

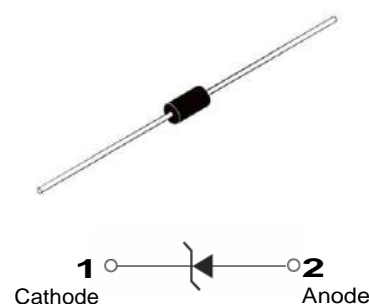
DO-15 Plastic-Encapsulate Diodes

Zener Diodes

Features:

- Glass Passivated Chip
- Low Leakage
- Built-in Strain Relief
- Low Inductance
- High Peak Reverse Power Dissipation
- For Use in Stabilizing and Clipping Circuits with High Power Rating

DO-15



Mechanical Data:

- Case: DO-15
- Epoxy: UL 94V-0 Rate Flame Retardant
- Lead: Axial Leads Solderable Per MIL STD 202 Method 208 Guranteed
- Polarity: Color Band Denotes Cathode End

MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
DC Power Dissipation @ $T_L=50^{\circ}\text{C}$ ¹	P_D	3	W
Maximum Forward Voltage @ $I_F=200\text{mA}$	V_F	1.5	V
Junction Temperature Range	T_J	-55~150	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-55~150	$^{\circ}\text{C}$

Note:

1. T_L =Lead temperature at 3/8" (9.5mm) from body.

Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Part Number	Marking Code	Nominal Zener Voltage		Max. Zener Impedance				Max. Reverse Leakage Current		Max. DC Zener Current
		$V_Z @ I_{ZT}$		$Z_{ZT} @ I_{ZT}$		$Z_{ZK} @ I_{ZK}$		$I_R @ V_R$		I_{ZM}
		Nom. V	mA	Ω	mA	Ω	mA	μA	V	mA
3EZ6.2D5	3EZ6.2D5	6.2	121	1.5	121	700	1	5	3	435
3EZ6.8D5	3EZ6.8D5	6.8	110	2	110	700	1	5	4	393
3EZ7.5D5	3EZ7.5D5	7.5	100	2	100	700	0.5	5	5	360
3EZ8.2D5	3EZ8.2D5	8.2	91	2.3	91	700	0.5	5	6	330
3EZ9.1D5	3EZ9.1D5	9.1	82	2.5	82	700	0.5	3	7	297
3EZ10D5	3EZ10D5	10	75	3.5	75	700	0.25	3	7.6	270
3EZ11D5	3EZ11D5	11	68	4	68	700	0.25	1	8.4	225
3EZ12D5	3EZ12D5	12	63	4.5	63	700	0.25	1	9.1	246
3EZ13D5	3EZ13D5	13	58	4.5	58	700	0.25	0.5	9.9	208
3EZ14D5	3EZ14D5	14	53	5	53	700	0.25	0.5	10.6	193
3EZ15D5	3EZ15D5	15	50	5.5	50	700	0.25	0.5	11.4	180
3EZ16D5	3EZ16D5	16	47	5.5	47	700	0.25	0.5	12.2	169
3EZ17D5	3EZ17D5	17	44	6	44	750	0.25	0.5	13	159
3EZ18D5	3EZ18D5	18	42	6	42	750	0.25	0.5	13.7	150
3EZ19D5	3EZ19D5	19	40	7	40	750	0.25	0.5	14.4	142
3EZ20D5	3EZ20D5	20	37	7	37	750	0.25	0.5	15.2	135
3EZ22D5	3EZ22D5	22	34	8	34	750	0.25	0.5	16.7	123
3EZ24D5	3EZ24D5	24	31	9	31	750	0.25	0.5	18.2	112
3EZ27D5	3EZ27D5	27	28	10	28	750	0.25	0.5	20.6	100
3EZ28D5	3EZ28D5	28	27	12	27	750	0.25	0.5	21	96
3EZ30D5	3EZ30D5	30	25	16	25	1000	0.25	0.5	22.5	90
3EZ33D5	3EZ33D5	33	23	20	23	1000	0.25	0.5	25.1	82
3EZ36D5	3EZ36D5	36	21	22	21	1000	0.25	0.5	27.4	75
3EZ39D5	3EZ39D5	39	19	28	19	1000	0.25	0.5	29.7	69
3EZ43D5	3EZ43D5	43	17	33	17	1500	0.25	0.5	32.7	63
3EZ47D5	3EZ47D5	47	16	38	16	1500	0.25	0.5	35.6	57
3EZ51D5	3EZ51D5	51	15	45	15	1500	0.25	0.5	38.8	53
3EZ56D5	3EZ56D5	56	13	50	13	2000	0.25	0.5	42.6	48
3EZ62D5	3EZ62D5	62	12	55	12	2000	0.25	0.5	47.1	44
3EZ68D5	3EZ68D5	68	11	70	11	2000	0.25	0.5	51.7	40
3EZ75D5	3EZ75D5	75	10	85	10	2000	0.25	0.5	56	36

Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Part Number	Marking Code	Nominal Zener Voltage		Max. Zener Impedance				Max. Reverse Leakage Current		Max. DC Zener Current
		$V_Z @ I_{ZT}$		$Z_{ZT} @ I_{ZT}$		$Z_{ZK} @ I_{ZK}$		$I_R @ V_R$		I_{ZM}
		Nom. V	mA	Ω	mA	Ω	mA	μA	V	mA
3EZ82D5	3EZ82D5	82	9.1	95	9.1	3000	0.25	0.5	62.2	33
3EZ91D5	3EZ91D5	91	8.2	115	8.2	3000	0.25	0.5	69.2	30
3EZ100D5	3EZ100D5	100	7.5	160	7.5	3000	0.25	0.5	76	27
3EZ110D5	3EZ110D5	110	6.8	225	6.8	4000	0.25	0.5	83.6	25
3EZ120D5	3EZ120D5	120	6.3	300	6.3	4500	0.25	0.5	91.2	22
3EZ130D5	3EZ130D5	130	5.8	375	5.8	5000	0.25	0.5	98.8	21
3EZ140D5	3EZ140D5	140	5.3	475	5.3	5000	0.25	0.5	106.4	19
3EZ150D5	3EZ150D5	150	5	550	5	6000	0.25	0.5	114	18
3EZ160D5	3EZ160D5	160	4.7	625	4.7	6500	0.25	0.5	121.6	17
3EZ170D5	3EZ170D5	170	4.4	650	4.4	7000	0.25	0.5	130.4	16
3EZ180D5	3EZ180D5	180	4.2	700	4.2	7000	0.25	0.5	136.8	15
3EZ190D5	3EZ190D5	190	4	800	4	8000	0.25	0.5	144.8	14
3EZ200D5	3EZ200D5	200	3.7	875	3.7	8000	0.25	0.5	152	13

Notes:

1. The type number listed have a standard tolerance on the nominal zener voltage of $\pm 5\%$.
2. The reverse surge current is a non-repetitive, 8.3ms pulse width square wave or equivalent sine-wave superimposed on I_{ZT} per JEDEC Method.

