TECHNICAL DATA SHEET

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ZENER – TEMPERATURE COMPENSATED ZENER REFERENCE DIODES
– 9.0 VOLT NOMINAL ZENER VOLTAGE
– METALLURGICALLY BONDED

Qualified per MIL-PRF-19500/156

DEVICES

1N935 thru 1N938B
1N935B-1 thru 1N938B-1

LEVELS

JAN
JANTX
JANTXV
JANS

MAXIMUM RATING AT 25°C

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

REVERSE LEAKAGE CURRENT

I_R = 10µA @ 25°C & V_R = 6Vdc

ELECTRICAL CHARACTERISTICS ***(T_A = 25°C, unless otherwise specified)***

MIL-PRF-19500/156	JEDEC TYPE NUMBER	ZENER VOLTAGE V_Z @ I_{ZT}	ZENER TEST CURRENT I_{ZT}	MAXIMUM ZENER IMPEDACE (Note 1) Z_{ZT}	VOLTAGE TEMPERATURE STABILITY $^3V_{ZT}$ MAXIMUM (Note 2)	TEMPERATURE RANGE	EFFECTIVE TEMPERATURE COEFFICIENT
		VOLTS	mA	OHMS	mV	°C	% / °C
1N935B-1	1N935 1N935A 1N935B	8.55 – 9.45 8.55 – 9.45 8.55 – 9.45	7.5 7.5 7.5	20 20 20	67 139 184	0 to + 75 -55 to +100 -55 to +150	0.01 0.01 0.01
1N936B-1	1N936 1N936A 1N936B	8.55 – 9.45 8.55 – 9.45 8.55 – 9.45	7.5 7.5 7.5	20 20 20	34 70 92	0 to + 75 -55 to +100 -55 to +150	0.005 0.005 0.005
1N937B-1	1N937 1N937A 1N937B	8.55 – 9.45 8.55 – 9.45 8.55 – 9.45	7.5 7.5 7.5	20 20 20	13 28 37	0 to + 75 -55 to +100 -55 to +150	0.002 0.002 0.002
1N938B-1	1N938 1N938A 1N938B	8.55 – 9.45 8.55 – 9.45 8.55 – 9.45	7.5 7.5 7.5	20 20 20	6.7 13.9 19	0 to + 75 -55 to +100 -55 to +150	0.001 0.001 0.001

DO-35

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 specified mV at any discrete temperature between the established limits, per JEDEC standard No. 5.

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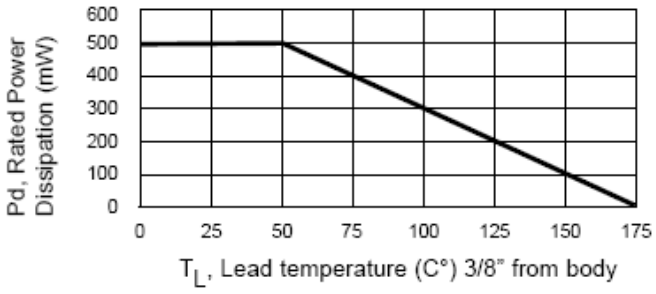
GRAPHS

