

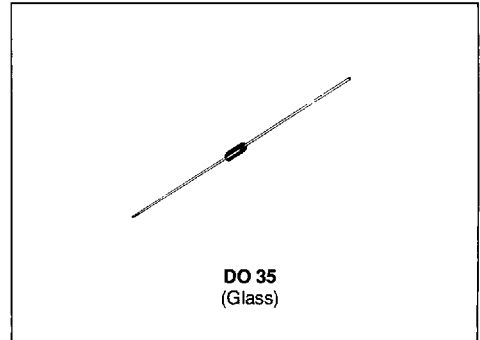

SGS-THOMSON
 MICROELECTRONICS

 T-11-09
 1N 4775, A → 1N 4784, A

S G S-THOMSON

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* $T_{amb} = 50^{\circ}\text{C}$	0.4	W
T_{stg} T_J	Storage and Junction Temperature Range	- 65 to 175 - 65 to 175	$^{\circ}\text{C}$ $^{\circ}\text{C}$
T_L	Maximum Lead Temperature for Soldering during 10s at 4mm from Case	230	$^{\circ}\text{C}$

THERMAL RESISTANCE

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

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

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

 * On infinite heatsink with $d = 4\text{mm}$.

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

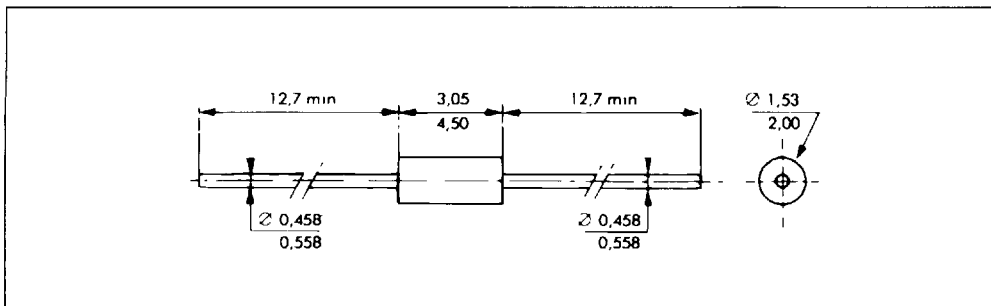
ELECTRICAL CHARACTERISTICS (continued)

Types	V_{ZT} typ. (V)	R_{ZT} @ I_{ZT}		Test Temperatures			ΔV_{Z}^{**} max. (mV)	αV_Z ($10^{-6}/^{\circ}\text{C}$)		
		max. (Ω)	(mA)	(°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_Z 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

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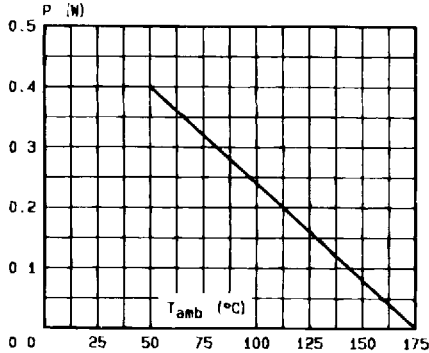


Fig 1 - Power dissipation versus ambient temperature.

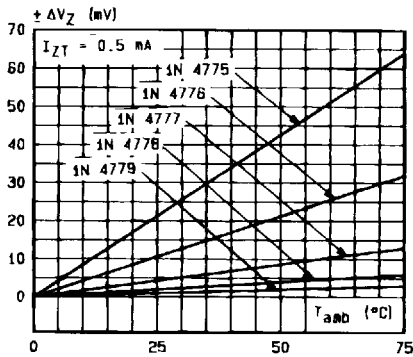


Fig 2a - Regulation voltage variation versus ambient temperature.

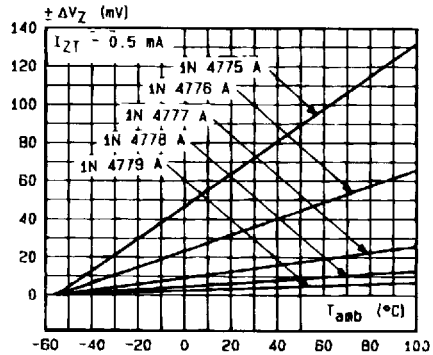


Fig 2b - Regulation voltage variation versus ambient temperature.

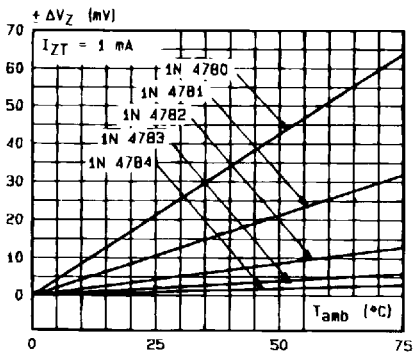


Fig 2c - Regulation voltage variation versus ambient temperature

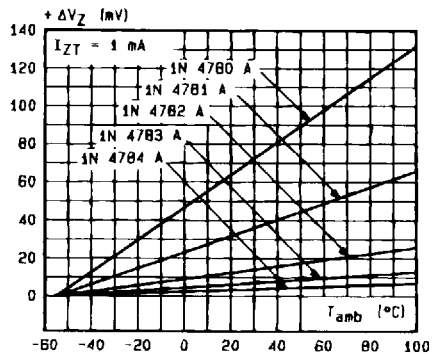


Fig 2d - Regulation voltage variation versus ambient temperature