Typical Characteristics

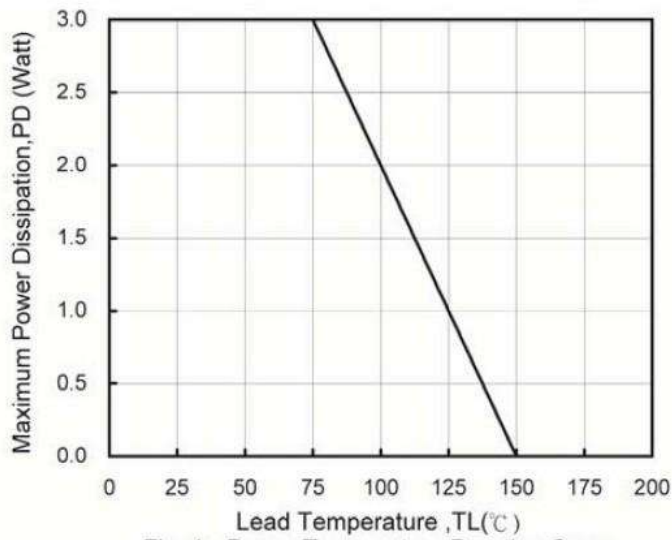


Fig. 1 - Power Temperature Derating Curve

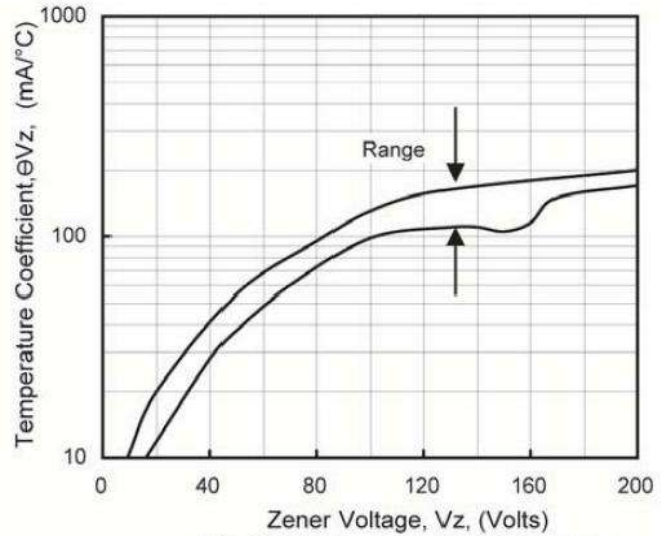


Fig. 2 - Temperature Coefficients v.s. Zener Voltage

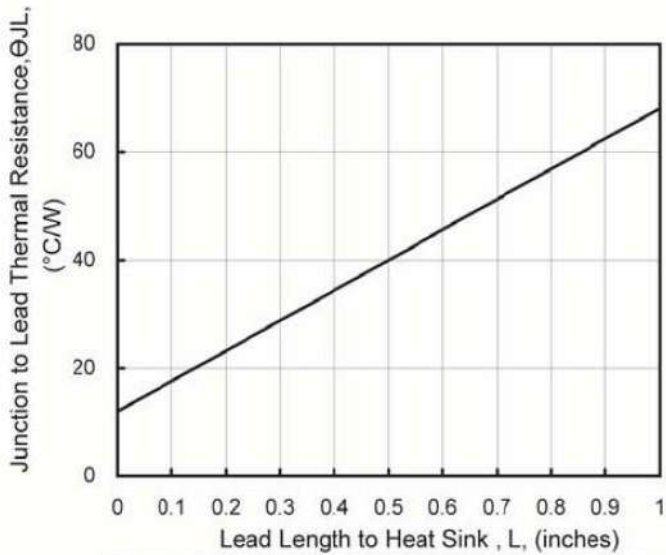


