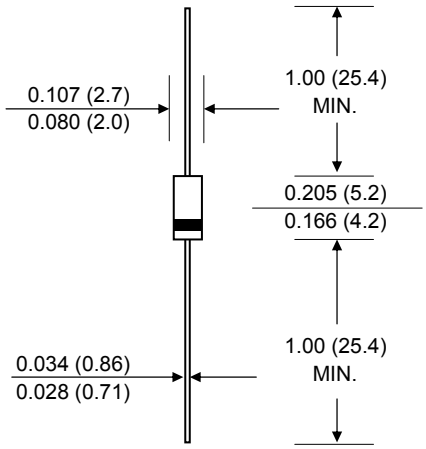
SYNSEMI SEMICONDUCTOR

1N4728A - 1N4764A
Z1110A - Z1300A

SILICON ZENER DIODES

V_Z : 3.3 - 300 Volts
P_D : 1 Watt

DO - 41



Dimensions in inches and (millimeters)

FEATURES :

* Complete voltage range 3.3 to 300 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

MAXIMUM RATINGS

Rating at 25 °C ambient temperature unless otherwise specified

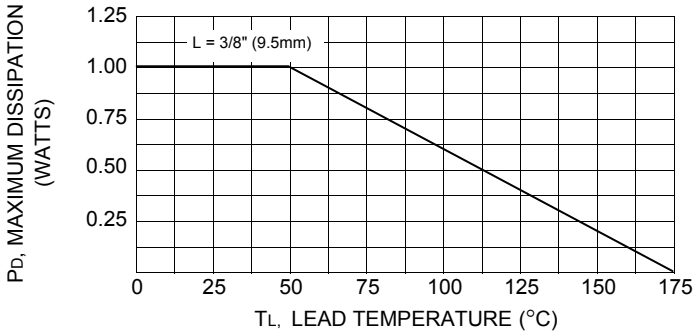
Rating	Symbol	Value	Unit
DC Power Dissipation at T_L = 50 °C (Note1)	P_D	1.0	Watt
Maximum Forward Voltage at I_F = 200 mA	V_F	1.2	Volts
Maximum Thermal Resistance Junction to Ambient Air (Note2)	$R_{\Theta JA}$	170	K / W
Junction Temperature Range	T_J	- 55 to + 175	°C
Storage Temperature Range	T_{STG}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

Note :

(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	Nominal Zener Voltage		Maximum Zener Impedance			Maximum Reverse Leakage Current		Maximum DC Zener Current	Maximum 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} (2)
	(V)	(mA)	(Ω)	(Ω)	(mA)	(μA)	(V)	(mA)	(mApk)
1N4728A	3.3	76.0	10	400	1.0	100	1.0	276	1380
1N4729A	3.6	69.0	10	400	1.0	100	1.0	252	1260
1N4730A	3.9	64.0	9.0	400	1.0	50	1.0	234	1190
1N4731A	4.3	58.0	9.0	400	1.0	10	1.0	217	1070
1N4732A	4.7	53.0	8.0	500	1.0	10	1.0	193	970
1N4733A	5.1	49.0	7.0	550	1.0	10	1.0	178	890
1N4734A	5.6	45.0	5.0	600	1.0	10	2.0	162	810
1N4735A	6.2	41.0	2.0	700	1.0	10	3.0	146	730
1N4736A	6.8	37.0	3.5	700	1.0	50	4.0	133	660
1N4737A	7.5	34.0	4.0	700	0.5	50	5.0	121	605
1N4738A	8.2	31.0	4.5	700	0.5	50	6.0	110	550
1N4739A	9.1	28.0	5.0	700	0.5	50	7.0	100	500
1N4740A	10	25.0	7.0	700	0.25	50	7.6	91	454
1N4741A	11	23.0	8.0	700	0.25	50	8.4	83	414
1N4742A	12	21.0	9.0	700	0.25	5.0	9.1	76	380
1N4743A	13	19.0	10	700	0.25	5.0	9.9	69	344
1N4744A	15	17.0	14	700	0.25	5.0	11.4	61	305
1N4745A	16	15.5	16	700	0.25	5.0	12.2	57	285
1N4746A	18	14.0	20	750	0.25	5.0	13.7	50	250
1N4747A	20	12.5	22	750	0.25	5.0	15.2	45	225
1N4748A	22	11.5	23	750	0.25	5.0	16.7	41	205
1N4749A	24	10.5	25	750	0.25	5.0	18.2	38	190
1N4750A	27	9.5	35	750	0.25	5.0	20.6	34	170
1N4751A	30	8.5	40	1000	0.25	5.0	22.8	30	150
1N4752A	33	7.5	45	1000	0.25	5.0	25.1	27	135
1N4753A	36	7.0	50	1000	0.25	5.0	27.4	25	125
1N4754A	39	6.5	60	1000	0.25	5.0	29.7	23	115
1N4755A	43	6.0	70	1500	0.25	5.0	32.7	22	110
1N4756A	47	5.5	80	1500	0.25	5.0	35.8	19	95
1N4757A	51	5.0	95	1500	0.25	5.0	38.8	18	90
1N4758A	56	4.5	110	2000	0.25	5.0	42.6	16	80
1N4759A	62	4.0	125	2000	0.25	5.0	47.1	14	70
1N4760A	68	3.7	150	2000	0.25	5.0	51.7	13	65
1N4761A	75	3.3	175	2000	0.25	5.0	56.0	12	60
1N4762A	82	3.0	200	3000	0.25	5.0	62.2	11	55
1N4763A	91	2.8	250	3000	0.25	5.0	69.2	10	50
1N4764A	100	2.5	350	3000	0.25	5.0	76.0	9.0	45
Z1110A	110	2.3	450	4000	0.25	5.0	83.6	8.6	40
Z1120A	120	2.0	550	4500	0.25	5.0	91.2	7.8	37
Z1130A	130	1.9	700	5000	0.25	5.0	98.8	7.0	34
Z1150A	150	1.7	1000	6000	0.25	5.0	114.0	6.4	30
Z1160A	160	1.6	1100	6500	0.25	5.0	121.6	5.8	28
Z1180A	180	1.4	1200	7000	0.25	5.0	136.8	5.2	25
Z1200A	200	1.2	1900	9990	0.25	5.0	152.0	4.7	22
Z1220A	220	1.0	1600	8000	0.25	5.0	167.2	4.0	20
Z1240A	240	0.93	1800	8500	0.25	5.0	182.4	3.8	19
Z1250A	250	0.90	2000	9000	0.25	5.0	190	3.6	18
Z1270A	270	0.82	2100	9000	0.25	5.0	205	3.3	16
Z1300A	300	0.75	2300	9500	0.25	5.0	228	3.0	15

Notes :

(1) The type number listed have a standard tolerance on the nominal zener voltage of ± 5%.

(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