

## 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			$T_{\text{stg}}$	-65~+200	$^\circ\text{C}$

### Maximum Thermal Resistance

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

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

	V <sub>Znom</sub> <sup>1)</sup>	I <sub>ZT</sub>	for	r <sub>zT</sub>	r <sub>zK</sub>	at	I <sub>ZK</sub>	I <sub>R</sub>	at	V <sub>R</sub>	TK <sub>VZ</sub>
	V	mA		Ω	Ω		mA	μA		V	%/K
DL5221B	2.4	20		<30	<1200		0.25	<100		1.0	<-0.085
DL5222B	2.5	20		<30	<1250		0.25	<100		1.0	<-0.085
DL5223B	2.7	20		<30	<1300		0.25	<75		1.0	<-0.080
DL5224B	2.8	20		<30	<1400		0.25	<75		1.0	<-0.080
DL5225B	3.0	20		<29	<1600		0.25	<50		1.0	<-0.075
DL5226B	3.3	20		<28	<1600		0.25	<25		1.0	<-0.070
DL5227B	3.6	20		<24	<1700		0.25	<15		1.0	<-0.065
DL5228B	3.9	20		<23	<1900		0.25	<10		1.0	<-0.060
DL5229B	4.3	20		<22	<2000		0.25	<5		1.0	<+0.055
DL5230B	4.7	20		<19	<1900		0.25	<5		2.0	<+0.030
DL5231B	5.1	20		<17	<1600		0.25	<5		2.0	<+0.030
DL5232B	5.6	20		<11	<1600		0.25	<5		3.0	<+0.038
DL5233B	6.0	20		<7	<1600		0.25	<5		3.5	<+0.038
DL5234B	6.2	20		<7	<1000		0.25	<5		4.0	<+0.045
DL5235B	6.8	20		<5	<750		0.25	<3		5.0	<+0.050
DL5236B	7.5	20		<6	<500		0.25	<3		6.0	<+0.058
DL5237B	8.2	20		<8	<500		0.25	<3		6.5	<+0.062
DL5238B	8.7	20		<8	<600		0.25	<3		6.5	<+0.065
DL5239B	9.1	20		<10	<600		0.25	<3		7.0	<+0.068
DL5240B	10	20		<17	<600		0.25	<3		8.0	<+0.075
DL5241B	11	20		<22	<600		0.25	<2		8.4	<+0.076
DL5242B	12	20		<30	<600		0.25	<1		9.1	<+0.077
DL5243B	13	9.5		<13	<600		0.25	<0.5		9.9	<+0.079
DL5244B	14	9.0		<15	<600		0.25	<0.1		10	<+0.082
DL5245B	15	8.5		<16	<600		0.25	<0.1		11	<+0.082
DL5246B	16	7.8		<17	<600		0.25	<0.1		12	<+0.083
DL5247B	17	7.4		<19	<600		0.25	<0.1		13	<+0.084
DL5248B	18	7.0		<21	<600		0.25	<0.1		14	<+0.085
DL5249B	19	6.6		<23	<600		0.25	<0.1		15	<+0.086
DL5250B	20	6.2		<25	<600		0.25	<0.1		16	<+0.086
DL5251B	22	5.6		<29	<600		0.25	<0.1		17	<+0.087
DL5252B	24	5.2		<33	<600		0.25	<0.1		18	<+0.088
DL5253B	25	5.0		<35	<600		0.25	<0.1		19	<+0.089
DL5254B	27	4.6		<41	<600		0.25	<0.1		21	<+0.090
DL5255B	28	4.5		<44	<600		0.25	<0.1		21	<+0.091
DL5256B	30	4.2		<49	<600		0.25	<0.1		23	<+0.091
DL5257B	33	3.8		<58	<700		0.25	<0.1		25	<+0.092
DL5258B	36	3.4		<70	<700		0.25	<0.1		27	<+0.093
DL5259B	39	3.2		<80	<800		0.25	<0.1		30	<+0.094
DL5260B	43	3.0		<93	<900		0.25	<0.1		33	<+0.095
DL5261B	47	2.7		<105	<1000		0.25	<0.1		36	<+0.095
DL5262B	51	2.5		<125	<1100		0.25	<0.1		39	<+0.096
DL5263B	56	2.2		<150	<1300		0.25	<0.1		43	<+0.096
DL5264B	60	2.1		<170	<1400		0.25	<0.1		46	<+0.097
DL5265B	62	2.0		<185	<1400		0.25	<0.1		47	<+0.097
DL5266B	68	1.8		<230	<1600		0.25	<0.1		52	<+0.097
DL5267B	75	1.7		<270	<1700		0.25	<0.1		58	<+0.098