Fig. 3 - Typical Thermal Resistance v.s. Lead Length

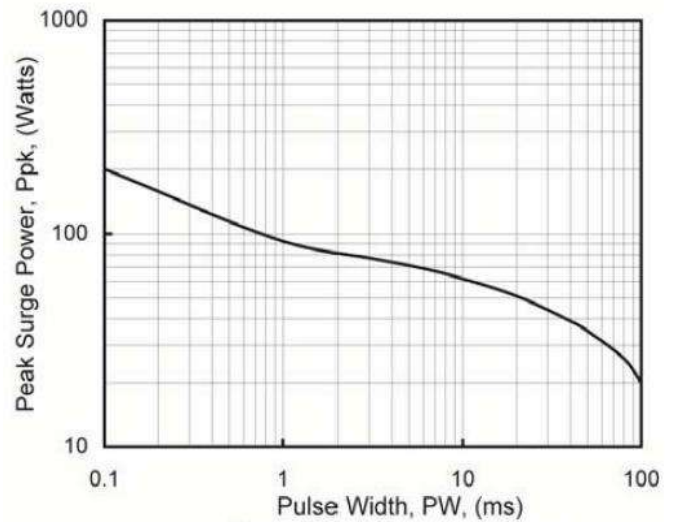


Fig. 4 - Maximum Surge Power

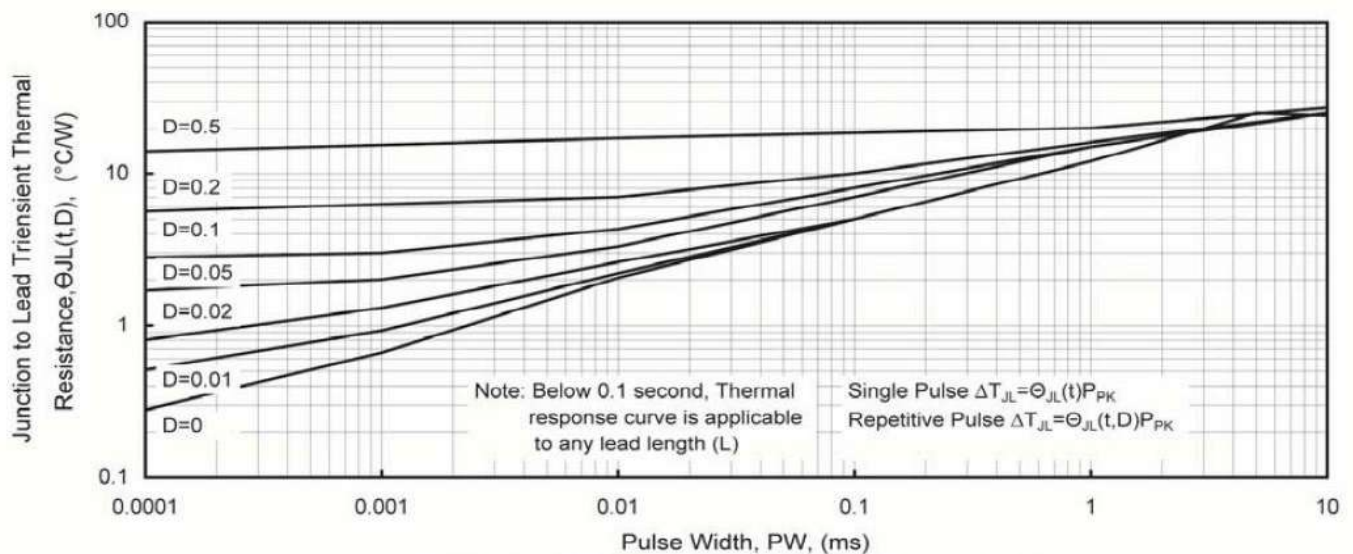
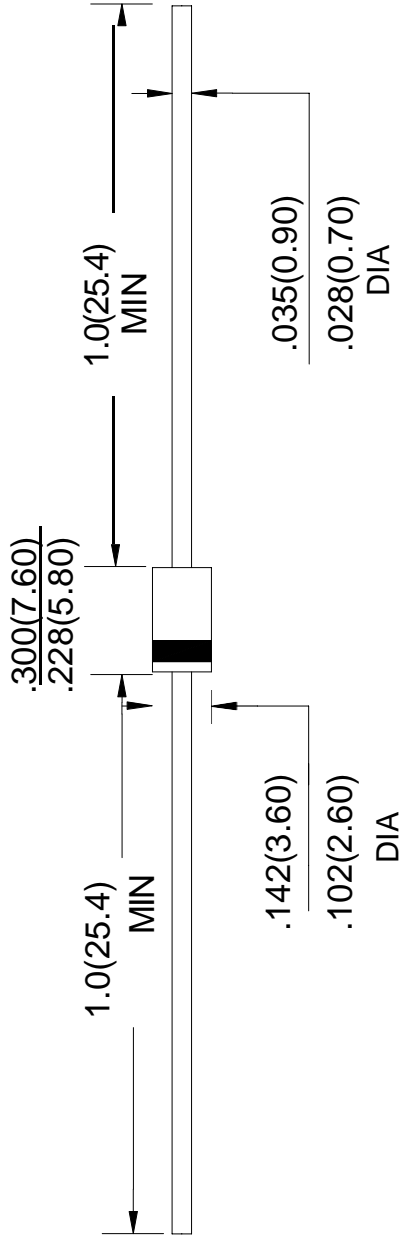


