



Zener diode

Features

1. High reliability
2. Very sharp reverse characteristic
3. Low reverse current level
4. V_Z -tolerance $\pm 5\%$



Applications

Voltage stabilization

Absolute Maximum Ratings

$T_j = 25^\circ\text{C}$

Parameter	Test Conditions	Type	Symbol	Value	Unit
Power dissipation	$T_{\text{amb}} \leq 75^\circ\text{C}$		P_V	500	mW
Z-current			I_Z	P_V/V_Z	mA
Junction temperature			T_j	200	$^\circ\text{C}$
Storage temperature range			T_{stg}	-65~+200	$^\circ\text{C}$

Maximum Thermal Resistance

$T_j = 25^\circ\text{C}$

Parameter	Test Conditions	Symbol	Value	Unit
Junction ambient	$l=9.5\text{mm}(3/8")$ $T_L=\text{constant}$	R_{thJA}	300	K/W

Electrical Characteristics

$T_j = 25^\circ\text{C}$

Parameter	Test Conditions	Type	Symbol	Min	Typ	Max	Unit
Forward voltage	$I_F=200\text{mA}$		V_F			1.1	V

Excel Semiconductor



Type	$V_{Znom}^{1)}$ V	I_{ZT} mA	for r_{zT} Ω	r_{zK} at I_{ZK} Ω	I_{ZK} mA	I_R at V_R μA	V_R V	TK_{VZ} %/K
LL5221B	2.4	20	<30	<1200	0.25	<100	1.0	<-0.085
LL5222B	2.5	20	<30	<1250	0.25	<100	1.0	<-0.085
LL5223B	2.7	20	<30	<1300	0.25	<75	1.0	<-0.080
LL5224B	2.8	20	<30	<1400	0.25	<75	1.0	<-0.080
LL5225B	3.0	20	<29	<1600	0.25	<50	1.0	<-0.075
LL5226B	3.3	20	<28	<1600	0.25	<25	1.0	<-0.070
LL5227B	3.6	20	<24	<1700	0.25	<15	1.0	<-0.065
LL5228B	3.9	20	<23	<1900	0.25	<10	1.0	<-0.060
LL5229B	4.3	20	<22	<2000	0.25	<5	1.0	<-0.055
LL5230B	4.7	20	<19	<1900	0.25	<5	2.0	<+0.030
LL5231B	5.1	20	<17	<1600	0.25	<5	2.0	<+0.030
LL5232B	5.6	20	<11	<1600	0.25	<5	3.0	<+0.038
LL5233B	6.0	20	<7	<1600	0.25	<5	3.5	<+0.038
LL5234B	6.2	20	<7	<1000	0.25	<5	4.0	<+0.045
LL5235B	6.8	20	<5	<750	0.25	<3	5.0	<+0.050
LL5236B	7.5	20	<6	<500	0.25	<3	6.0	<+0.058
LL5237B	8.2	20	<8	<500	0.25	<3	6.5	<+0.062
LL5238B	8.7	20	<8	<600	0.25	<3	6.5	<+0.065
LL5239B	9.1	20	<10	<600	0.25	<3	7.0	<+0.068
LL5240B	10	20	<17	<600	0.25	<3	8.0	<+0.075
LL5241B	11	20	<22	<600	0.25	<2	8.4	<+0.076
LL5242B	12	20	<30	<600	0.25	<1	9.1	<+0.077
LL5243B	13	9.5	<13	<600	0.25	<0.5	9.9	<+0.079
LL5244B	14	9.0	<15	<600	0.25	<0.1	10	<+0.082
LL5245B	15	8.5	<16	<600	0.25	<0.1	11	<+0.082
LL5246B	16	7.8	<17	<600	0.25	<0.1	12	<+0.083
LL5247B	17	7.4	<19	<600	0.25	<0.1	13	<+0.084
LL5248B	18	7.0	<21	<600	0.25	<0.1	14	<+0.085
LL5249B	19	6.6	<23	<600	0.25	<0.1	15	<+0.086
LL5250B	20	6.2	<25	<600	0.25	<0.1	16	<+0.086
LL5251B	22	5.6	<29	<600	0.25	<0.1	17	<+0.087
LL5252B	24	5.2	<33	<600	0.25	<0.1	18	<+0.088
LL5253B	25	5.0	<35	<600	0.25	<0.1	19	<+0.089
LL5254B	27	4.6	<41	<600	0.25	<0.1	21	<+0.090
LL5255B	28	4.5	<44	<600	0.25	<0.1	21	<+0.091
LL5256B	30	4.2	<49	<600	0.25	<0.1	23	<+0.091
LL5257B	33	3.8	<58	<700	0.25	<0.1	25	<+0.092
LL5258B	36	3.4	<70	<700	0.25	<0.1	27	<+0.093
LL5259B	39	3.2	<80	<800	0.25	<0.1	30	<+0.094
LL5260B	43	3.0	<93	<900	0.25	<0.1	33	<+0.095
LL5261B	47	2.7	<105	<1000	0.25	<0.1	36	<+0.095
LL5262B	51	2.5	<125	<1100	0.25	<0.1	39	<+0.096
LL5263B	56	2.2	<150	<1300	0.25	<0.1	43	<+0.096
LL5264B	60	2.1	<170	<1400	0.25	<0.1	46	<+0.097
LL5265B	62	2.0	<185	<1400	0.25	<0.1	47	<+0.097
LL5266B	68	1.8	<230	<1600	0.25	<0.1	52	<+0.097
LL5267B	75	1.7	<270	<1700	0.25	<0.1	58	<+0.098
LL5268B	82	1.5	<330	<2000	0.25	<0.1	62	<+0.098
LL5269B	87	1.4	<370	<2200	0.25	<0.1	68	<+0.099
LL5270B	91	1.4	<400	<2300	0.25	<0.1	69	<+0.099
LL5271B	100	1.3	<500	<2600	0.25	<0.1	76	<+0.11