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

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

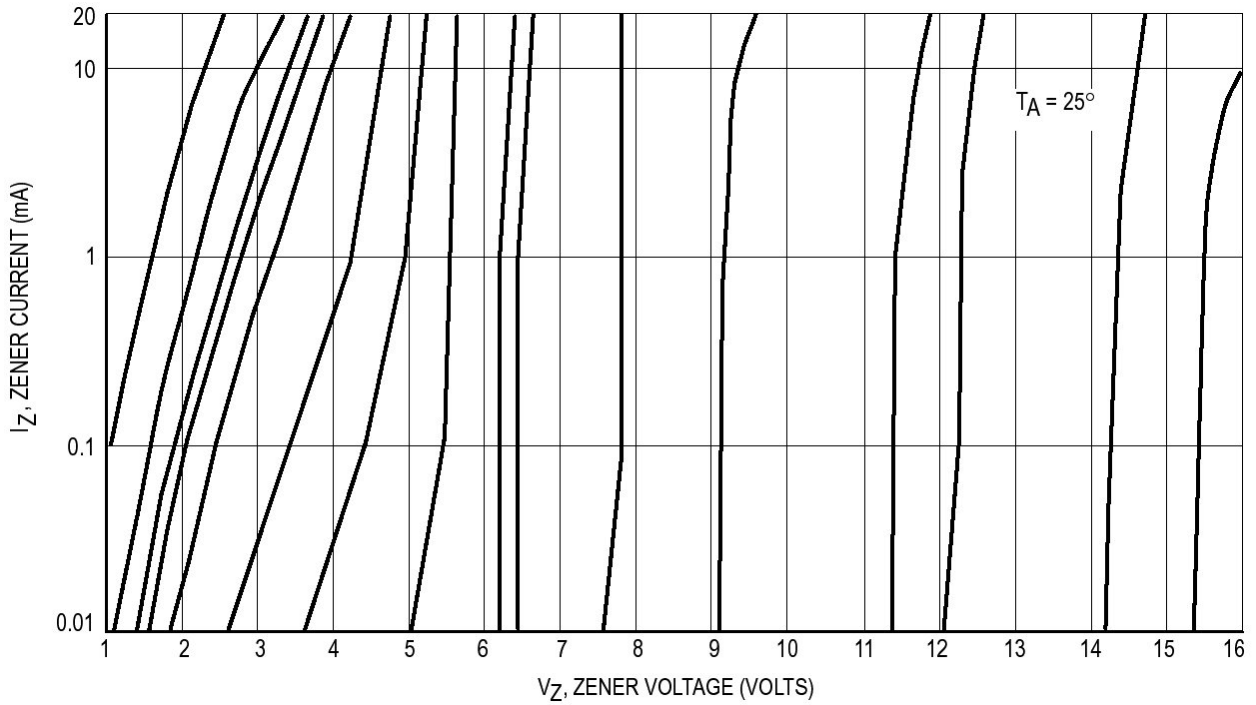


