

HZ-LL Series Silicon Epitaxial Planar Zener Diodes for Hard Knee Low Noise

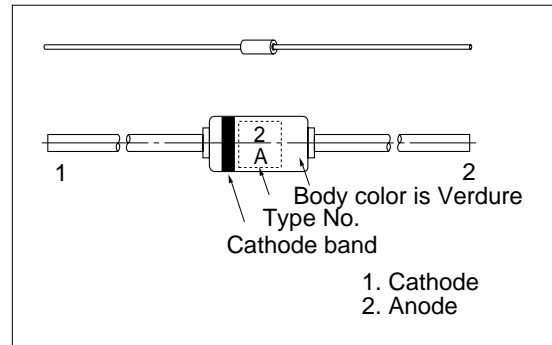
HITACHI

Preliminary
Rev. 0
Jul 1993

Features

- V_Z - I_Z characteristics are semilogarithmic linear from $I_Z=1nA$ to $1mA$ and have sharper breakdown knees in a low current region, and also lower V_Z temperature coefficients .
- Low dynamic impedance and low noise in the low current region (approximately 1/10 lower than the current zeners).

Outline



Ordering Information

Type No.	Mark	Package Code
HZ-LL Series	Type No.	DO-35

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Value	Unit
Power dissipation	P_d	250	mW
Junction temperature	T_j	175	°C
Storage temperature	T_{stg}	-55 to +175	°C

Electrical Characteristics (Ta = 25°C)

Type	Grade	V_Z (V)*		I_Z (mA)	I_R (nA)	V_R (V)	Z_{ZT} (Ω)	Z_{ZK}^{**} (k Ω)	I_{ZT} (mA)	I_{ZK} (μA)	$^{***}\Delta V_{Z1}$	$^{***}\Delta V_{Z2}$
		Min	Max								(V)	(V)
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									
	C	2.2	2.6									
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									
	C	3.1	3.5									

HZ-LL Series

Type	Grade	V_Z (V)*		I_Z (mA)	I_R (nA)		Z_{ZT} (Ω)		Z_{ZK} ** (k Ω)		$^{***}\Delta V_{Z1}$ (V)	$^{***}\Delta V_{Z2}$ (V)
		Min	Max		Max	V_R (V)	Max	I_{ZT} (mA)	Typ	I_{ZK} (μ A)	Max	Max
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									
	C	4.0	4.4									
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									
	C	4.9	5.3									

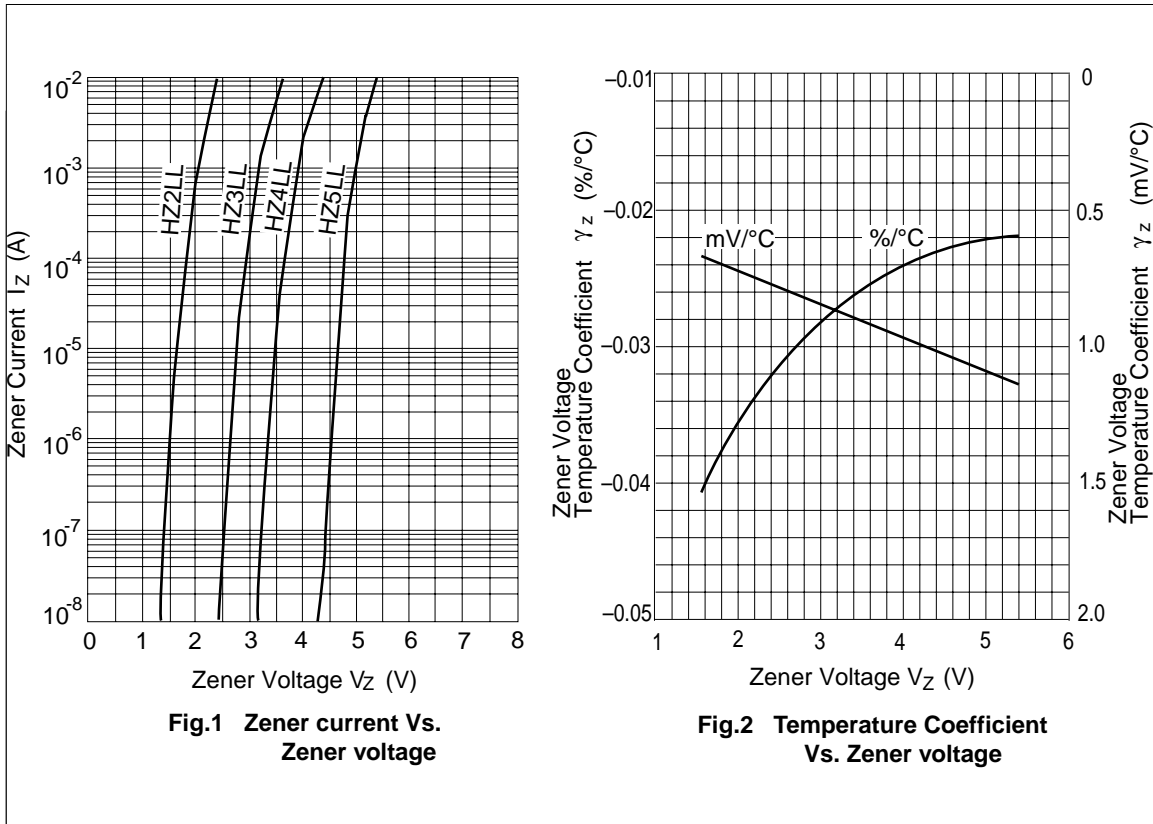
* Tested with DC.

