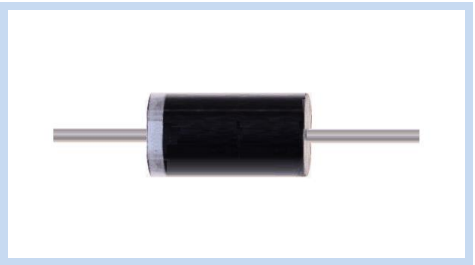
Zener Diodes
DO-41 Axial Leaded

1N4728A~Z1330A Series

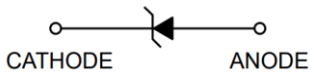
MERITEK

FEATURE



- Zener Voltage Range: 3.3V to 200V
- Zener Voltage Tolerance: ±5%
- Power Dissipation: 1W
- 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

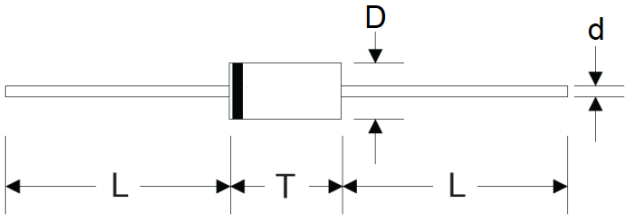
MAXIMUM RATINGS

Parameter	Symbols	Value	Unit
Power Dissipation at T_L =75 ˚C	P_D	1.0	W
Maximum Forward Voltage At I_F=200mA	V_F	1.2	V
Maximum thermal resistance junction to ambient air	$R_{\Theta JA}$	170	˚C/W
Junction Temperature	T_J	-55~+175	˚C
Storage Temperature Range	T_{STG}	-55~+175	˚C

Note:
1. Ratings at 25°C ambient temperature unless otherwise specified.
2. T_L=Lead Temperature at 3/8 (9.5mm) from body
3. Valid provided that leads are kept at ambient temperature at a distance of 10 mm from case

DIMENSIONS

Item	DO-41	
	Min. (mm)	Max. (mm)
D	0.71	0.84
T	4.19	5.21
L	25.4	--
d	2.29	2.97



ELECTRICAL CHARACTERISTICS

Part Number	Nominal Zener Voltage		Maximum Zener Impedance			Max Reverse Leakage Current		Max DC Zener Current	Max Surge Current
	V_Z @ I_{ZT}	I_{ZT}	Z_{ZT} @ I_{ZT}	Z_{ZK} @ I_{ZK}	I_{ZK}	I_R@V_R		I_{ZM}	I_{RM}
	V	mA	Ω	Ω	mA	μA	V	mA	mApk
1N4728A	3.3	76.0	10.0	400	1.0	100	1.0	274	1370
1N4729A	3.6	69.0	10.0	400	1.0	100	1.0	251	1255
1N4730A	3.9	64.0	9.0	400	1.0	50.0	1.0	232	1160
1N4731A	4.3	58.0	9.0	400	1.0	10.0	1.0	210	1050
1N4732A	4.7	53.0	8.0	500	1.0	10.0	1.0	192	960
1N4733A	5.1	49.0	7.0	550	1.0	10.0	1.0	177	885
1N4734A	5.6	45.0	5.0	600	1.0	10.0	2.0	161	805