Figure 1. Zener Voltage versus Zener Current –  $V_Z=1$  thru 16 Volts

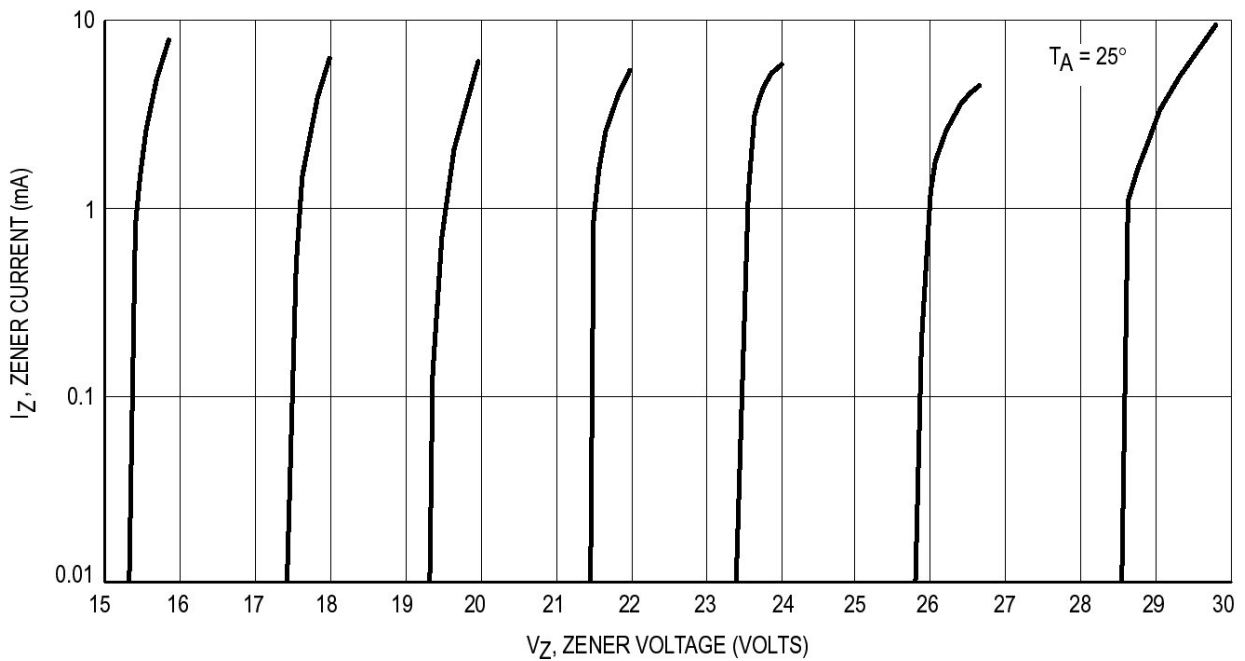
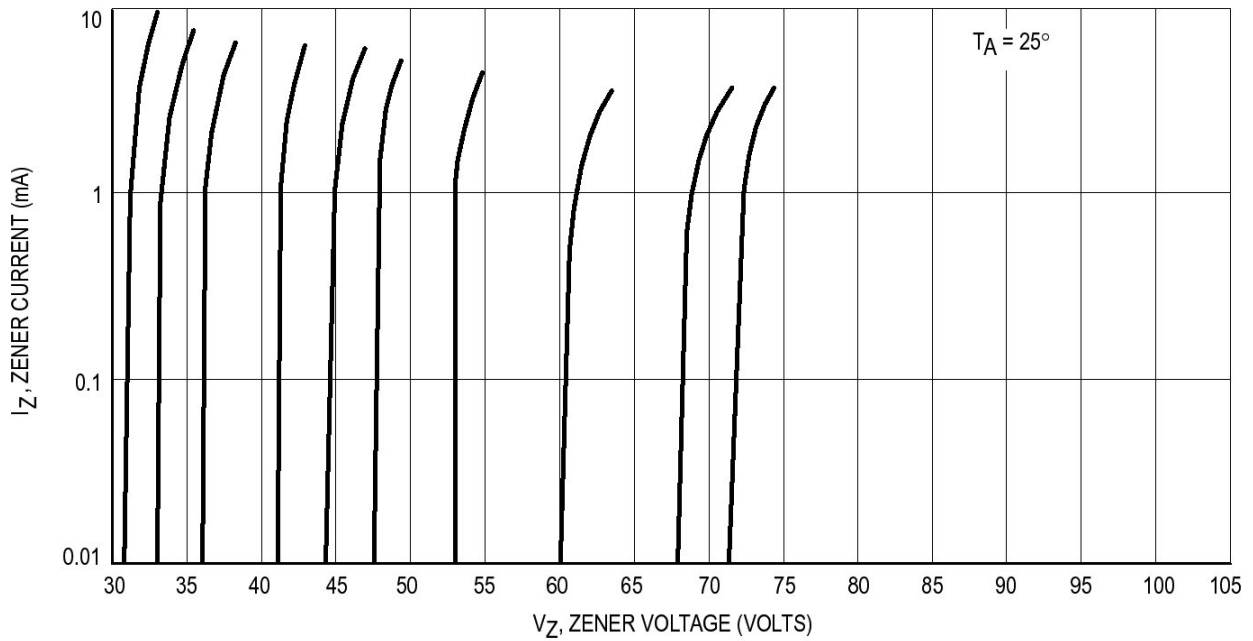
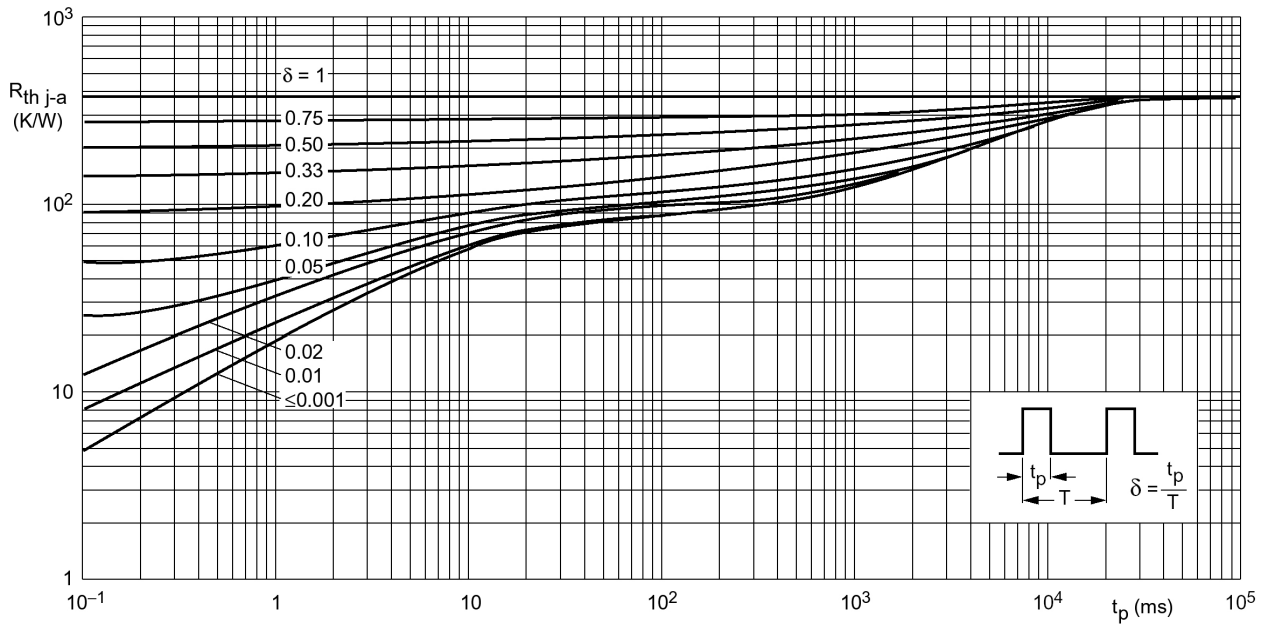


