
	C	5.6	6.3					
HZ6.2P	B	5.8	6.6	40	6	40	20	3.0
	C	6.2	7.0					
HZ6.8P	B	6.4	7.2	40	6	40	20	3.5
	C	6.8	7.7					
HZ7.5P	B	7.0	7.9	40	4	40	20	4.0
	C	7.5	8.4					
HZ8.2P	B	7.7	8.7	40	4	40	20	5.0
	C	8.2	9.3					
HZ9.1P	B	8.5	9.6	40	6	40	20	6.0
	C	9.1	10.2					
HZ10P	B	9.4	10.6	40	6	40	10	7.0
	C	10.0	11.2					
HZ11P	B	10.4	11.6	20	8	20	10	8.0
	C	11.0	12.3					
HZ12P	B	11.4	12.6	20	8	20	10	9.0
	C	12.0	13.5					
HZ13P	B	12.4	14.1	20	10	20	10	10.0
	C	13.3	15.0					
HZ15P	B	13.8	15.6	20	10	20	10	11.0
	C	14.7	16.5					
HZ16P	B	15.3	17.1	20	12	20	10	12.0
	C	16.2	18.3					
HZ18P	B	16.8	19.1	20	12	20	10	13.0
	C	18.0	20.3					
HZ20P	B	18.8	21.2	20	14	20	10	15.0
	C	20.0	22.4					
HZ22P	B	20.8	23.3	10	14	10	10	17.0
	C	22.0	24.5					
HZ24P	B	22.8	25.6	10	16	10	10	19.0
	C	24.0	27.6					
HZ27P	B	25.1	28.9	10	16	10	10	21.0
	C	27.0	30.8					
HZ30P	B	28.0	32.0	10	18	10	10	23.0
	C	30.0	34.0					
HZ33P	B	31.0	35.0	10	18	10	10	25.0
	C	33.0	37.0					
HZ36P	B	34.0	38.5	10	20	10	10	27.0
	C	36.0	40.0					

過渡熱インピーダンス特性
**TRANSIENT THERMAL
 IMPEDANCE CHARACTERISTICS**



サージ逆電力特性
SURGE REVERSE POWER CHARACTERISTICS

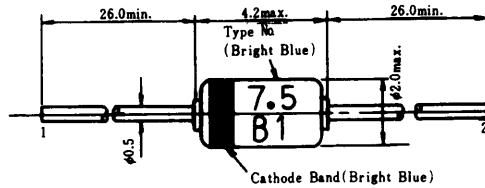


ツェナーダイオード ZENER DIODES

HZ-E SERIES

シリコンエピタキシャルプレーナ形
安定化電源用

SILICON EPITAXIAL PLANAR
STABILIZED POWER SUPPLY



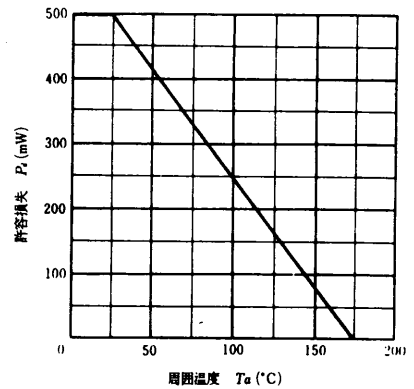
(JEDEC DO-35)

1. カソード: Cathode
 2. アノード: Anode
- (Dimensions in mm)

■絶対最大定格 ABSOLUTE MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

項 目	Symbol	HZ-E Series	Unit
順 電 流	I_F	200	mA
許 容 損 失	P_d	500	mW
接 合 部 温 度	T_j	175	$^\circ\text{C}$
保 存 温 度	T_{stg}	-55 ~ +175	$^\circ\text{C}$

■許容損失の周囲温度による変化 MAXIMUM POWER DISSIPATION CURVE



■品名の呼び方

本品の呼び方は、下記によります。

HZ2.7E B1

形名 区分記号

■電気的特性 ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

Type	Zener Voltage Grade	V_Z (V)*		Condition I_Z (mA)	Z_Z (Ω) max.	Condition I_Z (mA)	I_R (μA) max.	Condition V_R (V)
		min.	max.					
HZ2.7E	B1	2.54	2.75	20	100	20	2	0.5
	B2	2.69	2.91				1	
HZ3.0E	B1	2.85	3.07	20	80	20	1	0.5
	B2	3.01	3.22					
HZ3.3E	B1	3.16	3.38	20	70	20	1	0.5
	B2	3.32	3.53					
HZ3.6E	B1	3.47	3.68	20	60	20	1	0.5
	B2	3.62	3.83					
HZ3.9E	B1	3.77	3.98	20	50	20	1	1.0
	B2	3.92	4.14					
HZ4.3E	B1	4.05	4.26	20	40	20	5	1.0
	B2	4.20	4.40					
	B3	4.34	4.53					
HZ4.7E	B1	4.47	4.65	20	25	20	5	1.0
	B2	4.59	4.77					
	B3	4.71	4.91					
HZ5.1E	B1	4.85	5.03	20	20	20	5	1.5
	B2	4.97	5.18					
	B3	5.12	5.35					

