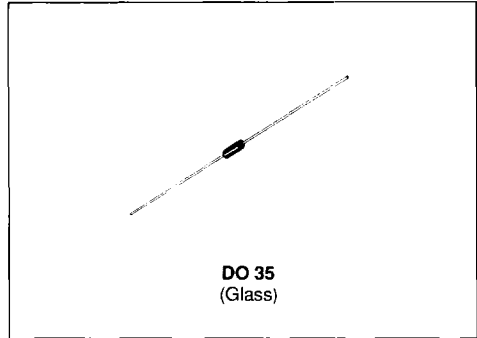




**TEMPERATURE COMPENSATED ZENER DIODES**

**NEW SERIE**

- SEMICONDUCTOR MATERIAL : SILICON
- TECHNOLOGY : LOCAL EPITAXY + GUARD RING



**ABSOLUTE RATINGS** (limiting values)

Symbol	Parameter		Value	Unit
$P_{tot}$	Power Dissipation*	$T_{amb} = 50^{\circ}C$	0.4	W
$T_{sig}$ $T_j$	Storage and Junction Temperature Range		- 65 to 175 - 65 to 175	$^{\circ}C$ $^{\circ}C$
$T_L$	Maximum Lead Temperature for Soldering during 10s at 4mm from Case		230	$^{\circ}C$

**THERMAL RESISTANCE**

Symbol	Parameter	Value	Unit
$R_{th(j-a)}$	Junction to Ambient*	300	$^{\circ}C/W$

**ELECTRICAL CHARACTERISTICS** ( $T_{amb} = 25^{\circ}C$  unless otherwise specified)

Types	$V_{ZT}$ typ. (V)	$R_{ZT}$ @ max. ( $\Omega$ )	$I_{ZT}$ (mA)	Test Temperatures ( $^{\circ}C$ )			$\Delta V_Z^{**}$ max. (mV)	$\alpha V_Z$ ( $10^{-6}/^{\circ}C$ )		
<b>1N 4775</b>	8.5	200	0.5	0	+ 25	+ 75	64	100		
<b>1N 4776</b>	8.5	200	0.5	0	+ 25	+ 75	32	50		
<b>1N 4777</b>	8.5	200	0.5	0	+ 25	+ 75	13	20		
<b>1N 4778</b>	8.5	200	0.5	0	+ 25	+ 75	6	10		
<b>1N 4779</b>	8.5	200	0.5	0	+ 25	+ 75	3	5		
<b>1N 4775 A</b>	8.5	200	0.5	- 55	0	+ 25	+ 75	+ 100	132	100
<b>1N 4776 A</b>	8.5	200	0.5	- 55	0	+ 25	+ 75	+ 100	66	50
<b>1N 4777 A</b>	8.5	200	0.5	- 55	0	+ 25	+ 75	+ 100	26	20
<b>1N 4778 A</b>	8.5	200	0.5	- 55	0	+ 25	+ 75	+ 100	13	10
<b>1N 4779 A</b>	8.5	200	0.5	- 55	0	+ 25	+ 75	+ 100	7	5

\* On infinite heatsink with d = 4mm.

\*\* The voltage reference diodes are characterized by the box method. The maximum allowable voltage change  $\Delta V_Z$  is guaranteed any two temperature within the range. Tests are performed at the indicated temperatures and the specified current.

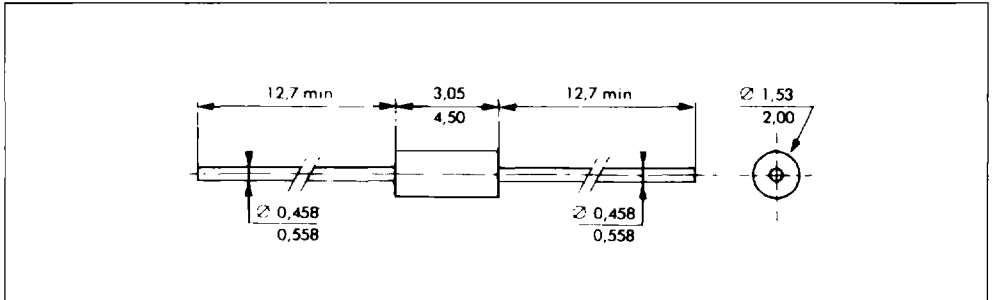
**ELECTRICAL CHARACTERISTICS** (continued)

