Zener Diodes
DO-15 Axial Leaded

3EZ-D5 Series

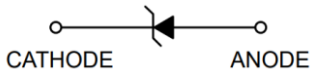
MERITEK

FEATURE

- Zener Voltage Range: 5.6V to 200V
- Zener Voltage Tolerance: ±5%
- Power Dissipation: 3W
- Glass passivation junction, Low inductance
- Built-in Strain Relief
- High Peak Reverse Power Dissipation

MECHANICAL DATA

- Flammability Classification Rating UL 94V-0
- Solderable per MIL-STD-202, Method 208
- Polarity: Color Band Denoted Cathode End



RoHS

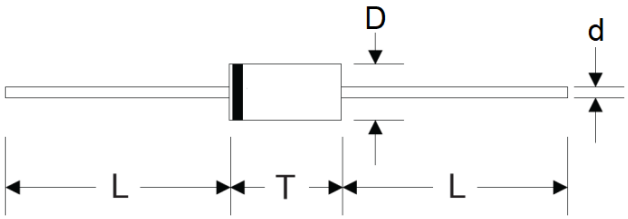
MAXIMUM RATINGS

Parameter	Symbols	Value	Unit
Power Dissipation at T_L =75 ˚C	P_D	3	W
Maximum Forward Voltage At I_F=200mA	V_F	1.5	V
Junction Temperature	T_J	-55~+175	˚C
Storage Temperature Range	T_{STG}	-55~+175	˚C

Note:
1. T_A =25°C unless otherwise noted
2. T_L =Lead Temperature at 3/8 (9.5mm) from body

DIMENSIONS

Item	DO-15	
	Min. (mm)	Max. (mm)
D	0.71	0.84
T	5.85	7.63
L	25.4	-
d	2.60	3.61



ELECTRICAL CHARACTERISTICS

Part Number	Nominal Zener Voltage		Maximum Zener Impedance			Max Reverse Leakage Current		Max Zener Current
	V_Z @ I_{ZT}	I_{ZT}	Z_{ZT} @ I_{ZT}	Z_{ZK} @ I_{ZK}	I_{ZK}	I_R@V_R		I_{ZM}
	V	mA	Ω	Ω	mA	μA	V	mA
3EZ5.6D5	5.6	134	2.5	600	1.0	5.0	2.0	481
3EZ6.2D5	6.2	121	1.5	700	1.0	5.0	3.0	435
3EZ6.8D5	6.8	110	2.0	700	1.0	5.0	4.0	393
3EZ7.5D5	7.5	100	2.0	700	0.5	5.0	5.0	360
3EZ8.2D5	8.2	91.0	2.3	700	0.5	5.0	6.0	330