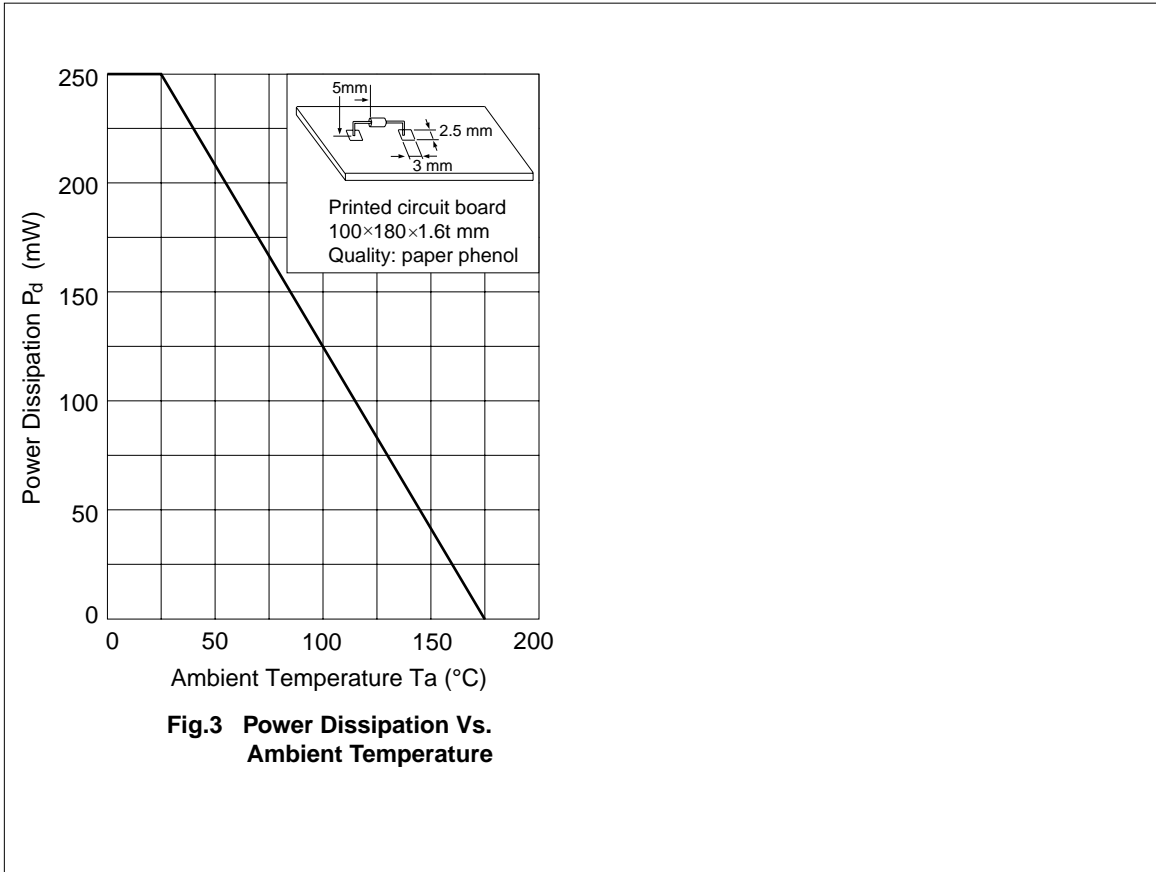
** Reference only

*** $\Delta V_{Z1} = V_Z (I_Z = 0.5 \text{ mA}) - V_Z (I_Z = 0.05 \text{ mA})$

*** $\Delta V_{Z2} = V_Z (I_Z = 0.05 \text{ mA}) - V_Z (I_Z = 0.001 \text{ mA})$

Note: Type No. is as follows; HZ2ALL, HZ2BLL, HZ5CLL.





Package Dimensions

Unit: mm

