SGS-THOMSON MICROELECTRONICS

1N 935,A,B
1N 939,A,B

TEMPERATURE COMPENSATED ZENER DIODES

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

DO 35
(Glass)

ABSOLUTE RATINGS (limiting values)

Symbol	Parameter	Value	Unit
P_{tot}	Power Dissipation*	0.5	W
T_{stg} T_j	Storage and Junction Temperature Range	– 65 to 175 – 55 to 175	°C °C
T_L	Maximum Lead Temperature for Soldering during 10s at 4mm from Case	230	°C

THERMAL RESISTANCE

Symbol	Parameter	Value	Unit
$R_{th(j-a)}$	Junction-ambient*	300	°C/W

ELECTRICAL CHARACTERISTICS (T_{amb} = 25°C unless otherwise specified)

Types	V_{ZT} typ. (V)	R_{ZT} @ I_{ZT} max. (Ω)	(mA)	Test Temperatures (°C)					ΔV_Z** max. (mV)	αV_Z (10^{-6}/°C)
1N 935	9	20	7.5		0	+ 25	+ 75			67	100
1N 936	9	20	7.5		0	+ 25	+ 75			33	50
1N 937	9	20	7.5		0	+ 25	+ 75			13	20
1N 938	9	20	7.5		0	+ 25	+ 75			6	10
1N 939	9	20	7.5		0	+ 25	+ 75			3	5
1N 935 A	9	20	7.5	– 55	0	+ 25	+ 75	+ 100		139	100
1N 936 A	9	20	7.5	– 55	0	+ 25	+ 75	+ 100		69	50
1N 937 A	9	20	7.5	– 55	0	+ 25	+ 75	+ 100		27	20
1N 938 A	9	20	7.5	– 55	0	+ 25	+ 75	+ 100		13	10
1N 939 A	9	20	7.5	– 55	0	+ 25	+ 75	+ 100		7	5
1N 935 B	9	20	7.5	– 55	0	+ 25	+ 75	+ 100	+ 150	184	100
1N 936 B	9	20	7.5	– 55	0	+ 25	+ 75	+ 100	+ 150	92	50
1N 937 B	9	20	7.5	– 55	0	+ 25	+ 75	+ 100	+ 150	37	20
1N 938 B	9	20	7.5	– 55	0	+ 25	+ 75	+ 100	+ 150	18	10
1N 939 B	9	20	7.5	– 55	0	+ 25	+ 75	+ 100	+ 150	9	5

* On infinite heatsink with d = 4mm

** 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.

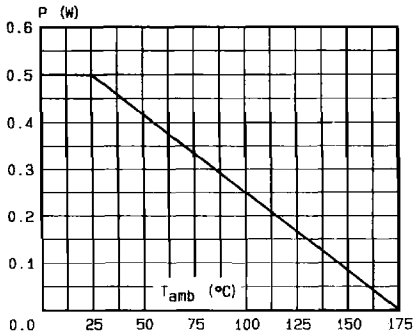


Fig.1 - Power dissipation versus ambient temperature.

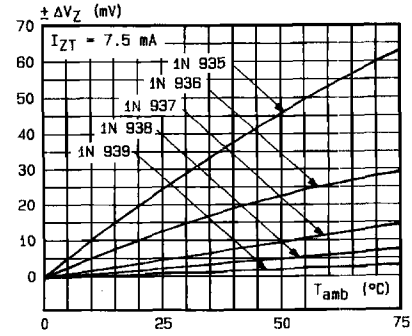


Fig.2a - Regulation voltage variation versus ambient temperature.

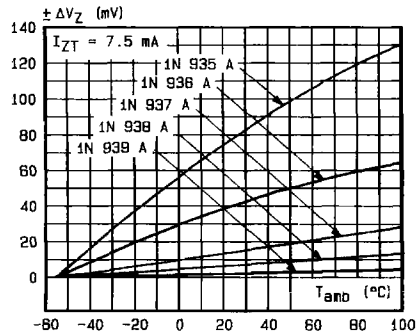


Fig.2b - Regulation voltage variation versus ambient temperature.

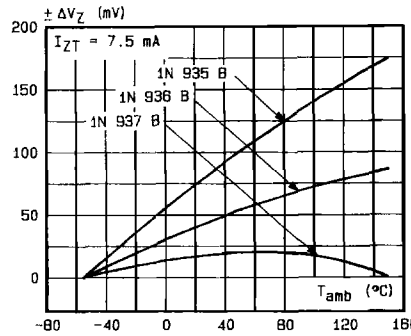
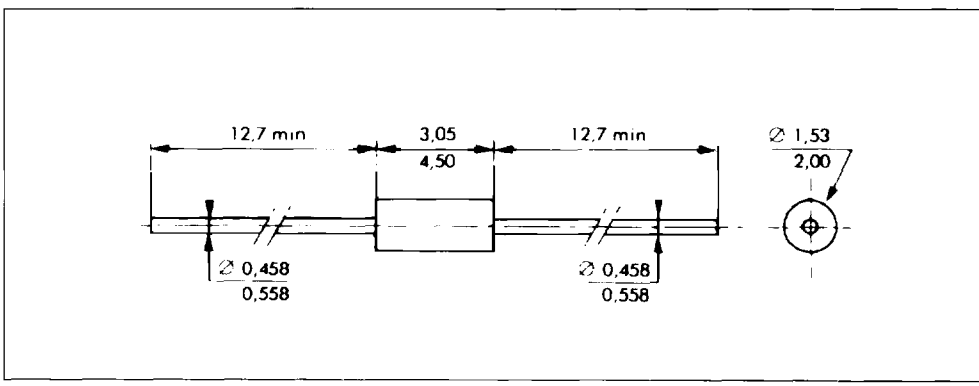


Fig.2c - Regulation voltage variation versus ambient temperature.

PACKAGE MECHANICAL DATA

DO 35 Glass



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