

# HJT7 Monolithic IC Zener Diode for Temperature Compensation

# HITACHI

Rev. 1  
Apr. 1995

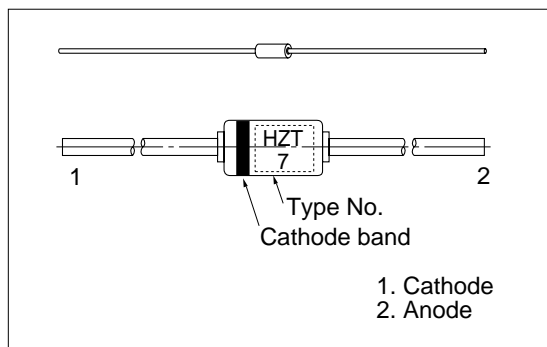
### Features

- Lower temperature coefficient of the reference voltage.  
( $\gamma_Z = \pm 0.002$  to  $\pm 0.01$  %/°Cmax)

### Ordering Information

Type No.	Mark	Package Code
HJT7	Type No.	DO-35

### Outline



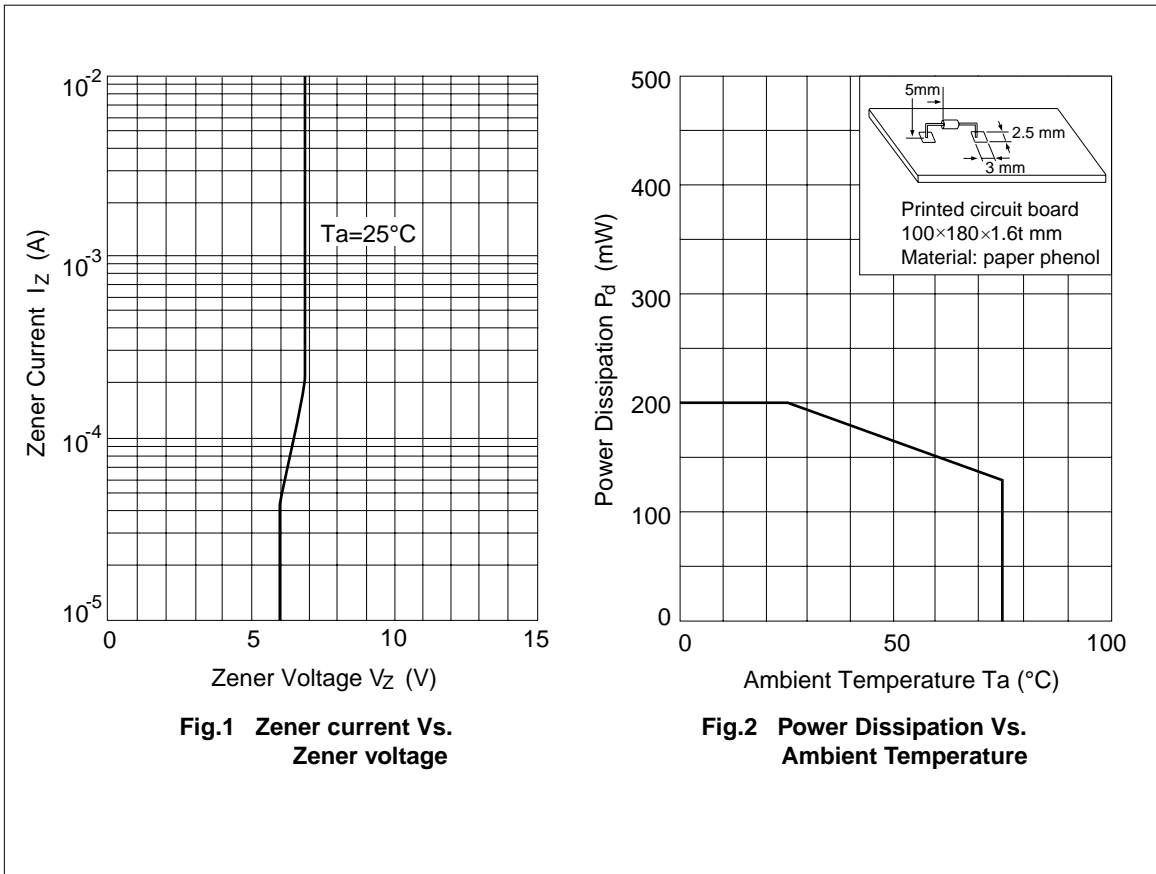
### Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Value	Unit
Power dissipation	$P_d$	200	mW
Operation temperature	$T_{opr}$	-40 to + 85	°C
Storage temperature	$T_{stg}$	-40 to +175	°C

