1N5913A-1N5956A

Zener Diodes

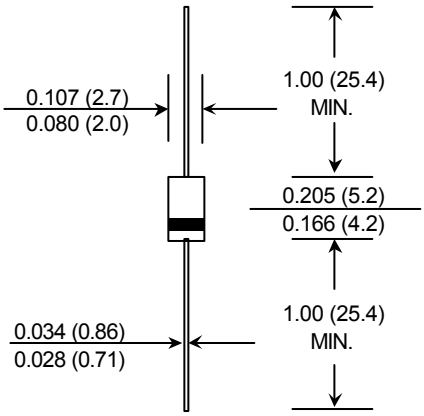
POWER DISSIPATION: 1.5W

DO-41



Features

- ◇ Silicon planar power zener diodes
- ◇ No suffix indicates a ±20% tolerance on nominal Vz. Suffix "A" denotes a ±10%, Suffix "B" denotes a ±5%, Suffix "C" denotes a ±2%, Suffix "D" denotes a ±1%.



Dimensions in inches and (millimeters)

Mechanical Data

- ◇ Case:DO-41
- ◇ Terminals: Solderable per MIL-STD-202, Method 208
- ◇ Polarity: Cathode Band
- ◇ Marking: Type Number
- ◇ Weight: 0.339 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.

Single phase,half wave,60 Hz,resistive or inductive load. For capacitive load,derate by 20%.

	SYMBOL	VALUE	UNIT
Zener current (see Table "Characteristics")			
Power dissipation at T_{amb}=25℃	P_{tot}	1.5[1)]	W
Junction temperature	T_J	150	℃
Storage temperature range	T_{STG}	-55---+150	℃

	SYMBOL	MIN	TYP	MAX	UNIT
Thermal resistance junction to lead	$R_{\theta JL}$	—	—	45[1)]	℃/W
Forward voltage at I_F=200mA	V_F	—	—	1.2	V

NOTES: (1) Valid provided that leads at a distance of 10 mm from case are kept at ambient temperature.

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Zener Diodes

ELECTRICAL CHARACTERISTICS @T_L=30°C

JEDEC TYPE NUMBER (note 1)	ZENER VOLTAGE V_Z	TEST CURRENT I_{ZT}	MAXIMUM DYNAMIC Z_{ZT}	KNEE CURRENT I_{ZK}	MAXIMUM KNEE IMPEDANCE Z_{ZK}	MAXIMUM REVERSE CURRENT I_R@V_R	REVERSE VOLTAGE V_R	MAX.DC CURRENT I_{ZM}
	Volts	m A	Ohms	m A	Ohms	μAdc	Volts	m A
1N5913A	3.3	113.6	10	1.0	500	100	1.0	454
1N5914A	3.6	104.2	9.0	1.0	500	75	1.0	416
1N5915A	3.9	96.1	7.5	1.0	500	25	1.0	384
1N5916A	4.3	87.2	6.0	1.0	500	5.0	1.0	348
1N5917A	4.7	79.8	5.0	1.0	500	5.0	1.5	319
1N5918A	5.1	73.5	4.0	1.0	350	5.0	2.0	294
1N5919A	5.6	66.9	2.0	1.0	250	5.0	3.0	267
1N5920A	6.2	60.5	2.0	1.0	200	5.0	4.0	241
1N5921A	6.8	55.1	2.5	1.0	200	5.0	5.2	220
1N5922A	7.5	50.0	3.0	0.5	400	5.0	6.0	200
1N5923A	8.2	45.7	3.5	0.5	400	5.0	6.5	182
1N5924A	9.1	41.2	4.0	0.5	500	5.0	7.0	164
1N5925A	10	37.5	4.5	0.25	500	5.0	8.0	150
1N5926A	11	34.1	5.5	0.25	550	1.0	8.4	136
1N5927A	12	31.2	6.5	0.25	550	1.0	9.1	125
1N5928A	13	28.8	7.0	0.25	550	1.0	9.9	115
1N5929A	15	25.0	9.0	0.25	600	1.0	11.4	110
1N5930A	16	23.4	10	0.25	600	1.0	12.2	93
1N5931A	18	20.8	12	0.25	650	1.0	13.7	83
1N5932A	20	18.7	14	0.25	650	1.0	15.2	75
1N5933A	22	17.0	17.5	0.25	650	1.0	16.7	68
1N5934A	24	15.6	19	0.25	700	1.0	18.2	62
1N5935A	27	13.9	23	0.25	700	1.0	20.6	55
1N5936A	30	12.5	28	0.25	750	1.0	22.8	50
1N5937A	33	11.4	33	0.25	800	1.0	25.1	45
1N5938A	36	10.4	38	0.25	850	1.0	27.4	41
1N5939A	39	9.6	45	0.25	900	1.0	29.7	38
1N5940A	43	8.7	53	0.25	950	1.0	32.7	34
1N5941A	47	8.0	67	0.25	1000	1.0	35.8	31
1N5942A	51	7.3	70	0.25	1100	1.0	38.8	29
1N5943A	56	6.7	86	0.25	1300	1.0	42.6	26
1N5944A	62	6.0	100	0.25	1500	1.0	47.1	24
1N5945A	68	5.5	120	0.25	1700	1.0	51.2	22
1N5946A	75	5.0	140	0.25	2000	1.0	56.0	20
1N5947A	82	4.6	160	0.25	2500	1.0	62.2	18
1N5948A	91	4.1	200	0.25	3000	1.0	69.2	16
1N5949A	100	3.7	250	0.25	3100	1.0	76.0	15
1N5950A	110	3.4	300	0.25	4000	1.0	83.6	13
1N5951A	120	3.1	380	0.25	4500	1.0	91.2	12
1N5952A	130	2.9	450	0.25	5000	1.0	98.8	11
1N5953A	150	2.5	600	0.25	6000	1.0	114.0	10
1N5954A	160	2.3	700	0.25	6500	1.0	121.6	9
1N5955A	180	2.1	900	0.25	7000	1.0	136.8	8
1N5956A	200	1.9	1200	0.25	8000	1.0	152.0	7