1) Based on DC-measurement at thermal equilibrium while maintaining the lead temperature(T_L) at 30°C, 9.5mm (3/8") from the diode body.



Characteristics ($T_j=25^\circ\text{C}$ unless otherwise specified)

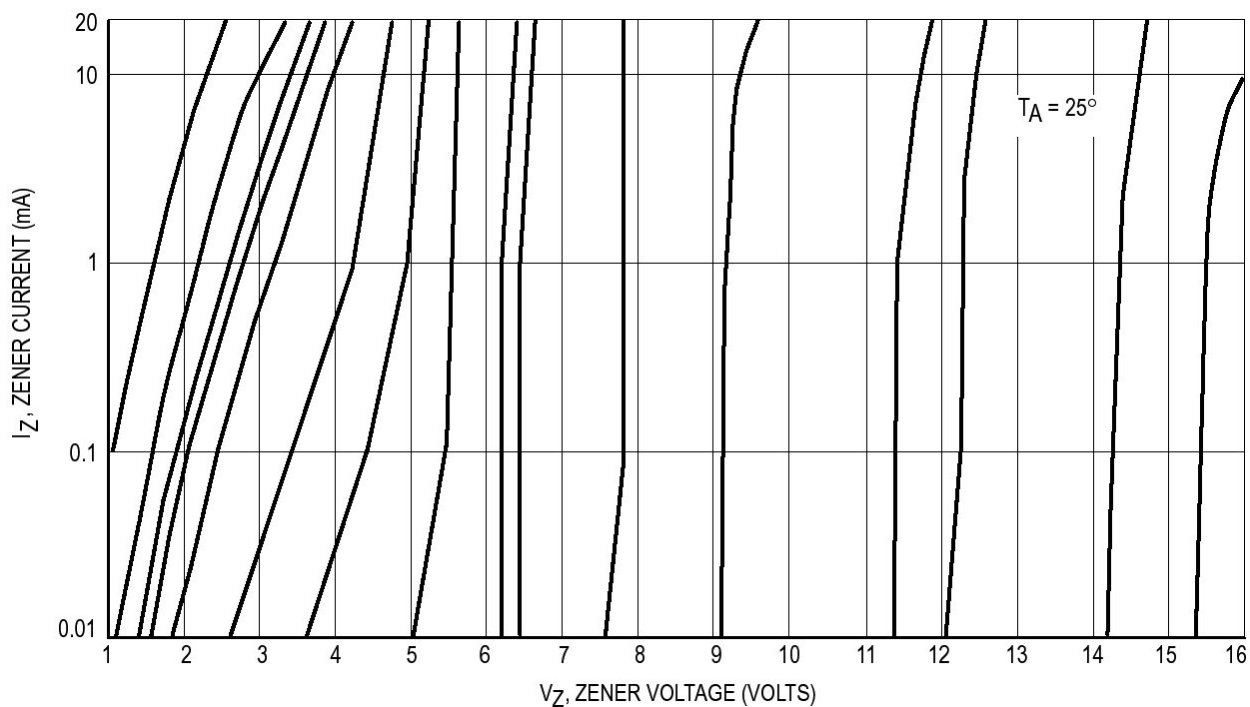


Figure 1. Zener Voltage versus Zener Current – $V_Z=1$ thru 16 Volts

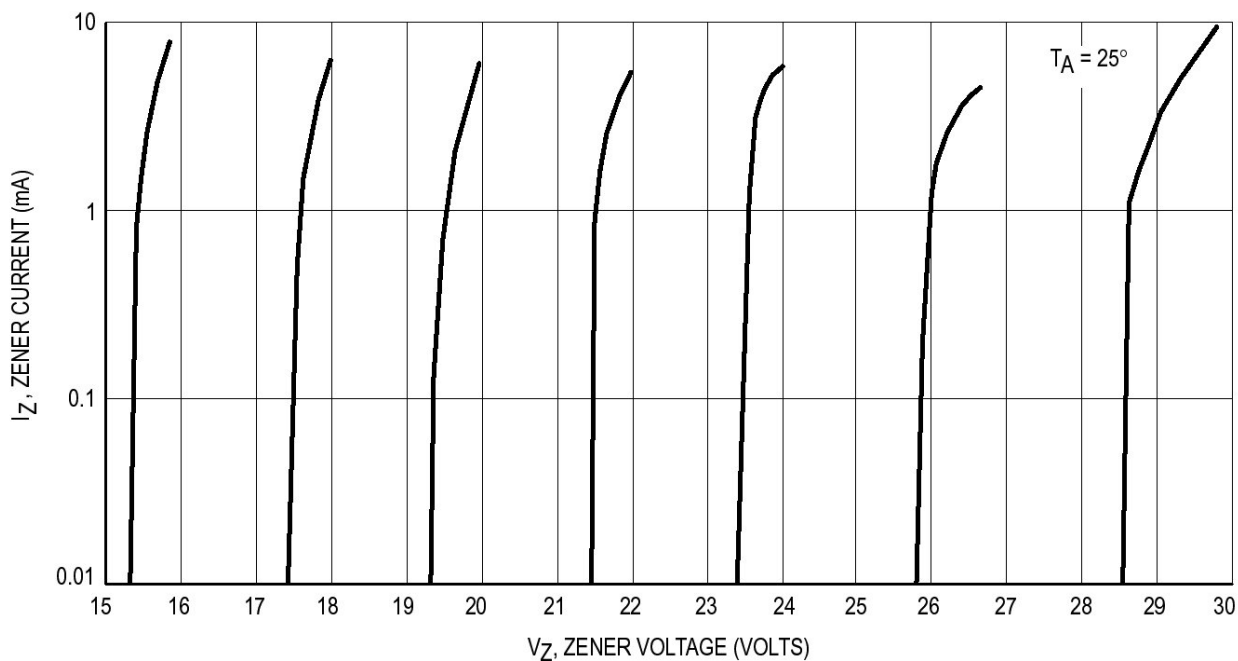


