

- 1N4099UR-1 THRU 1N4135UR-1 AVAILABLE IN JAN, JANTX, JANTXV AND JANS PER MIL-PRF-19500/435
- LEADLESS PACKAGE FOR SURFACE MOUNT
- LOW CURRENT OPERATION AT 250  $\mu$ A
- METALLURGICALLY BONDED
- DOUBLE PLUG CONSTRUCTION

1N4099UR-1  
thru  
1N4135UR-1  
and  
CDLL4099 thru CDLL4135

### MAXIMUM RATINGS

Junction and Storage Temperature: -65°C to +175°C  
DC Power Dissipation: 500mW @  $T_{EC} = +125^{\circ}C$   
Power Derating: 10mW/°C above  $T_{EC} = +125^{\circ}C$   
Forward Derating @ 200 mA: 1.1 Volts maximum

ELECTRICAL CHARACTERISTICS @ 25°C, unless otherwise specified.

CDI TYPE NUMBER	NOMINAL ZENER VOLTAGE $V_Z @ I_{ZT}$ (Note 1)	ZENER TEST CURRENT $I_{ZT}$	MAXIMUM ZENER IMPEDANCE $Z_{ZT}$ (Note 2)	MAXIMUM REVERSE LEAKAGE CURRENT $I_R @ V_R$		MAXIMUM ZENER CURRENT $I_{ZM}$
	VOLTS	$\mu$ A	OHMS	$\mu$ A	VOLTS	mA
CDLL4099	6.8	250	200	10	5.17	56
CDLL4100	7.5	250	200	10	5.70	51
CDLL4101	8.2	250	200	1.0	6.24	46
CDLL4102	8.7	250	200	1.0	6.61	44
CDLL4103	9.1	250	200	1.0	6.92	42
CDLL4104	10	250	200	1.0	7.60	38
CDLL4105	11	250	200	.05	8.44	35
CDLL4106	12	250	200	.05	9.12	32
CDLL4107	13	250	200	.05	9.87	29
CDLL4108	14	250	200	.05	10.65	27
CDLL4109	15	250	100	.05	11.40	25
CDLL4110	16	250	100	.05	12.15	24
CDLL4111	17	250	100	.05	12.92	22
CDLL4112	18	250	100	.05	13.67	21
CDLL4113	19	250	150	.05	14.44	20
CDLL4114	20	250	150	.01	15.20	19
CDLL4115	22	250	150	.01	16.72	17
CDLL4116	24	250	150	.01	18.25	16
CDLL4117	25	250	150	.01	19.00	15
CDLL4118	27	250	150	.01	20.46	14
CDLL4119	28	250	200	.01	21.28	14
CDLL4120	30	250	200	.01	22.80	13
CDLL4121	33	250	200	.01	25.08	12
CDLL4122	36	250	200	.01	27.38	11
CDLL4123	39	250	200	.01	29.65	9.8
CDLL4124	43	250	250	.01	32.65	8.9
CDLL4125	47	250	250	.01	35.75	8.1
CDLL4126	51	250	300	.01	38.76	7.5
CDLL4127	56	250	300	.01	42.60	6.7
CDLL4128	60	250	400	.01	45.60	6.4
CDLL4129	62	250	500	.01	47.10	6.1
CDLL4130	68	250	700	.01	51.68	5.6
CDLL4131	75	250	700	.01	57.00	5.1
CDLL4132	82	250	800	.01	62.32	4.6
CDLL4133	87	250	1000	.01	66.12	4.4
CDLL4134	91	250	1200	.01	69.16	4.2
CDLL4135	100	250	1500	.01	76.00	3.8

**NOTE 1** The CDI type numbers shown above have a Zener voltage tolerance of  $\pm 5\%$  of the nominal Zener voltage. Nominal Zener voltage is measured with the device junction in thermal equilibrium at an ambient temperature of  $25^{\circ}C \pm 3^{\circ}C$ . A "C" suffix denotes a  $\pm 2\%$  tolerance and a "D" suffix denotes a  $\pm 1\%$  tolerance.

**NOTE 2** Zener impedance is derived by superimposing on  $I_{ZT}$ , A 60 Hz rms a.c. current equal to 10% of  $I_{ZT}$  (25  $\mu$  A a.c.).

