

- 1N3154UR-1 THRU 1N3157UR-1 AVAILABLE IN JAN, JANTX, JANTXV AND JANS PER MIL-PRF-19500/158
- TEMPERATURE COMPENSATED ZENER REFERENCE DIODES
- LEADLESS PACKAGE FOR SURFACE MOUNT
- 8.4 VOLT NOMINAL ZENER VOLTAGE
- METALLURGICALLY BONDED, DOUBLE PLUG CONSTRUCTION

1N3154UR-1  
thru  
1N3157UR-1  
and  
CDLL3154  
thru  
CDLL3157A

## 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

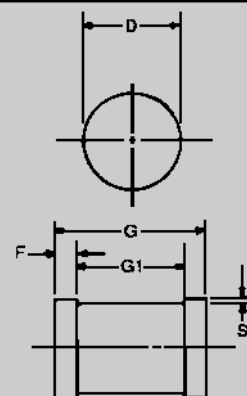
$I_R = 10 \mu A @ 25^\circ C \ \& \ V_R = 5.5V_{dc}$

ELECTRICAL CHARACTERISTICS @ 25°C, unless otherwise specified.

CDI TYPE NUMBER	ZENER VOLTAGE $V_Z @ I_{ZT}$	ZENER TEST CURRENT $I_{ZT}$	MAXIMUM ZENER IMPEDANCE $Z_{ZT}$  (Note 1)	VOLTAGE TEMPERATURE STABILITY $\Delta V_{ZT}$ MAXIMUM (Note 2)	TEMPERATURE RANGE	EFFECTIVE TEMPERATURE COEFFICIENT
	VOLTS	mA	OHMS	mV	°C	% / °C
CDLL3154 CDLL3154A	8.00 - 8.80	10	15	130	-55 to +100	.01
	8.00 - 8.80	10	15	172	-55 to +150	.01
CDLL3155 CDLL3155A	8.00 - 8.80	10	15	65	-55 to +100	.005
	8.00 - 8.80	10	15	86	-55 to +150	.005
CDLL3156 CDLL3156A	8.00 - 8.80	10	15	26	-55 to +100	.002
	8.00 - 8.80	10	15	34	-55 to +150	.002
CDLL3157 CDLL3157A	8.00 - 8.80	10	15	13	-55 to +100	.001
	8.00 - 8.80	10	15	17	-55 to +150	.001

**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.



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
D	1.60	1.70	0.063	0.067
F	0.41	0.55	0.016	0.022
G	3.30	3.70	.130	.146
G1	2.54 REF.		.100 REF.	
S	0.03 MIN.		.001 MIN.	

FIGURE 1

## DESIGN DATA

**CASE:** DO-213AA, Hermetically sealed glass case. (MELF, SOD-80, LL34)

**LEAD FINISH:** Tin / Lead

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

**MOUNTING POSITION:** Any.

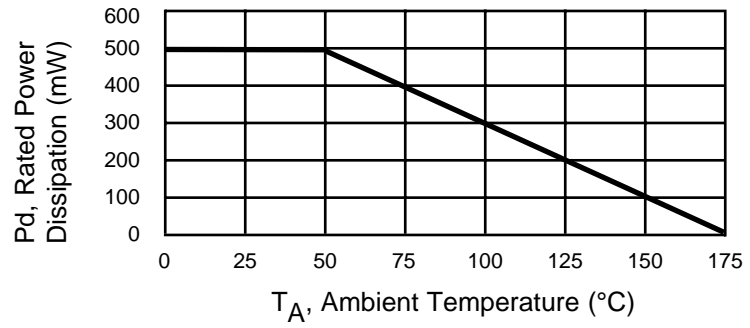
**MOUNTING SURFACE SELECTION:**  
The Axial Coefficient of Expansion (COE) Of this Device is Approximately +6PPM/°C. The COE of the Mounting Surface System Should Be Selected To Provide A Suitable Match With This Device.



