

# 1N3154(A)-1N3157(A)

## TEMPERATURE COMPENSATED ZENER DIODE

### FEATURES

- Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number.
- Available as non-RoHS (Sn/Pb plating), standard, and as RoHS by adding "-PBF" suffix.

### MAXIMUM RATINGS

Operating Temperature	-65 to +175°C
Storage Temperature	-65 to +175°C
DC Power Dissipation	500 mW @ 50°C
Power Derating	4 mW/°C above 50°C
Reverse Leakage Current	$I_R = 10\mu\text{A}$ @ 25°C & $V_R = 5.5\text{ Vdc}$

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

Type Number	Zener Voltage $V_Z @ I_{ZT}$	Zener Test Current $I_{ZT}$	Maximum Zener Impedance $Z_{ZT}$ Note 1	Voltage Temperature Stability $V_{ZT}$ maximum Note 2	Temperature Range	Effective Temperature Coefficient
	Volts	mA	Ohms	mV	°C	%/°C
1N3154	8.00-8.80	10	15	130	-55 to +100	.01
1N3154A	8.00-8.80	10	15	172	-55 to +150	.01
1N3155	8.00-8.80	10	15	65	-55 to +100	.005
1N3155A	8.00-8.80	10	15	86	-55 to +150	.005
1N3156	8.00-8.80	10	15	26	-55 to +100	.002
1N3156A	8.00-8.80	10	15	34	-55 to +150	.002
1N3157	8.00-8.80	10	15	13	-55 to +100	.001
1N3157A	8.00-8.80	10	15	17	-55 to +150	.001

Note 1: Zener impedance is derived by superimposing on  $I_{ZT}$  A 60 Hz rms ac current equal to 10% of  $I_{ZT}$ .

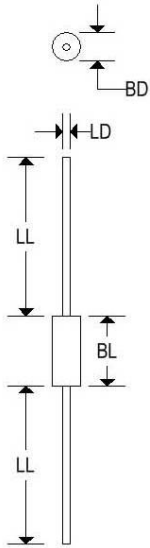
Note 2: The maximum allowable change observed over the entire temperature range. (The diode voltage will not exceed the specified mV at any discrete temperature between the established limits.)

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### MECHANICAL CHARACTERISTICS

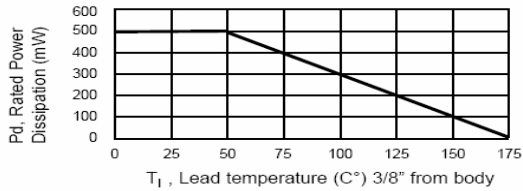
<b>Case:</b>	DO-35 hermetically sealed glass
<b>Polarity:</b>	Cathode band
<b>Marking:</b>	Body Painted, Alpha-Numeric



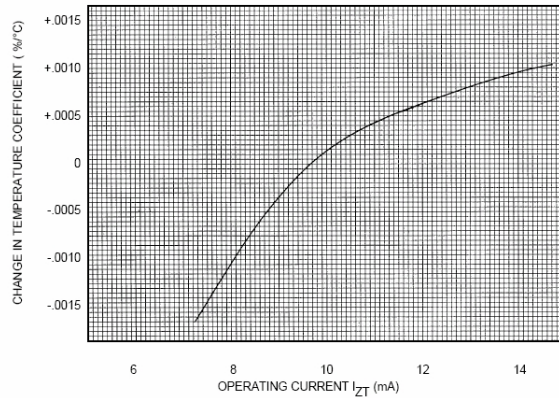
	DO-35			
	Inches		Millimeters	
	Min	Max	Min	Max
BD	0.065	0.090	1.400	2.290
BL	0.120	0.200	3.050	5.080
LD	0.018	0.022	0.460	0.560
LL	1.000	1.500	25.400	38.100

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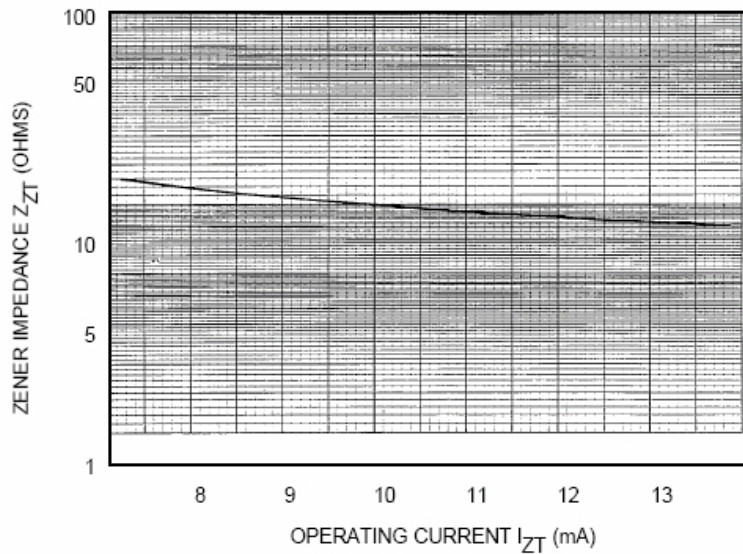
## TEMPERATURE COMPENSATED ZENER DIODE



**POWER DERATING CURVE**



**TYPICAL CHANGE OF TEMPERATURE COEFFICIENT WITH CHANGE IN OPERATING CURRENT**



**ZENER IMPEDANCE VS. OPERATING CURRENT**