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	V_Z @ I_{ZT}	I_{ZT}	Z_{ZT} @ I_{ZT}	Z_{ZK} @ I_{ZK}	I_{ZK}	I_R@V_R		I_{ZM}	I_{RM}
	V	mA	Ω	Ω	mA	μA	V	mA	mApk
1N4736A	6.8	37.0	3.5	700	1.0	5.0	4.0	133	660
1N4737A	7.5	34.0	4.0	700	0.5	5.0	5.0	121	605
1N4738A	8.2	31.0	4.5	700	0.5	5.0	6.0	110	550
1N4739A	9.1	28.0	5.0	700	0.5	0.5	7.0	100	500
1N4740A	10.0	25.0	7.0	700	0.25	0.5	7.6	91.0	454
1N4741A	11.0	23.0	8.0	700	0.25	0.1	8.4	83.0	414
1N4742A	12.0	21.0	9.0	700	0.25	0.1	9.1	76.0	380
1N4743A	13.0	19.0	10.0	700	0.25	0.1	9.9	69.0	344
1N4744A	15.0	17.0	14.0	700	0.25	0.1	11.4	61.0	305
1N4745A	16.0	15.5	16.0	700	0.25	0.1	12.2	57.0	285
1N4746A	18.0	14.0	20.0	750	0.25	0.1	13.7	50.0	250
1N4747A	20.0	12.5	22.0	750	0.25	0.1	15.2	45.0	225
1N4748A	22.0	11.5	23.0	750	0.25	0.1	16.7	41.0	205
1N4749A	24.0	10.5	25.0	750	0.25	0.1	18.2	38.0	190
1N4750A	27.0	9.5	35.0	750	0.25	0.1	20.6	34.0	170
1N4751A	30.0	8.5	40.0	1000	0.25	0.1	22.8	30.0	150
1N4752A	33.0	7.5	45.0	1000	0.25	0.1	25.1	27.0	135
1N4753A	36.0	7.0	50.0	1000	0.25	0.1	27.4	25.0	125
1N4754A	39.0	6.5	60.0	1000	0.25	0.1	29.7	23.0	115
1N4755A	43.0	6.0	70.0	1500	0.25	0.1	32.7	22.0	110
1N4756A	47.0	5.5	80.0	1500	0.25	0.1	35.8	19.0	95.0
1N4757A	51.0	5.0	95.0	1500	0.25	0.1	38.8	18.0	90.0
1N4758A	56.0	4.5	110	2000	0.25	0.1	42.6	16.0	80.0
1N4759A	62.0	4.0	125	2000	0.25	0.1	47.1	14.0	70.0
1N4760A	68.0	3.7	150	2000	0.25	0.1	51.7	13.0	65.0
1N4761A	75.0	3.3	175	2000	0.25	0.1	56.0	12.0	60.0
1N4762A	82.0	3.0	200	3000	0.25	0.1	62.2	11.0	55.0
1N4763A	91.0	2.8	250	3000	0.25	0.1	69.2	10.0	50.0
1N4764A	100	2.5	350	3000	0.25	0.1	76.0	9.0	45.0
Z1110A	110	2.3	450	4000	0.25	0.1	83.6	8.6	40.0
Z1120A	120	2.0	550	4500	0.25	0.1	91.2	7.8	37.0
Z1130A	130	1.9	700	5000	0.25	0.1	98.8	7.0	34.0
Z1150A	150	1.7	1000	6000	0.25	0.1	114.0	6.4	30.0
Z1160A	160	1.6	1100	6500	0.25	0.1	121.6	5.8	28.0
Z1180A	180	1.4	1200	7000	0.25	0.1	136.8	5.2	25.0
Z1200A	200	1.2	1900	9990	0.25	0.1	152.0	4.7	22.0
Z1220A	220	1.0	1600	8000	0.25	0.1	167.2	4.0	20.0
Z1240A	240	0.9	1800	8500	0.25	0.1	182.4	3.8	19.0
Z1250A	250	0.9	2000	9000	0.25	0.1	190.0	3.6	18.0
Z1270A	270	0.8	2100	9000	0.25	0.1	205.0	3.3	16.0
Z1300A	300	0.8	2300	9500	0.25	0.1	228.0	3.0	15.0
Z1330A	330	0.7	2500	9500	0.25	0.1	250.2	2.7	13.0

Note: 1.Standard tolerance on the nominal Zener voltage: ± 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