Figure 2. Zener Voltage versus Zener Current –  $V_Z=15$  thru 30 Volts

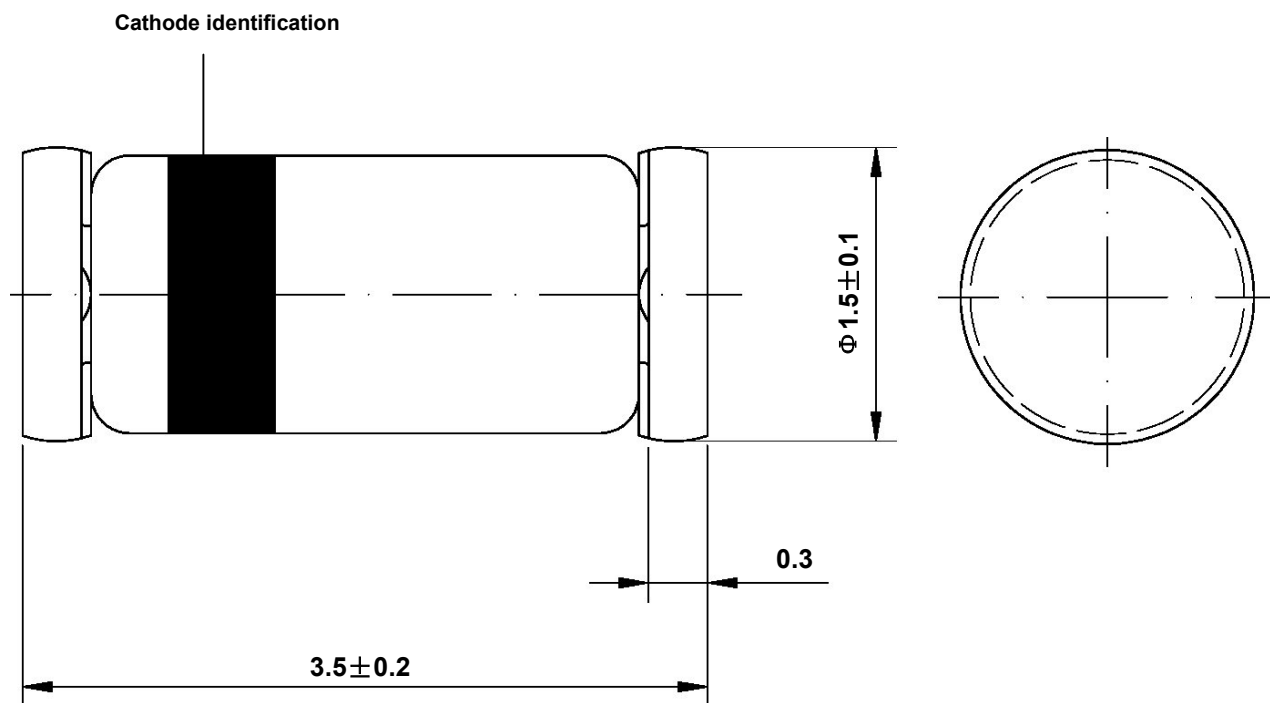


**Figure 3. Zener Voltage versus Zener Current –  $V_Z=30$  thru 75 Volts**



**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