- 1N821-1,1N823-1,1N825-1,1N827-1 AND 1N829-1 AVAILABLE IN JAN, JANTX, JANTXV AND JANS PER MIL-PRF-19500/159
- TEMPERATURE COMPENSATED ZENER REFERENCE DIODES
- METALLURGICALLY BONDED
- DOUBLE PLUG CONSTRUCTION

1N821 thru 1N829A and 1N821-1 thru 1N829-1

MAXIMUM RATINGS

Operating Temperature: -65°C to +175°C
Storage Temperature: -65°C to +175°C
DC Power Dissipation: 500mW @ +50°C
Power Derating: 4 mW / °C above +50°C

REVERSE LEAKAGE CURRENT

I_R = 2μA @ 25°C & V_R = 3 Vdc

ELECTRICAL CHARACTERISTICS @ 25°C, unless otherwise speci½ed.

JEDEC TYPE NUMBER	ZENER VOLTAGE V_z @ I_{ZT}	ZENER TEST CURRENT I_{ZT}	MAXIMUM ZENER IMPEDANCE (Note 1) Z_{ZT}	VOLTAGE TEMPERATURE STABILITY $^{3}V_{ZT}$ -55° to +100° (Note 2)	EFFECTIVE TEMPERATURE COEFFICIENT
	VOLTS	mA	OHMS	mV	% / °C
1N821	5.9—6.5	7.5	15	96	0.01
1N821A	5.9—6.5	7.5	10	96	0.01
1N822 †	5.9—6.5	7.5	15	96	0.01
1N823	5.9—6.5	7.5	15	48	0.005
1N823A	5.9—6.5	7.5	10	48	0.005
1N824 †	5.9—6.5	7.5	15	48	0.005
1N825	5.9—6.5	7.5	15	19	0.002
1N825A	5.9—6.5	7.5	10	19	0.002
1N826	6.2—6.9	7.5	15	20	0.002
1N827	5.9—6.5	7.5	15	9	0.001
1N827A	5.9—6.5	7.5	10	9	0.001
1N828	6.2—6.9	7.5	15	10	0.001
1N829	5.9—6.5	7.5	15	5	0.0005
1N829A	5.9—6.5	7.5	10	5	0.0005

† Double Anode: Electrical Speci½cations Apply Under Both Bias Polarities.

NOTE 1 Zener impedance is derived by superimposing on I_{ZT} A 60Hz rms a.c. current equal to 10% of I_{ZT}.

NOTE 2 The maximum allowable change observed over the entire temperature range i.e., the diode voltage will not exceed the speci½ed mV at any discrete temperature between the established limits, per JEDEC standard No. 5.

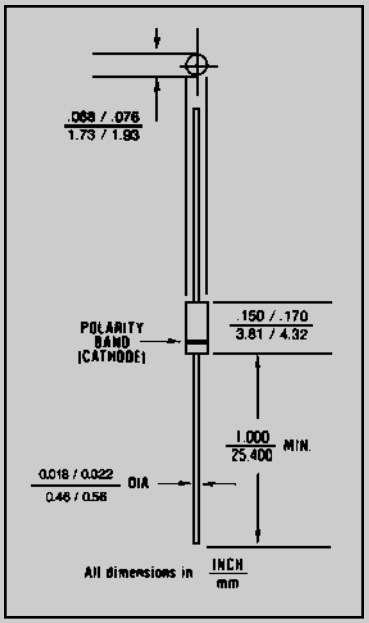

FIGURE 1

DESIGN DATA

CASE: Hermetically sealed glass case. DO – 35 outline.

LEAD MATERIAL: Copper clad steel.

LEAD FINISH: Tin / Lead

POLARITY: Diode to be operated with the banded (cathode) end positive.

MOUNTING POSITION: Any.