CHARACTERISTIC CURVES

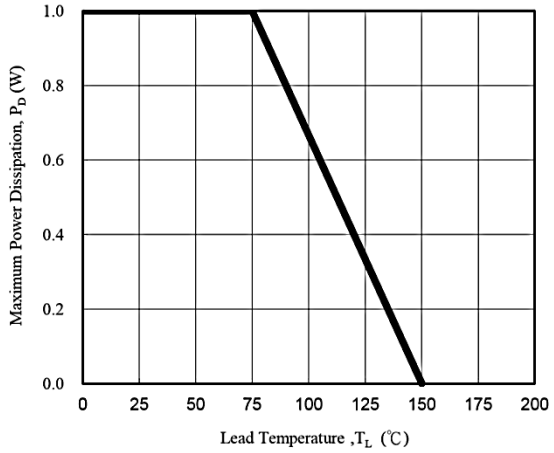


Fig. 1 - Power Temperature Derating Curve

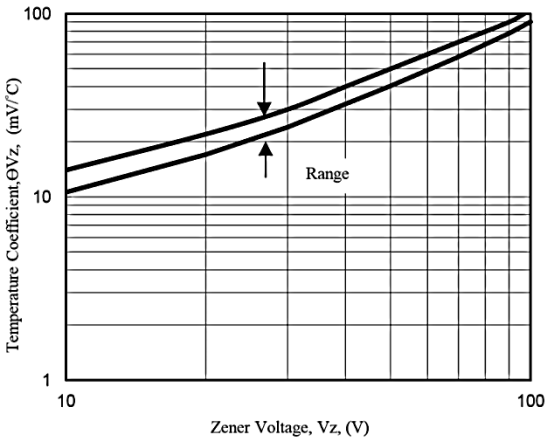


Fig. 2 - Temperature Coefficients v.s. Zener Voltage

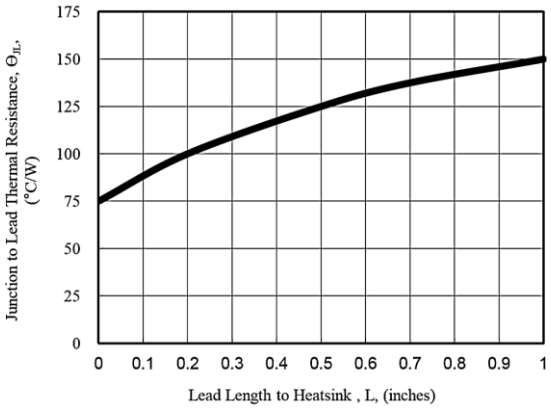
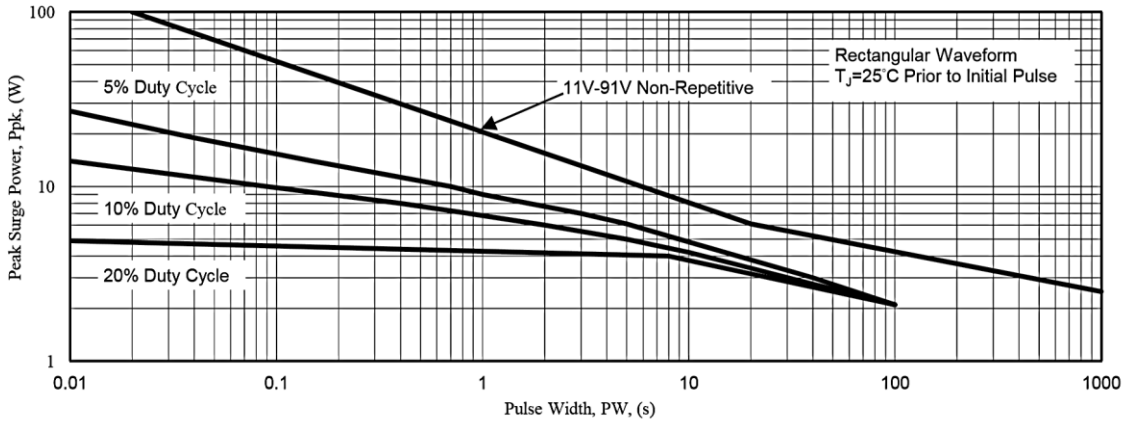


Fig. 3 - Typical Thermal Resistance v.s. Lead Length



Fg. 4 - Maximum Surge Power

*Specifications subject to change without notice.