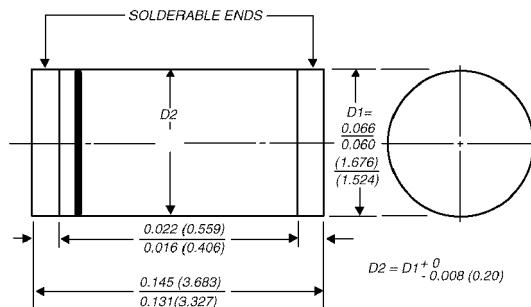


1/2 Watt ZENER DIODES (2.4V to 62V) Mechanical Dimensions

**DO-213AA
(Mini-MELF)**



Dimensions in inches and (mm)

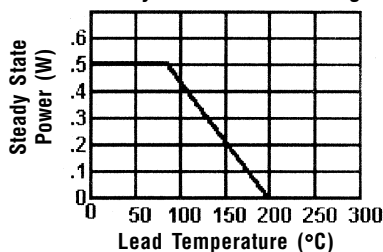
Features

■ **5 & 10% VOLTAGE
TOLERANCES AVAILABLE**

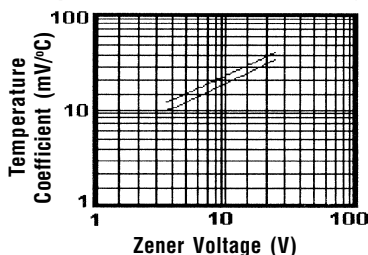
■ **WIDE VOLTAGE RANGE**
■ **MEETS UL SPECIFICATION 94V-0**

Maximum Ratings	LL5221 . . . LL5265	Units
DC Power Dissipation with $T_L = > = 75^{\circ}\text{C}$... P_D	500	mW
Lead Length = .375 Inches Derate Above 50°C	4	mW / $^{\circ}\text{C}$
Operating & Storage Temperature Range... T_J , T_{STRG}	-65 to 100	$^{\circ}\text{C}$

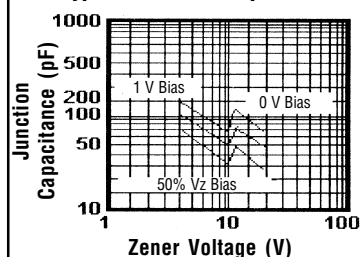
Steady State Power Derating



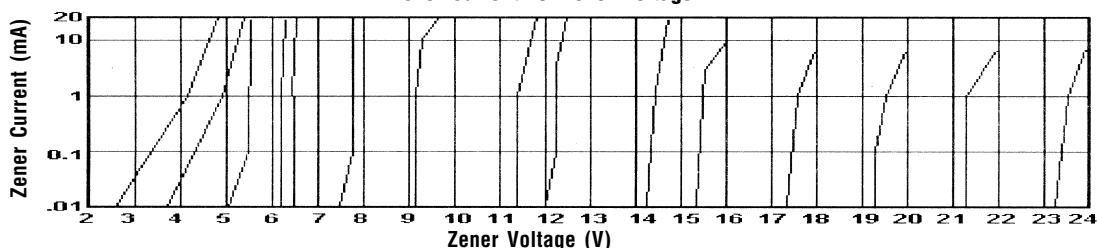
Temperature Coefficients vs. Voltage



Typical Junction Capacitance



Zener Current vs. Zener Voltage



NOTES: 1. For 10% Tolerance on Zener Voltage, Specify Suffix "A". For 5% Tolerance, Specify Suffix "B". (Example: LL5230B = 4.7V +/- 5%)
2. $T_A = 25^\circ\text{C}$ unless otherwise specified. Measurements made at Thermal Equilibrium.
Lead Length = .375". Thermal Resistance of Heat Sink = 30°C/W , $V_F = 1.1\text{V}$ Max. @ $I_F = 200\text{mA}$

Electrical Characteristics @ 25°C .

Part #	Nominal Zener Voltage	Test Current I_{ZT} (mA)	Max. Zener Impedance		Max. Reverse Leakage Current @ V_R		Max. Zener Voltage Temp. Coeff. of V_Z (%/°C)
			$Z_{ZT} @ I_{ZT}$ (Ω)	$Z_{ZK} @ I_{ZK} = 0.25\text{mA}$ (Ω)	I_R (μA)	V_R (V)	
LL5221A or B	2.4	20	30	1200	100	1	-0.085
LL5222A or B	2.5	20	30	1250	100	1	-0.085
LL5223A or B	2.7	20	30	1300	75	1	-0.08
LL5224A or B	2.8	20	30	1400	75	1	-0.08
LL5225A or B	3.0	20	29	1600	50	1	-0.075
LL5226A or B	3.3	20	28	1600	25	1	-0.07
LL5227A or B	3.6	20	24	1700	15	1	-0.065
LL5228A or B	3.9	20	23	1900	10	1	-0.06
LL5229A or B	4.3	20	22	2000	5	1	+/- 0.055
LL5230A or B	4.7	20	19	1900	5	2	+/- 0.03
LL5231A or B	5.1	20	17	1600	5	2	+/- 0.03
LL5232A or B	5.6	20	11	1600	5	3	+ 0.038
LL5233A or B	6.0	20	7	1600	5	3.5	+ 0.038
LL5234A or B	6.2	20	7	1000	5	4	+ 0.045
LL5235A or B	6.8	20	5	750	5	5	+ 0.050
LL5236A or B	7.5	20	6	500	3	6	+ 0.058
LL5237A or B	8.2	20	8	500	3	6.5	+ 0.062
LL5238A or B	8.7	20	8	600	3	6.5	+ 0.065
LL5239A or B	9.1	20	10	600	3	7	+ 0.068
LL5240A or B	10	20	17	600	3	8	+ 0.075
LL5241A or B	11	20	22	600	2	8.4	+ 0.076
LL5242A or B	12	20	30	600	1	9.1	+ 0.077
LL5243A or B	13	9.5	13	600	.5	9.9	+ 0.079
LL5244A or B	14	9.0	15	600	.1	10	+ 0.082
LL5245A or B	15	8.5	16	600	.1	11	+ 0.082
LL5246A or B	16	7.8	17	600	.1	12	+ 0.083
LL5247A or B	17	7.4	19	600	.1	13	+ 0.084
LL5248A or B	18	7.0	21	600	.1	14	+ 0.085
LL5249A or B	19	6.6	23	600	.1	15	+ 0.086
LL5250A or B	20	6.2	25	600	.1	16	+ 0.086
LL5251A or B	22	5.6	29	600	.1	17	+ 0.087
LL5252A or B	24	5.2	33	600	.1	18	+ 0.088
LL5253A or B	25	5.0	35	600	.1	19	+ 0.089
LL5254A or B	27	4.6	41	600	.1	21	+ 0.090
LL5255A or B	28	4.5	44	600	.1	21	+ 0.091
LL5256A or B	30	4.2	49	600	.1	23	+ 0.091
LL5257A or B	33	3.8	58	700	.1	25	+ 0.092
LL5258A or B	36	3.4	70	700	.1	27	+ 0.093
LL5259A or B	39	3.2	80	800	.1	30	+ 0.094
LL5260A or B	43	3.0	93	900	.1	33	+ 0.095
LL5261A or B	47	2.7	105	1000	.1	36	+ 0.095
LL5262A or B	51	2.5	125	1100	.1	39	+ 0.096
LL5263A or B	56	2.2	150	1300	.1	43	+ 0.096
LL5264A or B	60	2.1	170	1400	.1	46	+ 0.097
LL5265A or B	62	2.0	185	1400	.1	47	+ 0.097