Figure 2. Zener Voltage versus Zener Current – $V_Z=15$ thru 30 Volts

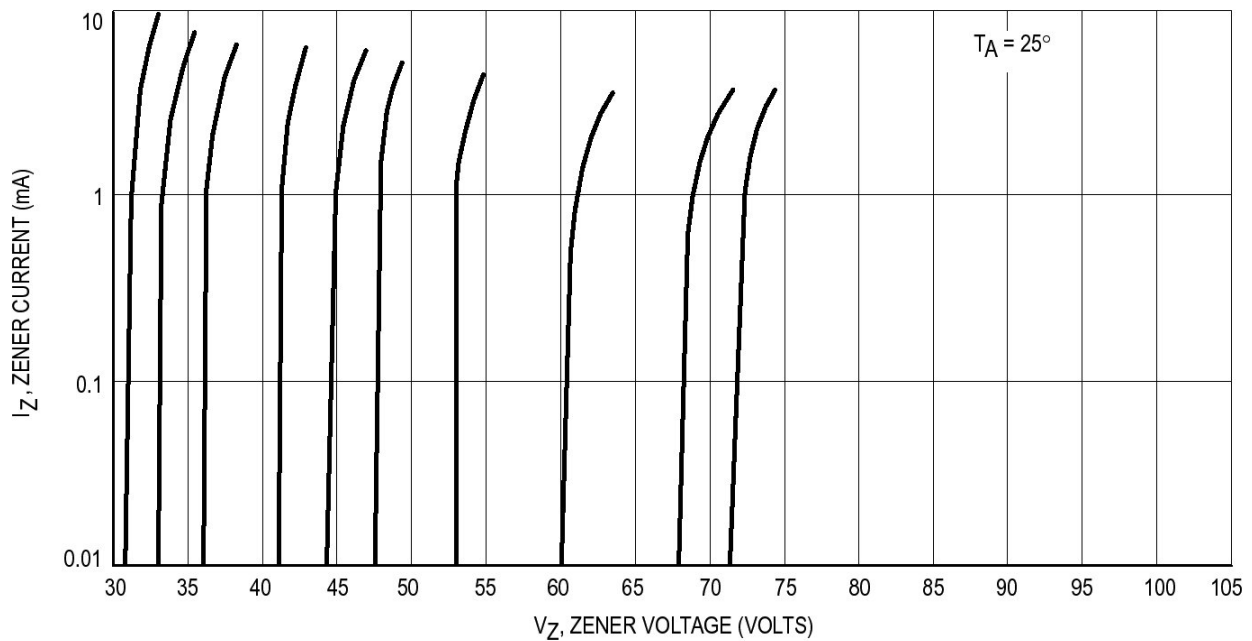


Figure 3. Zener Voltage versus Zener Current – $V_Z=30$ thru 75 Volts

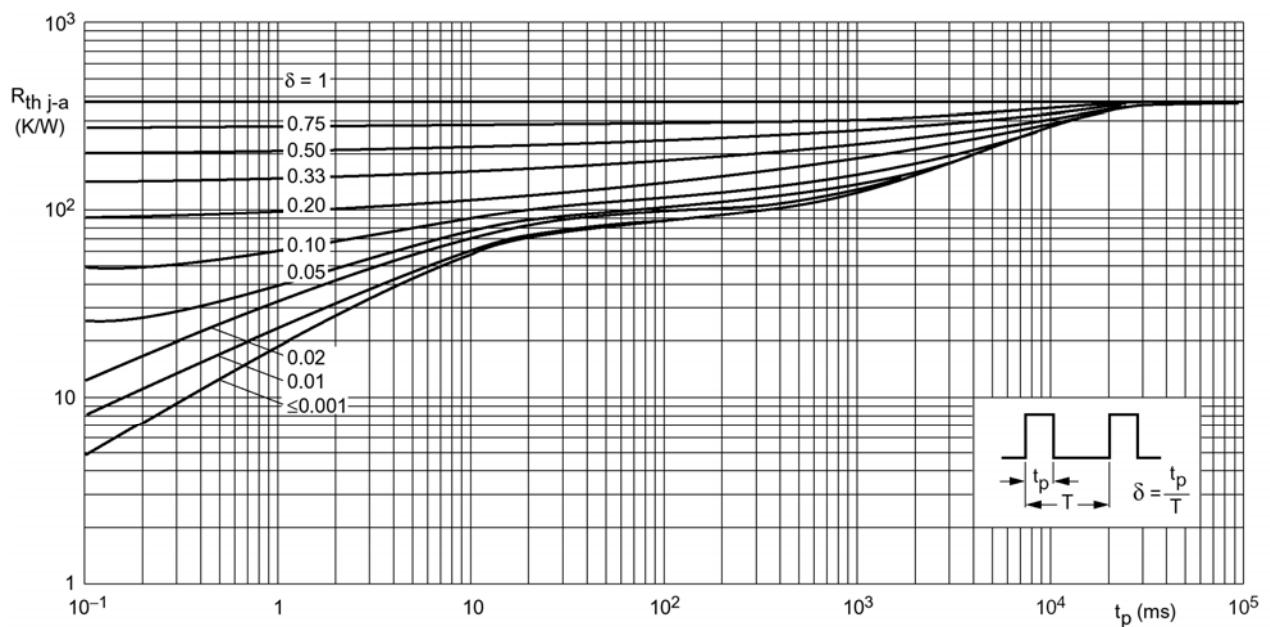
