www.eicsemi.com

1N4728 - 1N4764
Z1110 - Z1200

SILICON ZENER DIODES

V_Z : 3.3 - 200 Volts
P_D : 1 Watt

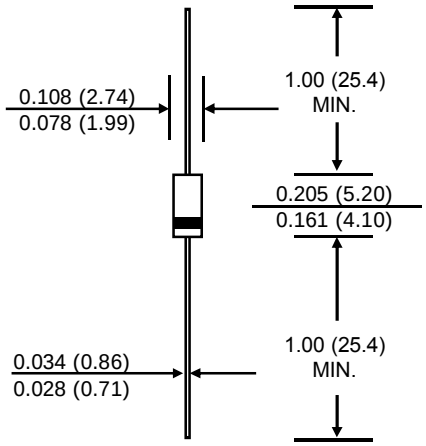
FEATURES :

* Complete voltage range 3.3 to 200 Volts
* High peak reverse power dissipation
* High reliability
* Low leakage current
* Pb / RoHS Free

MECHANICAL DATA

* Case : DO-41 Molded plastic
* Epoxy : UL94V-O rate flame retardant
* Lead : Axial lead solderable per MIL-STD-202, method 208 guaranteed
* Polarity : Color band denotes cathode end
* Mounting position : Any
* Weight : 0.335 gram

DO - 41



Dimensions in inches and (millimeters)

MAXIMUM RATINGS

Rating at 25 °C ambient temperature unless otherwise specified

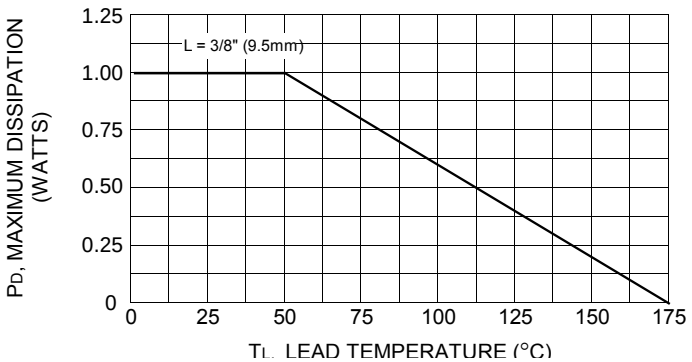
Rating	Symbol	Value	Unit
DC Power Dissipation at T_L = 50 °C (Note1)	P_D	1.0	Watt
Maximum Forward Voltage at I_F = 200 mA	V_F	1.2	Volts
Maximum Thermal Resistance Junction to Ambient Air (Note2)	$R_{\Theta JA}$	170	K / W
Junction Temperature Range	T_J	- 55 to + 175	°C
Storage Temperature Range	T_{STG}	- 55 to + 175	°C

Notes :

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

(2) Valid provided that leads are kept at ambient temperature at a distance of 10 mm from case.

Fig. 1 POWER TEMPERATURE DERATING CURVE



ELECTRICAL CHARACTERISTICS (Rating at 25 °C ambient temperature unless otherwise specified)