### Electrical Characteristics (Ta = 25°C)

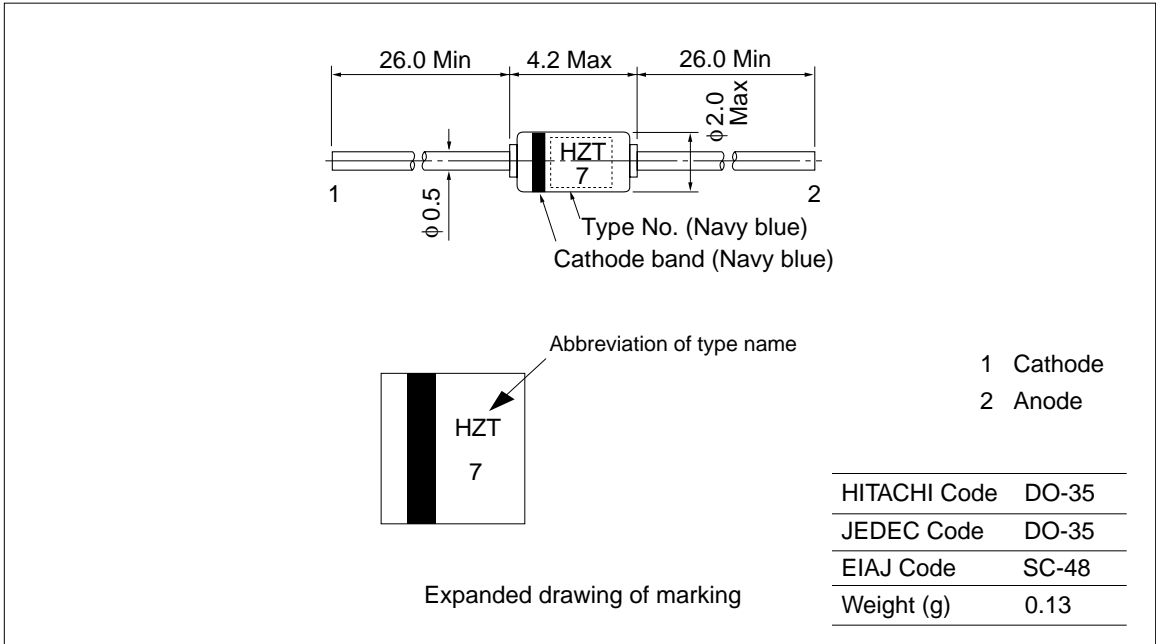
Type	Zener Voltage			Dynamic Resistance		Temperature Coefficient		
	$V_Z$ (V)		Test Condition	$r_d$ ( $\Omega$ )	Test Condition	$\gamma_Z$ (%/°C)	Test Condition	$T_a$ (°C)
	Min	Max	$I_Z$ (mA)	Max	$I_Z$ (mA)	Max	$I_Z$ (mA)	
HJT7A1	6.5	7.0	10	20	10	$\pm 0.01$	10	-40 to 25 to 85
HJT7A2						$\pm 0.005$		
HJT7A3						$\pm 0.002$		
HJT7B1	6.5	7.0	5	25	5	$\pm 0.01$	5	-40 to 25 to 85
HJT7B2						$\pm 0.005$		
HJT7B3						$\pm 0.002$		
HJT7C1	6.5	7.0	1	100	1	$\pm 0.01$	1	-40 to 25 to 85
HJT7C2						$\pm 0.005$		

## HZT7



### Package Dimensions

Unit: mm



# HZT33

## Monolithic IC Zener Diode for Temperature Compensation

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 Rev. 1  
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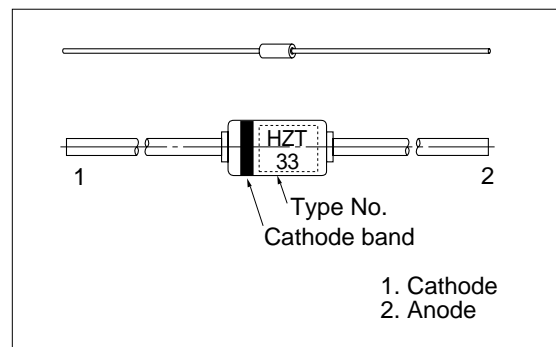
### Features

- Lower temperature coefficient of the reference voltage.  
( $\gamma_Z = \pm 1 \text{ mV}/^\circ\text{C}_{\text{max}}$ )
- Lower dynamic resistance.