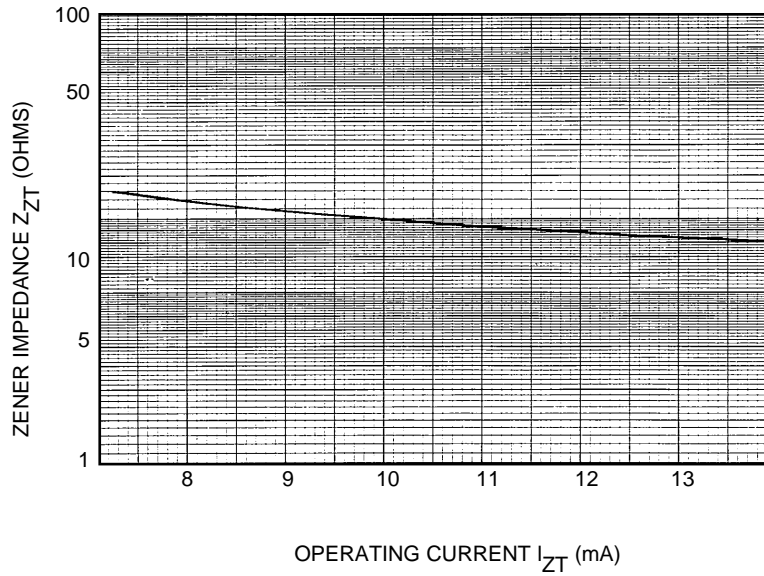
6 LAKE STREET, LAWRENCE, MASSACHUSETTS 01841  
PHONE (978) 620-2600  
WEBSITE: <http://www.microsemi.com>

FAX (978) 689-0803

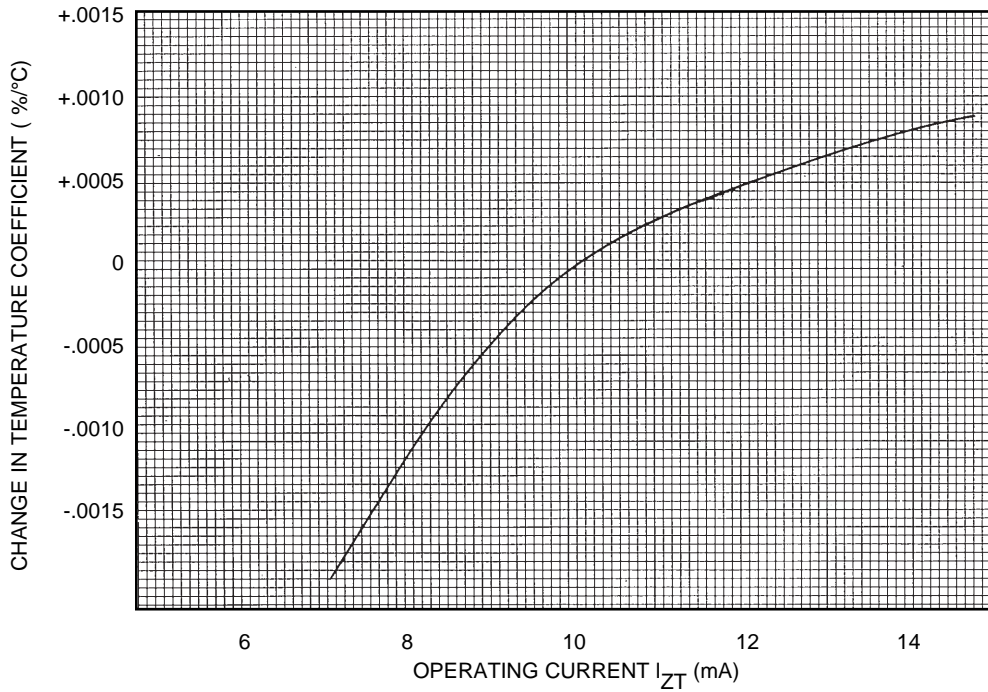
# CDLL3154 thru CDLL3157A



**FIGURE 2  
POWER DERATING CURVE**



**FIGURE 3  
ZENER IMPEDANCE VS. OPERATING CURRENT**



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