Type No.	Zener Voltage				Maximum Zener Impedance			Maximum Reverse Leakage Current		Maximum DC Zener Current	Maximum Surge Current
	V_Z[1] (V) @ I_{ZT}			I_{ZT}	Z_{ZT} @ I_{ZT}	Z_{ZK} @ I_{ZK}	I_{ZK}	I_R @ V_R		I_{ZM}	I_{RM}[2]
	Min.	Nom.	Max.	(mA)	(Ω)	(Ω)	(mA)	(μA)	(V)	(mA)	(mApk)
1N4728	2.97	3.3	3.63	76.0	10	400	1.0	100	1.0	276	1380
1N4729	3.24	3.6	3.96	69.0	10	400	1.0	100	1.0	252	1260
1N4730	3.51	3.9	4.29	64.0	9.0	400	1.0	50	1.0	234	1190
1N4731	3.87	4.3	4.73	58.0	9.0	400	1.0	10	1.0	217	1070
1N4732	4.23	4.7	5.17	53.0	8.0	500	1.0	10	1.0	193	970
1N4733	4.59	5.1	5.61	49.0	7.0	550	1.0	10	1.0	178	890
1N4734	5.04	5.6	6.16	45.0	5.0	600	1.0	10	2.0	162	810
1N4735	5.58	6.2	6.82	41.0	2.0	700	1.0	10	3.0	146	730
1N4736	6.12	6.8	7.48	37.0	3.5	700	1.0	10	4.0	133	660
1N4737	6.75	7.5	8.25	34.0	4.0	700	0.5	10	5.0	121	605
1N4738	7.38	8.2	9.02	31.0	4.5	700	0.5	10	6.0	110	550
1N4739	8.19	9.1	10.01	28.0	5.0	700	0.5	10	7.0	100	500
1N4740	9	10	11	25.0	7.0	700	0.25	10	7.6	91	454
1N4741	9.9	11	12.1	23.0	8.0	700	0.25	5.0	8.4	83	414
1N4742	10.8	12	13.2	21.0	9.0	700	0.25	5.0	9.1	76	380
1N4743	11.7	13	14.3	19.0	10	700	0.25	5.0	9.9	69	344
1N4744	13.5	15	16.5	17.0	14	700	0.25	5.0	11.4	61	305
1N4745	14.4	16	17.6	15.5	16	700	0.25	5.0	12.2	57	285
1N4746	16.2	18	19.8	14.0	20	750	0.25	5.0	13.7	50	250
1N4747	18	20	22	12.5	22	750	0.25	5.0	15.2	45	225
1N4748	19.8	22	24.2	11.5	23	750	0.25	5.0	16.7	41	205
1N4749	21.6	24	26.4	10.5	25	750	0.25	5.0	18.2	38	190
1N4750	24.3	27	29.7	9.5	35	750	0.25	5.0	20.6	34	170
1N4751	27	30	33	8.5	40	1000	0.25	5.0	22.8	30	150
1N4752	29.7	33	36.3	7.5	45	1000	0.25	5.0	25.1	27	135
1N4753	32.4	36	39.6	7.0	50	1000	0.25	5.0	27.4	25	125
1N4754	35.1	39	42.9	6.5	60	1000	0.25	5.0	29.7	23	115
1N4755	38.7	43	47.3	6.0	70	1500	0.25	5.0	32.7	22	110
1N4756	42.3	47	51.7	5.5	80	1500	0.25	5.0	35.8	19	95
1N4757	45.9	51	56.1	5.0	95	1500	0.25	5.0	38.8	18	90
1N4758	50.4	56	61.6	4.5	110	2000	0.25	5.0	42.6	16	80
1N4759	55.8	62	68.2	4.0	125	2000	0.25	5.0	47.1	14	70
1N4760	61.2	68	74.8	3.7	150	2000	0.25	5.0	51.7	13	65
1N4761	67.5	75	82.5	3.3	175	2000	0.25	5.0	56.0	12	60
1N4762	73.8	82	90.2	3.0	200	3000	0.25	5.0	62.2	11	55
1N4763	81.9	91	100.1	2.8	250	3000	0.25	5.0	69.2	10	50
1N4764	90	100	110	2.5	350	3000	0.25	5.0	76.0	9.0	45
Z1110	99	110	121	2.3	450	4000	0.25	5.0	83.6	8.6	40
Z1120	108	120	132	2.0	550	4500	0.25	5.0	91.2	7.8	37
Z1130	117	130	143	1.9	700	5000	0.25	5.0	98.8	7.0	34
Z1150	135	150	165	1.7	1000	6000	0.25	5.0	114.0	6.4	30
Z1160	144	160	176	1.6	1100	6500	0.25	5.0	121.6	5.8	28
Z1180	162	180	198	1.4	1200	7000	0.25	5.0	136.8	5.2	25
Z1200	180	200	220	1.2	1900	9990	0.25	5.0	152.0	4.7	22

Notes :

(1) The type number listed have a standard tolerance on the nominal zener voltage of ± 10%.
Suffix "A" indicates ± 5% tolerance, suffix "C" indicates ± 2% tolerance.

(2) 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