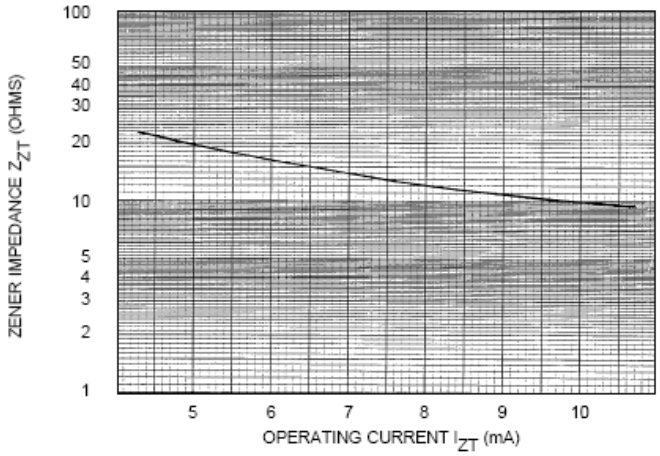
FIGURE 1



T_L, Lead temperature (C°) 3/8“ from body

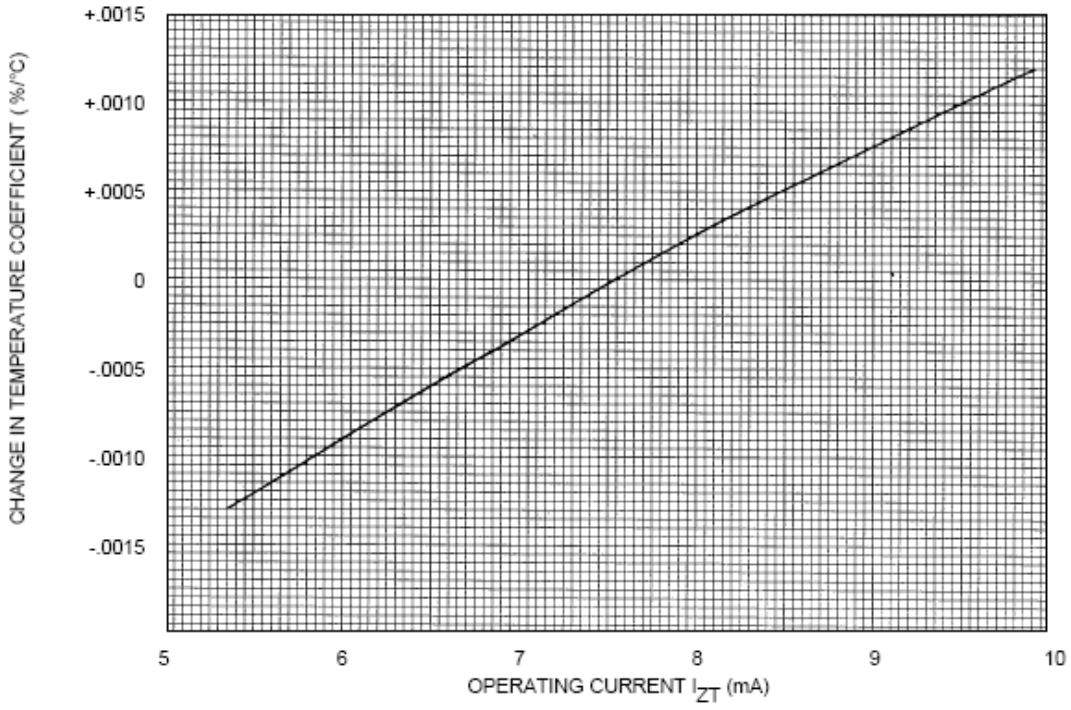
POWER DERATING CURVE

FIGURE 2



ZENER IMPEDANCE VS. OPERATING CURRENT

FIGURE 3



TYPICAL CHANGE OF TEMPERATURE COEFFICIENT WITH CHANGE IN OPERATING CURRENT

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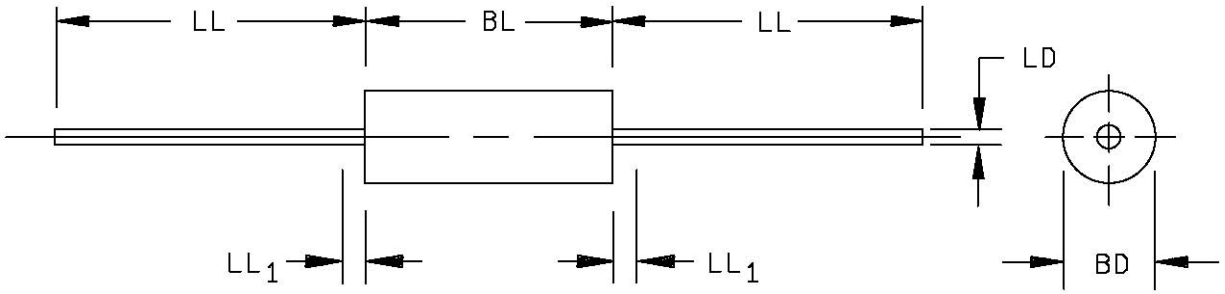
PACKAGE DIMENSIONS



NOTE:

1. Dimensions are in inches.
2. Millimeters are given for general information only.
3. Package contour optional within BD and length BL. Heat slugs, if any, shall be included within this cylinder but shall not be subject to minimum limit of BD.
4. Within this zone, lead diameter may vary to allow for lead finishes and irregularities, other than heat slugs.
5. In accordance with ASME Y14.5M, diameters are equivalent to Φx symbology.

Symbol	Dimensions				Notes
	Inches		Millimeters		
	Min	Max	Min	Max	
BD	.060	.107	1.52	2.72	3
BL	.120	.300	3.05	7.62	3
LD	.018	.023	0.46	0.58	
LL	1.000	1.500	25.40	38.10	
LL1		0.050		1.27	4

FIGURE 1. Physical dimensions 1N935B-1, 1N937B-1 through 1N940B-1 (DO-7 and DO-35).

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 postive.

Mounting Position: Any.