NOTES:1.No suffix indicates a ±20% tolerance on nominal V_Z.Suffix A denotes a ±10% tolerance,B denotes a ±5% tolerance,C denotes a 2% tolerance, and D denotes a ±1% tolerance. Also add a P suffix for plastic construction,e.g. 1N5956BP(G suffix designates glass body options described by separate data sheet).

2.Zener voltage (V_Z) is measured at T_L=30°C and 90 seconds after application of dc current.

3.The zener impedance is derived from the 60 H_Z ac voltage,which results when an ac current having an rms value equal to 10% of the dc zener current (I_{ZT} or I_{ZK}) is superimposed on I_{ZT} or I_{ZK}.See MicroNote 202 for zener impedance variation with different operating currents.

Ratings AND Charactieristic Curves

FIG.1 -- POWER DERATING CURVE

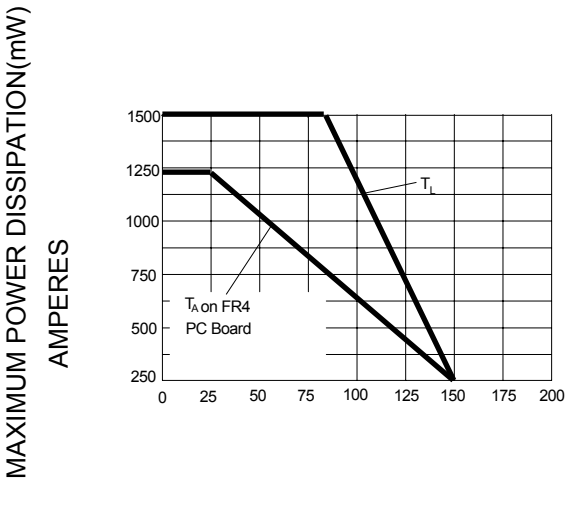


FIG.2 – TRANSIENT SURGE CAPABILITY

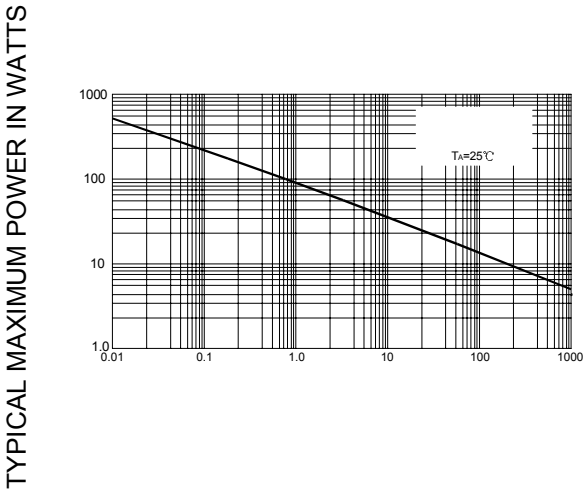


FIGURE 3 - CAPACITANCE vs. V_Z CURVE

