Microsemi Corp.
The diode experts

SANTA ANA, CA
For more information call:
(714) 979-8220

ALSO AVAILABLE IN SURFACE MOUNT

TS04700 thru TS10000

LOW VOLTAGE AVALANCHE DIODES

FEATURES

- Low voltage avalanche zener diodes.
- Considerably sharper breakdown than standard 4-10 volt zeners.
- Suppressed field emission breakdown mechanism produces avalanche breakdown with sharpest knee available.
- Glass passivated planar die.
- Rugged subminiature DO-35 package.
- Reference voltages at $< 1\mu W$ power consumption.
- ΔV_Z <100mV from 100μA to 1mA.

MAXIMUM RATINGS

Junction and Storage Temperature: --65°C to +200°C.
DC Power Dissipation: 500mW.
Power Derating: 4mW/°C above 75°C.
Forward Voltage at 100mA: 1V Maximum.

ELECTRICAL CHARACTERISTICS

DEVICE TYPE	NOMINAL ZENER VOLTAGE (1)	I_Z	MAXIMUM VOLTAGE REGULATION	MAXIMUM REVERSE LEAKAGE CURRENT		MAXIMUM D.C. ZENER CURRENT
	@ I_Z		ΔV_Z	IR @ V_R		I_{ZM}
	(V)	(μA)	(V)	(μA)	(V)	(mA)
TS04700	4.7	1000	0.25 (2)	1.0	2.0	100
TS05100	5.1	250	0.25 (3)	1.0	3.0	96
TS05600	5.6	25	0.1 (4)	1.0	4.5	80
TS0600	6.0	1	0.1 (5)	.025	4.8	75
TS06200	6.2	1	0.1 (5)	.025	5.0	72
TS06800	6.8	1	0.1 (5)	.025	5.2	66
TS07100	7.1	1	0.1 (5)	.025	5.7	64
TS07500	7.5	1	0.1 (5)	.010	6.0	60
TS08200	8.2	1	0.1 (5)	.010	6.5	58
TS08700	8.7	1	0.1 (6)	.010	7.0	54
TS09100	9.1	1	0.1 (6)	.010	7.2	52
TS10000	10.0	1	0.1 (6)	.010	8.0	47

NOTES: (1) All voltages are ±5% tolerance.
(2) ΔV_Z @ 10mA minus V_Z @ 1mA.
(3) ΔV_Z @ 1mA minus V_Z @ 100 μA.
(4) ΔV_Z @ 1mA minus V_Z @ 25 μA.
(5) ΔV_Z @ 1mA minus V_Z @ 1 μA.
(6) ΔV_Z @ 1mA minus V_Z @ 100 nA.

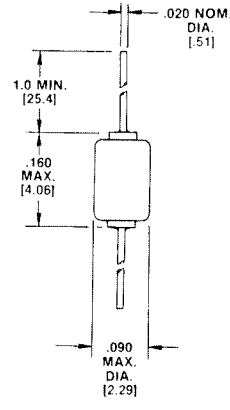

FIGURE 1
DO-35

MECHANICAL CHARACTERISTICS

Case: Hermetically sealed glass case.
Lead Material: Tinned copper.
Marking: Body painted, alpha numeric.
Polarity: Cathode band.

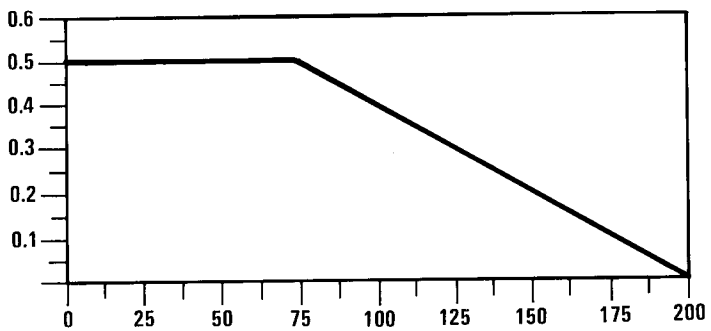

FIGURE 2. POWER DERATING CURVE