Microsemi

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WEBSITE: http://www.microsemi.com

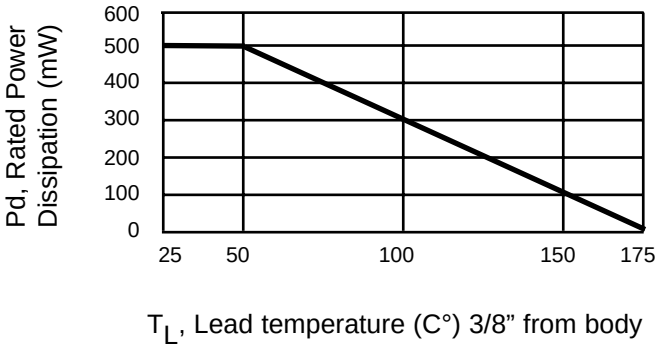

FIGURE 2
POWER DERATING CURVE

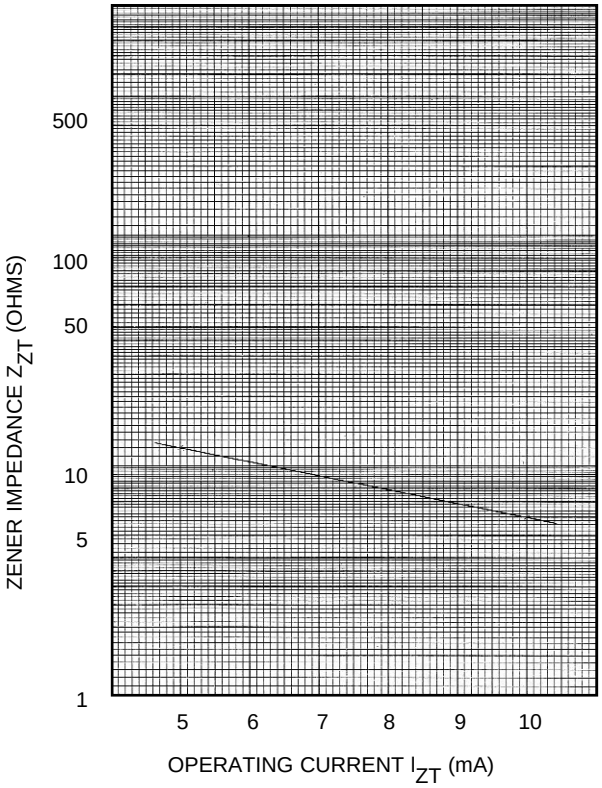

FIGURE 3
ZENER IMPEDANCE VS. OPERATING CURRENT

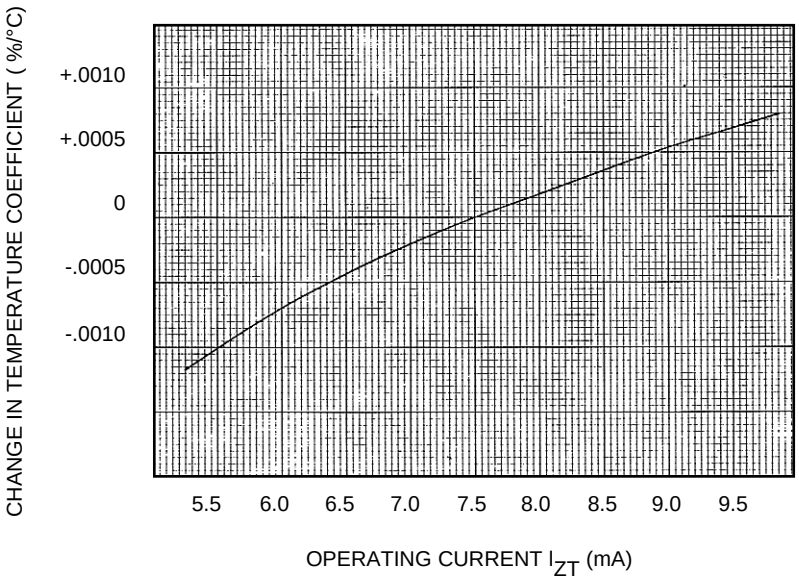

FIGURE 4
TYPICAL CHANGE OF TEMPERATURE COEFFICIENT WITH CHANGE IN OPERATING CURRENT