



american
power devices, inc.

1N5913-1N5949

Standard tolerances of 5%
10%, 5%, 2% & 1% are available

1.5 watt silicon zener diodes

FEATURES

- Zener voltage 3.3 to 100 V
- Withstands large surge stress
- APD can select any voltage in tolerances 1%, 2%, 5% and 10% at your application's test current.

MAXIMUM RATINGS

- Junction and storage -55°C to +200°C
- DC Power Dissipation: 1.5 Watt
- 12 mW/°C above 75°C
- Forward Voltage @ 200 mA: 1.2 Volts

ELECTRICAL CHARACTERISTICS @ T_L = 30°C

Motorola Type Number (Note 1)	Nominal Zener Voltage V _Z @ I _{ZT} Volts (Note 2)	Test Current I _{ZT} mA	Max. Zener Impedance			Max. Reverse Leakage Current		Maximum DC Zener Current I _{ZM} mAdc
			Z _{ZT} @ I _{ZT} Ohms	Z _{ZK} Ohms	I _{ZK} mA	I _R @ V _R μA	V _R Volts	
1N5913A	3.3	113.6	10	500	1.0	100	1.0	454
1N5914A	3.6	104.2	9.0	500	1.0	75	1.0	416
1N5915A	3.9	96.1	7.5	500	1.0	25	1.0	354
1N5916A	4.3	87.2	6.0	500	1.0	5.0	1.0	348
1N5917A	4.7	79.8	5.0	500	1.0	5.0	1.5	319
1N5918A	5.1	73.5	4.0	350	1.0	5.0	2.0	294
1N5919A	5.6	66.9	2.0	250	1.0	5.0	3.0	267
1N5920A	6.2	60.5	2.0	200	1.0	5.0	4.0	241
1N5921A	6.8	55.1	2.5	200	1.0	5.0	5.2	220
1N5922A	7.5	50.0	3.0	400	0.5	5.0	6.8	200
1N5923A	8.2	45.7	3.5	400	0.5	5.0	6.5	182
1N5924A	9.1	41.2	4.0	500	0.5	5.0	7.0	164
1N5925A	10	37.5	4.5	500	0.25	5.0	8.0	150
1N5926A	11	34.1	5.5	550	0.25	1.0	8.4	136
1N5927A	12	31.2	6.5	550	0.25	1.0	9.1	125
1N5928A	13	28.8	7.0	550	0.25	1.0	9.9	115
1N5929A	15	25.0	9.0	600	0.25	1.0	11.4	100
1N5930A	16	23.4	10	600	0.25	1.0	12.2	93
1N5931A	18	20.8	12	650	0.25	1.0	13.7	83
1N5932A	20	18.7	14	650	0.25	1.0	15.2	75
1N5933A	22	17.0	17.5	650	0.25	1.0	16.7	68
1N5934A	24	15.6	19	700	0.25	1.8	18.2	62
1N5935A	27	13.9	23	700	0.25	1.0	20.6	55
1N5936A	30	12.5	26	750	0.25	1.0	22.8	50
1N5937A	33	11.4	33	800	0.25	1.0	25.1	45
1N5938A	36	10.4	38	850	0.25	1.0	27.4	41
1N5939A	39	9.6	45	900	0.25	1.0	29.7	38
1N5940A	43	8.7	53	950	0.25	1.0	32.7	34
1N5941A	47	8.0	67	1000	0.25	1.0	35.6	31
1N5942A	51	7.3	70	1100	0.25	1.0	38.8	29
1N5943A	56	6.7	86	1300	0.25	1.0	42.6	26
1N5944A	62	6.0	100	1500	0.25	1.0	47.1	24
1N5945A	68	5.5	120	1700	0.25	1.0	51.7	22
1N5946A	75	5.0	140	2000	0.25	1.0	56.0	20
1N5947A	82	4.6	160	2500	0.25	1.0	62.2	18
1N5948A	91	4.1	200	3000	0.25	1.0	69.2	16
1N5949A	100	3.7	250	3100	0.25	1.0	76.0	15

MECHANICAL CHARACTERISTICS

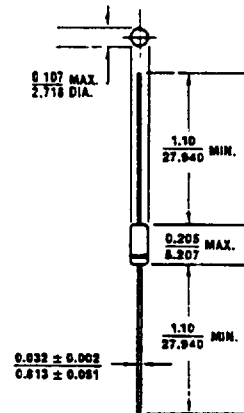


FIGURE 1 all dimensions in INCH

mm

CASE: Hermetically sealed, axial leaded glass package (DO-41)
FINISH: Corrosion resistant.
Leads are tin plated
THERMAL RESISTANCE: 60°C/W junction to lead at 0.375-inches from body
POLARITY: Cathode Band
WEIGHT: 0.4 grams (typical)

Note 1 No suffix indicates a ±20% tolerance on nominal V_Z. Suffix A denotes a ±10% tolerance. Suffix B denotes a ±5% tolerance and suffix C denotes a ±1% tolerance.

Note 2 Zener voltage, (V_Z) is measured at T_L = 30°C. Voltage measurement to be performed 90 seconds after application of DC current.

Note 3 The zener impedance is derived from the 60 Hz 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}.

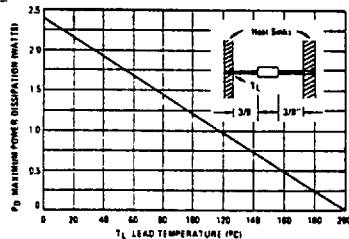


Figure 2 POWER DERATING



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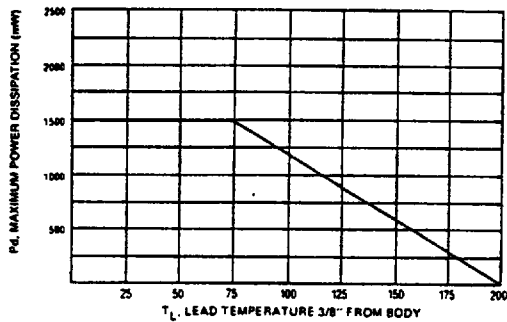


Figure 2 POWER DERATING CURVE

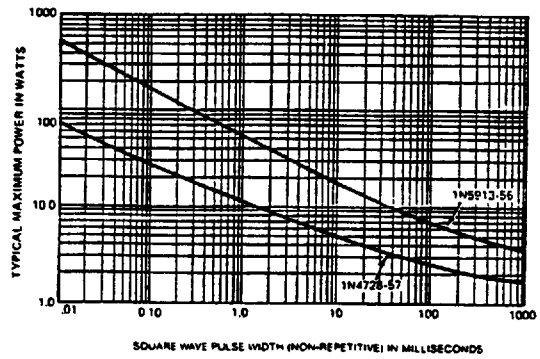


Figure 3 TRANSIENT SURGE CAPABILITY OF DO-41 DIODE