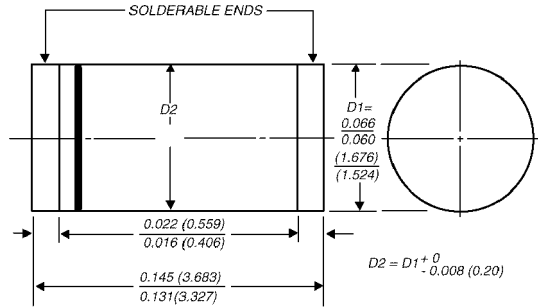


**Description**

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

**LL5221 ... LL5265**

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



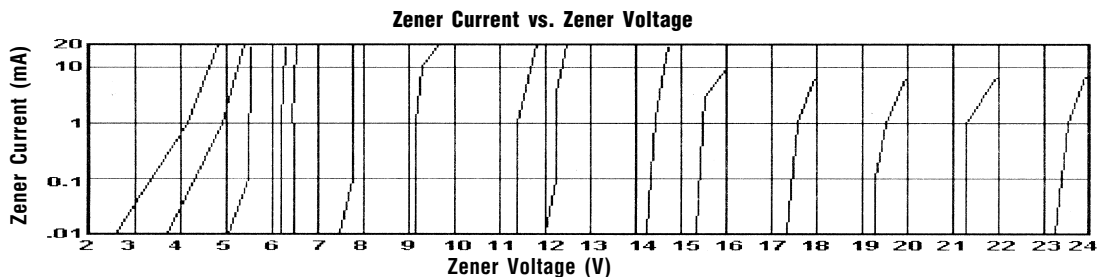
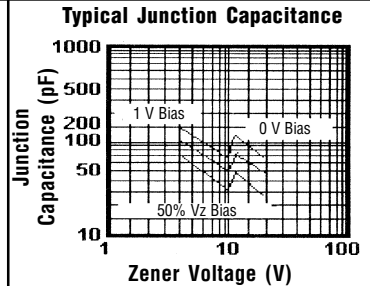
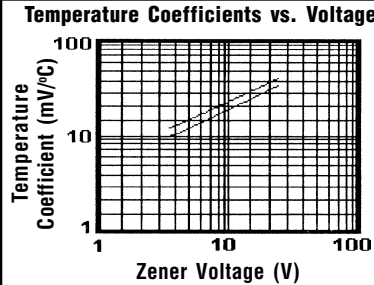
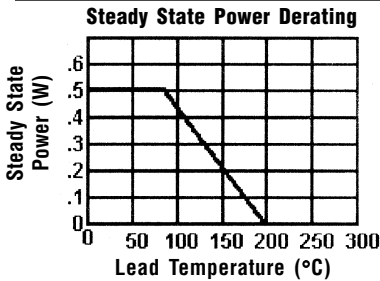
Dimensions in inches and (mm)

**Features**

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

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

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





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

**LL5221 . . . LL5265**

**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 =  $30^\circ\text{C/W}$ ,  $V_F = 1.1\text{V}$  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)
			$Z_{ZT} @ I_{ZT}$ ( $\Omega$ )	$Z_{ZK} @ I_{ZK} = 0.25\text{mA}$ ( $\Omega$ )	$I_R$ ( $\mu\text{A}$ )	$V_R$ (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