(次頁に続く) (to be continued)

Type	Zener Voltage Value Grade	V _Z (V)*		Condition	Z _Z (Ω)	Condition	I _R (μA)	Condition
		min.	max.	I _Z (mA)	max.	I _Z (mA)	max.	V _R (V)
HZ5.6E	B1	5.29	5.52	20	13	20	5	2.5
	B2	5.46	5.70					
	B3	5.64	5.88					
HZ6.2E	B1	5.81	6.06	20	10	20	5	3.0
	B2	5.99	6.24					
	B3	6.16	6.40					
HZ6.8E	B1	6.32	6.59	20	6	20	1	3.5
	B2	6.52	6.79					
	B3	6.70	6.97					
HZ7.5E	B1	6.88	7.19	20	6	20	0.5	4.0
	B2	7.11	7.41					
	B3	7.33	7.64					
HZ8.2E	B1	7.56	7.90	20	6	20	0.5	5.0
	B2	7.82	8.15					
	B3	8.07	8.41					
HZ9.1E	B1	8.33	8.70	20	6	20	0.2	6.0
	B2	8.69	8.99					
	B3	8.89	9.29					
HZ10E	B1	9.19	9.59	20	6	20	0.2	7.0
	B2	9.48	9.90					
	B3	9.82	10.30					
	C	9.94	10.44					
HZ11E	B1	10.18	10.63	10	10	10	0.2	8.0
	B2	10.50	10.95					
	B3	10.82	11.26					
HZ12E	B1	11.13	11.63	10	12	10	0.2	9.0
	B2	11.50	11.92					
	B3	11.80	12.30					
HZ13E	B1	12.18	12.71	10	14	10	0.2	10
	B2	12.59	13.16					
	B3	13.03	13.62					
HZ15E	B1	13.48	14.09	10	16	10	0.2	11
	B2	13.95	14.56					
	B3	14.42	15.02					
HZ16E	B1	14.87	15.50	10	18	10	0.2	12
	B2	15.33	15.96					
	B3	15.79	16.50					
HZ18E	B1	16.34	17.06	10	23	10	0.2	13
	B2	16.90	17.67					
	B3	17.51	18.30					
HZ20E	B1	18.11	18.92	10	28	10	0.2	15
	B2	18.73	19.57					
	B3	19.38	20.22					
	B4	19.88	20.72					
HZ22E	B1	20.23	21.08	5	30	5	0.2	17
	B2	20.76	21.65					
	B3	21.22	22.09					
	B4	21.52	22.63					

* ツェナー電圧(V_Z)は通電後40msで測定します。

* Zener voltage (V_Z) is measured 40ms after the apply of I_Z.

(次頁に続く) (to be continued)

HZ-E SERIES

Type	Zener Voltage Grade Value	$V_Z(V)^*$		Condition	$Z_Z(\Omega)$	Condition	$I_R(\mu A)$	Condition
				I_Z (mA)		max.		I_Z (mA)
		min.	max.					
HZ24E	B1	22.26	23.12	5	35	5	0.2	19
	B2	22.75	23.73					
	B3	23.29	24.27					
	B4	23.81	24.81					
HZ27E	B1	24.26	25.52	5	45	5	0.2	21
	B2	24.97	26.26					
	B3	25.63	26.95					
	B4	26.29	27.64					
HZ30E	B1	26.99	28.39	5	55	5	0.2	23
	B2	27.70	29.13					
	B3	28.36	29.82					
	B4	29.02	30.51					
HZ33E	B1	29.68	31.22	5	65	5	0.2	25
	B2	30.32	31.88					
	B3	30.90	32.50					
	B4	31.49	33.11					
HZ36E	B1	32.14	33.79	5	75	5	0.2	27
	B2	32.79	34.49					
	B3	33.40	35.13					
	B4	34.01	35.77					
HZ39E	B1	34.68	36.47	5	85	5	0.2	30
	B2	35.36	37.19					
	B3	36.00	37.85					
	B4	36.63	38.52					

* ツェナー電圧 (V_Z) は通電後40msで測定します。

* Zener voltage (V_Z) is measured 40ms after the apply of I_Z .