ELECTRICAL CHARACTERISTICS

Part Number	Nominal Zener Voltage		Maximum Zener Impedance			Max Reverse Leakage Current		Max Zener Current
	V_Z @ I_{ZT}	I_{ZT}	Z_{ZT} @ I_{ZT}	Z_{ZK} @ I_{ZK}	I_{ZK}	I_R@V_R		I_{ZM}
	V	mA	Ω	Ω	mA	μA	V	mA
3EZ9.1D5	9.1	82.0	2.5	700	0.5	3.0	7.0	297
3EZ10D5	10.0	75.0	3.5	700	0.25	3.0	7.6	270
3EZ11D5	11.0	68.0	4.0	700	0.25	1.0	8.4	225
3EZ12D5	12.0	63.0	4.5	700	0.25	1.0	9.1	246
3EZ13D5	13.0	58.0	4.5	700	0.25	0.5	9.9	208
3EZ14D5	14.0	53.0	5.0	700	0.25	0.5	10.6	193
3EZ15D5	15.0	50.0	5.5	700	0.25	0.5	11.4	180
3EZ16D5	16.0	47.0	5.5	700	0.25	0.5	12.2	169
3EZ17D5	17.0	44.0	6.0	750	0.25	0.5	13.0	159
3EZ18D5	18.0	42.0	6.0	750	0.25	0.5	13.7	150
3EZ19D5	19.0	40.0	7.0	750	0.25	0.5	14.4	142
3EZ20D5	20.0	37.0	7.0	750	0.25	0.5	15.2	135
3EZ22D5	22.0	34.0	8.0	750	0.25	0.5	16.7	123
3EZ24D5	24.0	31.0	9.0	750	0.25	0.5	18.2	112
3EZ27D5	27.0	28.0	10.0	750	0.25	0.5	20.6	100
3EZ28D5	28.0	27.0	12.0	750	0.25	0.5	21.0	96
3EZ30D5	30.0	25.0	16.0	1000	0.25	0.5	22.5	90
3EZ33D5	33.0	23.0	20.0	1000	0.25	0.5	25.1	82
3EZ36D5	36.0	21.0	22.0	1000	0.25	0.5	27.4	75
3EZ39D5	39.0	19.0	28.0	1000	0.25	0.5	29.7	69
3EZ43D5	43.0	17.0	33.0	1500	0.25	0.5	32.7	63
3EZ47D5	47.0	16.0	38.0	1500	0.25	0.5	35.6	57
3EZ51D5	51.0	15.0	45.0	1500	0.25	0.5	38.8	53
3EZ56D5	56.0	13.0	50.0	2000	0.25	0.5	42.6	48
3EZ62D5	62.0	12.0	55.0	2000	0.25	0.5	47.1	44
3EZ68D5	68.0	11.0	70.0	2000	0.25	0.5	51.7	40
3EZ75D5	75.0	10.0	85.0	2000	0.25	0.5	56.0	36
3EZ82D5	82.0	9.1	95.0	3000	0.25	0.5	62.2	33
3EZ91D5	91.0	8.2	115	3000	0.25	0.5	69.2	30
3EZ100D5	100	7.5	160	3000	0.25	0.5	76.0	27
3EZ110D5	110	6.8	225	4000	0.25	0.5	83.6	25
3EZ120D5	120	6.3	300	4500	0.25	0.5	91.2	22
3EZ130D5	130	5.8	375	5000	0.25	0.5	98.8	21
3EZ140D5	140	5.3	475	5000	0.25	0.5	106.4	19
3EZ150D5	150	5.0	550	6000	0.25	0.5	114.0	18
3EZ160D5	160	4.7	625	6500	0.25	0.5	121.6	17
3EZ170D5	170	4.4	650	7000	0.25	0.5	130.4	16
3EZ180D5	180	4.2	700	7000	0.25	0.5	136.8	15
3EZ190D5	190	4.0	800	8000	0.25	0.5	144.8	14
3EZ200D5	200	3.7	875	8000	0.25	0.5	152.0	13

Note:
1. TA =25°C unless otherwise noted
2. Standard tolerance on the nominal zener voltage: ± 5 %
3. The revese surge current is a non-repetitive, 8.3ms pulse width square wave or equivalent sine-wave superimposed on I_{ZT} per JEDEC method