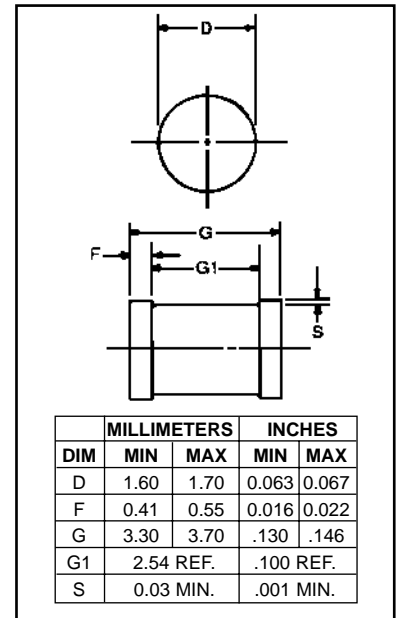


FIGURE 1

### DESIGN DATA

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

**LEAD FINISH:** Tin / Lead

**THERMAL RESISTANCE:** ( $R_{\theta JEC}$ ): 100  $^{\circ}C/W$  maximum at  $L = 0$  inch

**THERMAL IMPEDANCE:** ( $Z_{\theta JX}$ ): 35  $^{\circ}C/W$  maximum

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

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

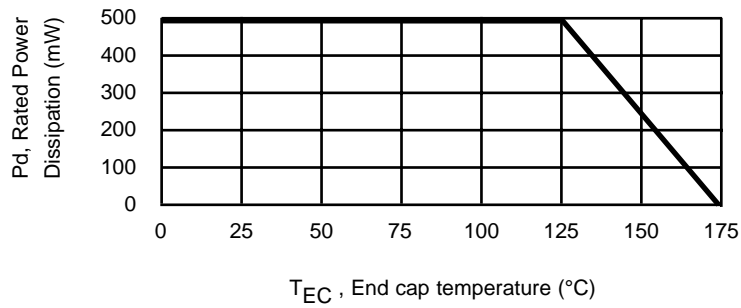


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# 1N4099UR-1 thru 1N4135UR-1 CDLL4099 thru CDLL4135

FIGURE 2



POWER DERATING CURVE

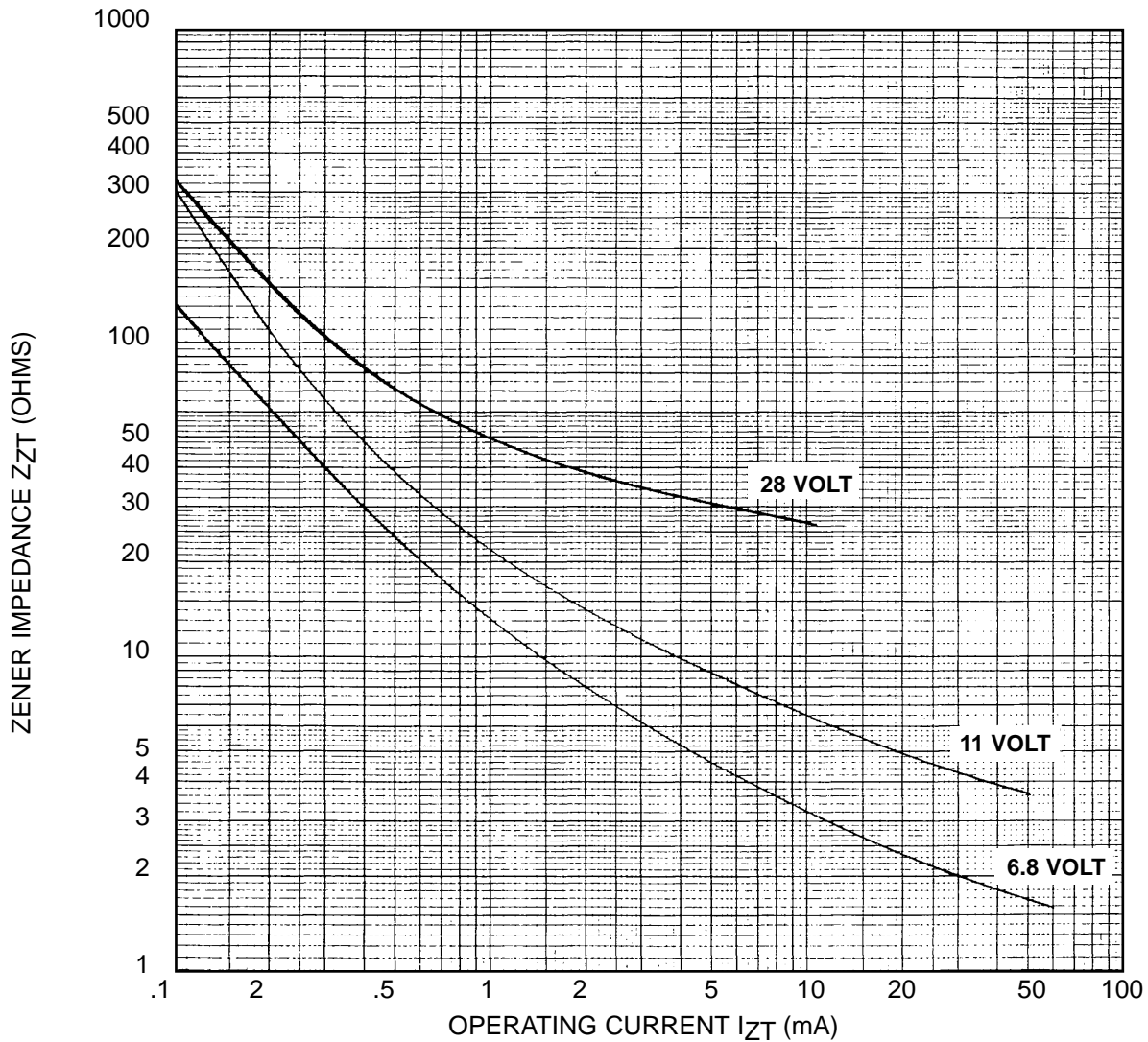


FIGURE 3  
ZENER IMPEDANCE VS. OPERATING CURRENT