### Ordering Information

Type No.	Mark	Package Code
HZT33	Type No.	DO-35

### Outline



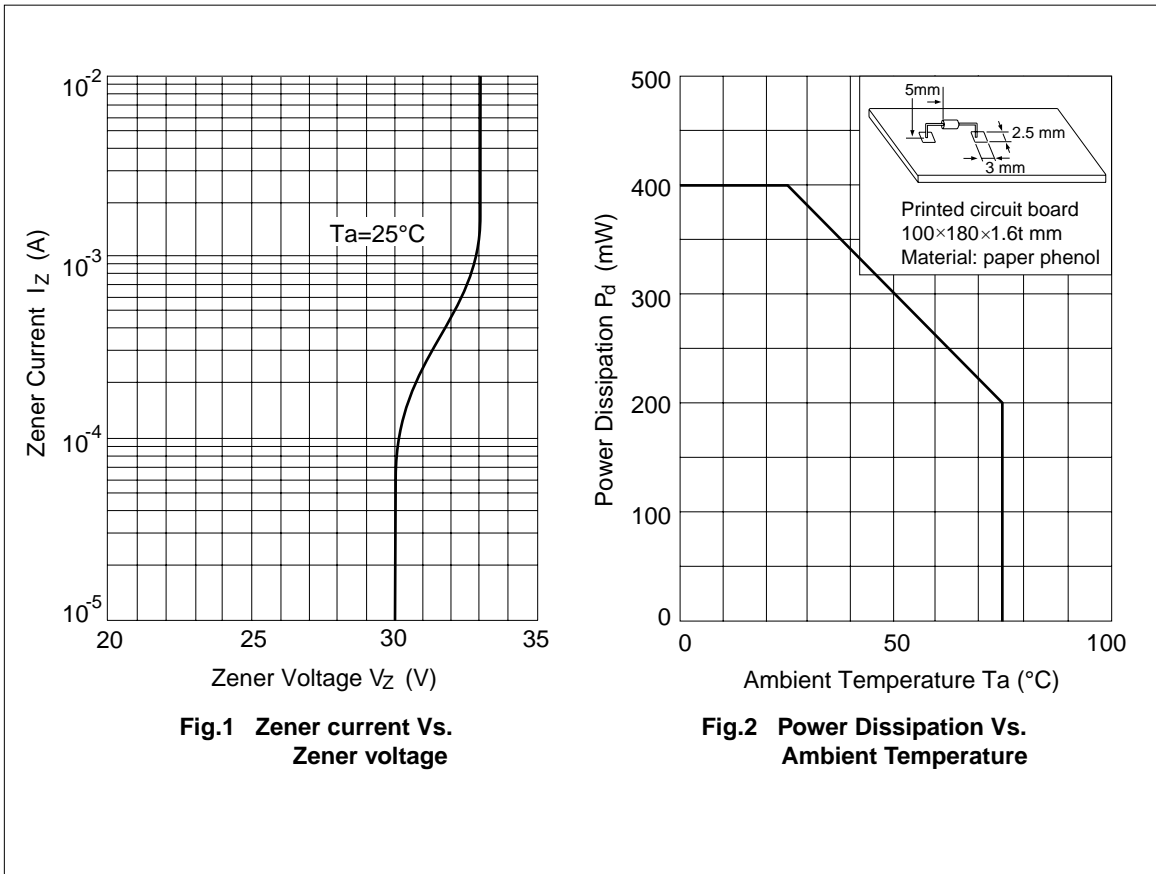
### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

Item	Symbol	Value	Unit
Power dissipation	$P_d$	200	mW
Operation temperature	$T_{opr}$	-20 to + 75	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-40 to +175	$^\circ\text{C}$

### Electrical Characteristics ( $T_a = 25^\circ\text{C}$ )

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Zener voltage	$V_Z$	31.0	—	35.0	V	$I_Z = 5 \text{ mA}$
Dynamic resistance	$r_d$	—	—	25.0	$\Omega$	$I_Z = 5 \text{ mA}$
Temperature coefficient	$\gamma_Z$	—	—	$\pm 1.0$	$\text{mV}/^\circ\text{C}$	$I_Z = 5 \text{ mA}$ $T_a = -20 \text{ to } 25 \text{ to } 75^\circ\text{C}$

## HZT33



### Package Dimensions

Unit: mm