Fig. 5 - Typical Thermal Response L, Lead Length=3/8inch

DO-15 Package Outline Dimensions

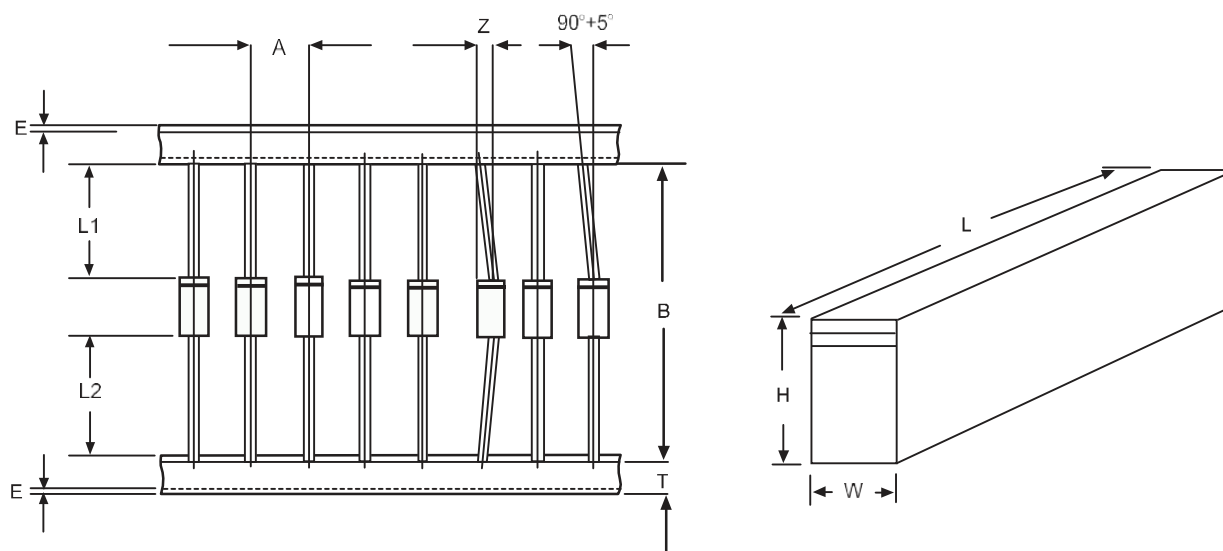


Unit: in inches (millimeters)

Ammo Box Packaging Specifications For Axial Lead Rectifiers

Axial lead devices are packed in accordance with EIA standard RS-296-D and specifications given below

COMPONENT OUTLINE	COMPONENT PITCH A	INNER TAPE PITCH B	CUMULATIVE PITCH TOLERANCE
	$\pm 0.5\text{mm}(0.020'')$	$+0.5\text{mm}(0.020'')$	
R-1	5.0mm	26.0mm	2.0mm/20pitch
R-1	5.0mm	52.4mm	2.0mm/10pitch
A-405	5.0mm	26.0mm	2.0mm/20pitch
A-405	5.0mm	52.4mm	2.0mm/10pitch
DO-34/DO-35	5.0mm	26.0mm	2.0mm/20pitch
DO-34/DO-35	5.0mm	52.4mm	2.0mm/10pitch
DO-41	5.0mm	26.0mm	2.0mm/20pitch
DO-41	5.0mm	52.4mm	2.0mm/10pitch
DO-15	5.0mm	52.4mm	2.0mm/10pitch
DO-27	10.0mm	52.4mm	2.0mm/10pitch
R-6	10.0mm	52.4mm	2.0mm/10pitch



ITEM	SYMBOL	SPECIFICATIONS(mm)	SPECIFICATIONS(inch)
Component alignment	Z	1.2max	0.048max
Tape width	T	6.0±0.4	0.236±0.016
Exposed adhesive	E	0.8max	0.032max
Body eccentricity	L1-L2	1.0max	0.040max
Box length	L	255.0±5.0	10.04±0.197
Box width	W	78.0±5.0	3.07±0.197
Box height	H	150.0±5.0	5.91±0.197

NOTE: Each component lead shall be sandwiched between tapes for A minimum of 3.2mm(0.126'')