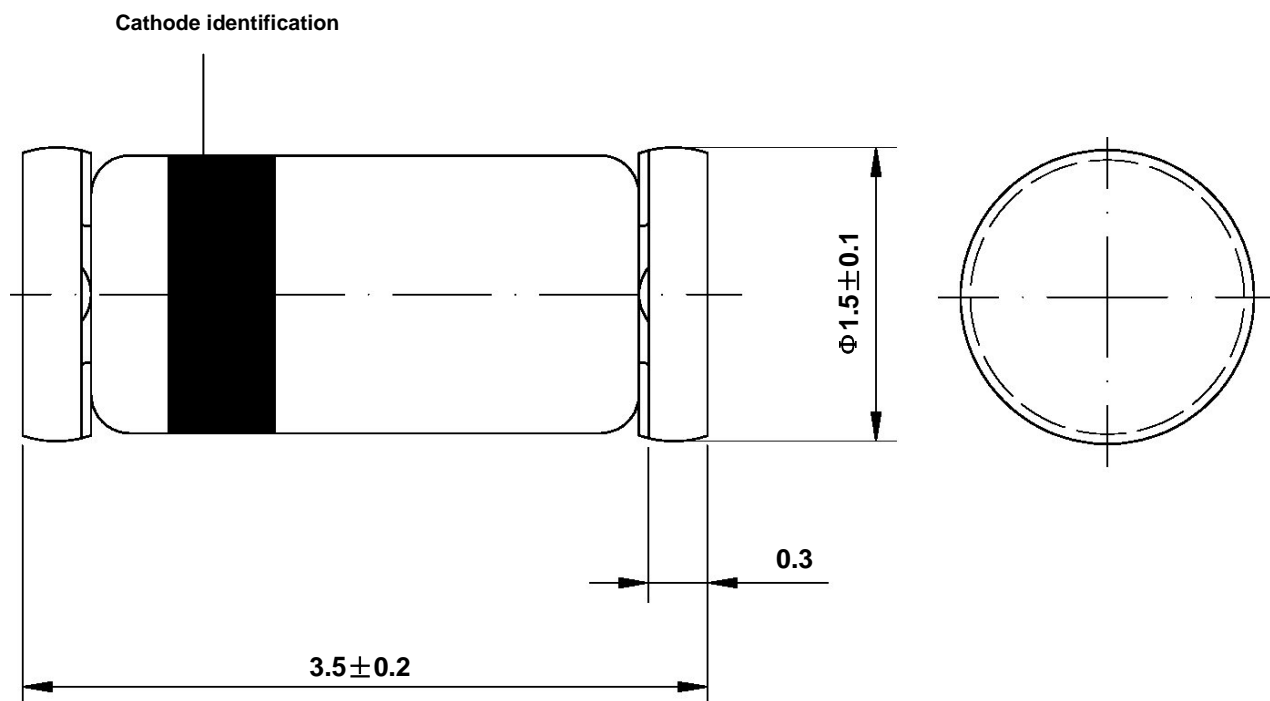


Figure 4. Thermal resistance from junction to ambient as a function of pulse duration



Dimensions in mm



Glass Case
Mini Melf / SOD 80
JEDEC DO 213 AA