CHARACTERISTIC CURVES

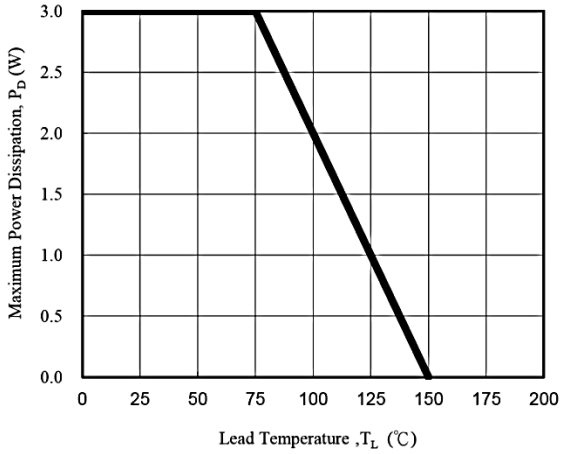


Fig. 1 - Power Temperature Derating Curve

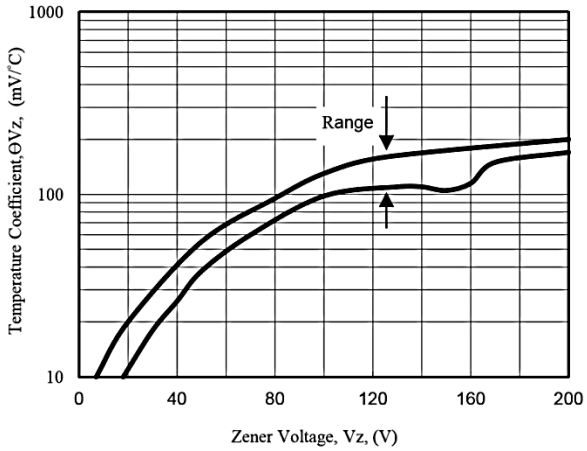


Fig. 2 - Temperature Coefficients v.s. Zener Voltage

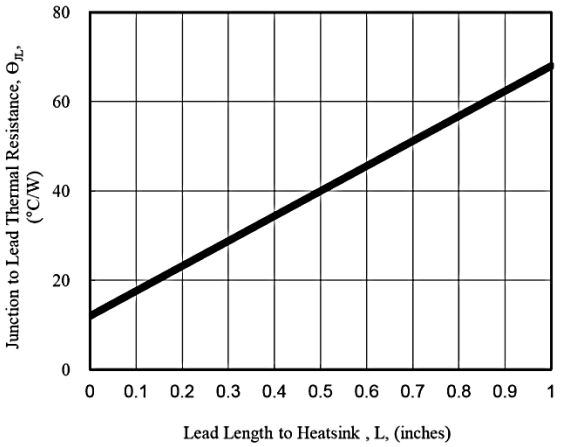


Fig. 3 - Typical Thermal Resistance v.s. Lead Length

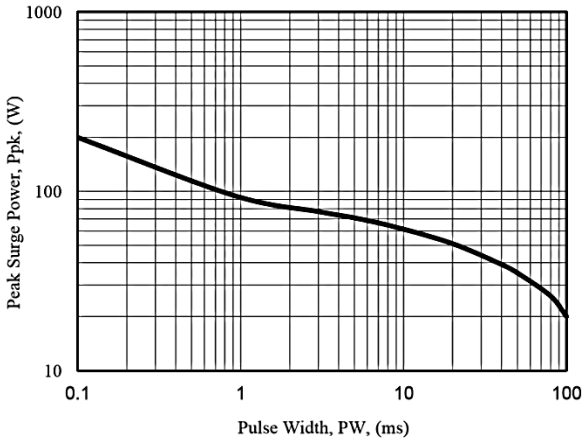


Fig. 4 - Maximum Surge Power

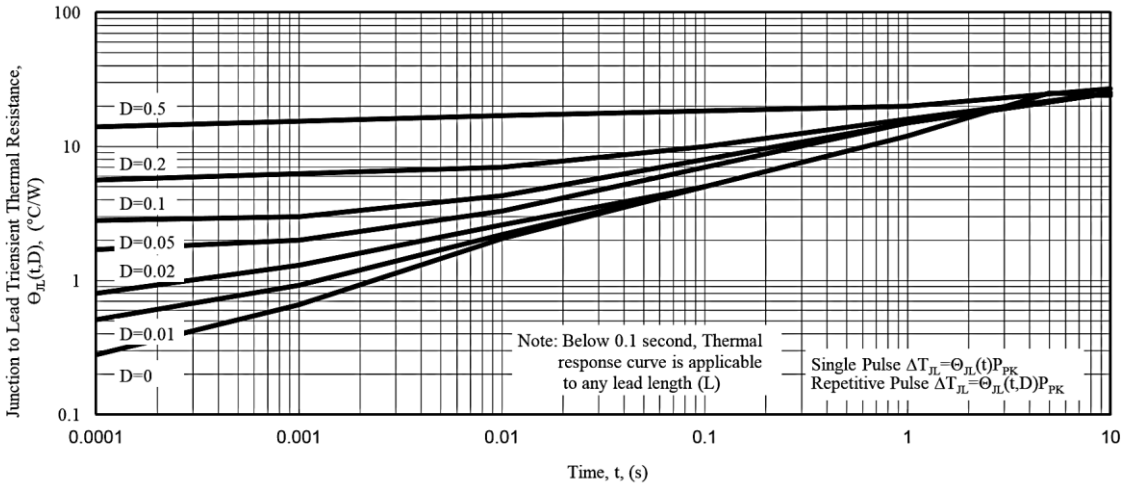


Fig. 5 - Typical Thermal Response L, Lead Length=3/8inch

*Specifications subject to change without notice.