Types	V <sub>ZT</sub> typ. (V)	R <sub>ZT</sub> @ max. (Ω)	I <sub>ZT</sub> (mA)	Test Temperatures (°C)				ΔV <sub>Z</sub> ** max. (mV)	αV <sub>Z</sub> (10 <sup>-6</sup> /°C)	
1N 4780	8.5	100	1	0	+ 25	+ 75		64	100	
1N 4781	8.5	100	1	0	+ 25	+ 75		32	50	
1N 4782	8.5	100	1	0	+ 25	+ 75		13	20	
1N 4783	8.5	100	1	0	+ 25	+ 75		6	10	
1N 4784	8.5	100	1	0	+ 25	+ 75		3	5	
1N 4780 A	8.5	100	1	- 55	0	+ 25	+ 75	+ 100	132	100
1N 4781 A	8.5	100	1	- 55	0	+ 25	+ 75	+ 100	66	50
1N 4782 A	8.5	100	1	- 55	0	+ 25	+ 75	+ 100	26	20
1N 4783 A	8.5	100	1	- 55	0	+ 25	+ 75	+ 100	13	10
1N 4784 A	8.5	100	1	- 55	0	+ 25	+ 75	+ 100	7	5

\* The voltage reference diodes are characterized by the box method. The maximum allowable voltage change ΔV<sub>Z</sub> is guaranteed any two temperature within the range.

**PACKAGE MECHANICAL DATA**

DO 35 Glass



Cooling method : by convection and conduction.  
 Marking : clear, ring at cathode end.  
 Weight : 0.15g

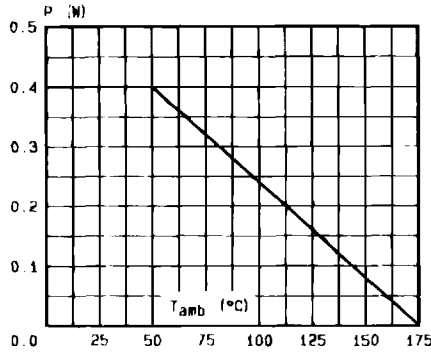


Fig. 1 - Power dissipation versus ambient temperature.

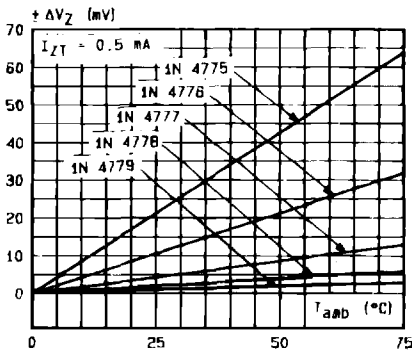


Fig. 2a - Regulation voltage variation versus ambient temperature.

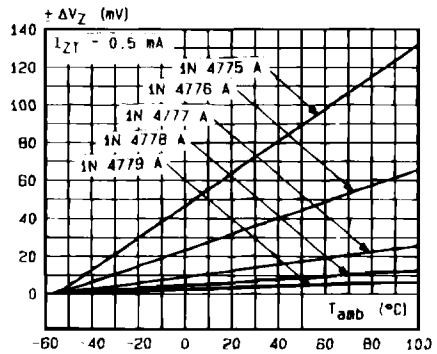


Fig. 2b - Regulation voltage variation versus ambient temperature.

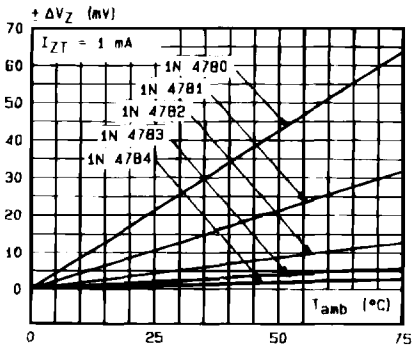


Fig. 2c - Regulation voltage variation versus ambient temperature.

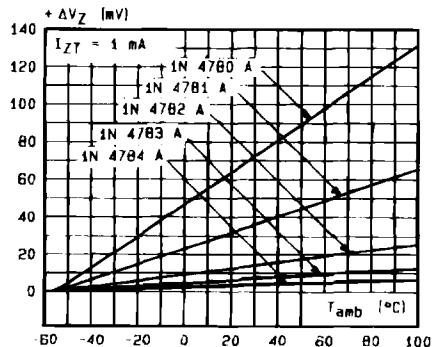


Fig. 2d - Regulation voltage variation versus ambient temperature.