1N5925B thru 1N5956B

Zener Diodes

Vz Range: 10V to 200V Power Dissipation: 3W

Features

- Power dissipation: Max. 3.0W
- For use in stabilizing and clipping circuits with high power rating
- Low leakage current
- Moisture sensitivity: Level 1, per J-STD-020
- Solder dip 260°C, 10s

DO-204AC (DO-15)

Absolute Maximum Ratings (T_A=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Max. Steady State Power Dissipation @ T_L=75°C, Lead Length=3/8″	P_D	3.0	W
Max. Steady State Power Dissipation-Derate above 75°C		24	mW/°C
Typical Thermal Resistance Junction to Ambient[4]	$R_{\theta JA}$	72	°C/W
Typical Thermal Resistance Junction to Case[4]	$R_{\theta JC}$	13	
Typical Thermal Resistance Junction to Lead[4]	$R_{\theta JL}$	40	
Operating and Storage Temperature Range	T_J/T_{STG}	-55 to +150	°C

GOOD-ARK SEMICONDUCTOR

1N5925B thru 1N5956B

Zener Diodes

Vz Range: 10V to 200V Power Dissipation: 3W

Electrical Characteristics (T_A=25°C unless otherwise specified)

MPN	Zener Voltage Range[1]				Zener Impedance[2]			Reverse Leakage Current		Regulator Current @ T_A=50°C[3]
	V_{ZT}			at I_{ZT}	Z_T	Z	at I_{ZT}	I_R	at V_R	I
	Min. (V)	Nom. (V)	Max. (V)	(mA)	Max. (Ω)	(Ω)	(mA)	Max. (uA)	(V)	Max. (mA)
1N5925B	9.5	10	10.5	37.5	4.5	500	0.25	2.5	8	300
1N5926B	10.45	11	11.55	34.1	5.5	550	0.25	0.5	8.4	272
1N5927B	11.4	12	12.6	31.2	6.5	550	0.25	0.5	9.1	250
1N5928B	12.35	13	13.65	28.8	7	550	0.25	0.5	9.9	230
1N5929B	14.25	15	15.75	25	9	600	0.25	0.5	11.4	200
1N5930B	15.2	16	16.8	23.4	10	600	0.25	0.5	12.2	186
1N5931B	17.1	18	18.9	20.8	12	650	0.25	0.5	13.7	166
1N5932B	19	20	21	18.7	14	650	0.25	0.5	15.2	150
1N5933B	20.9	22	23.1	17	17.5	650	0.25	0.5	16.7	156
1N5934B	22.8	24	25.2	15.6	19	700	0.25	0.5	18.2	124
1N5935B	25.65	27	28.35	13.9	23	700	0.25	0.5	20.6	110
1N5936B	28.5	30	31.5	12.5	26	750	0.25	0.5	22.8	100
1N5937B	31.35	33	34.65	11.4	33	800	0.25	0.5	25.1	90
1N5938B	34.2	36	37.8	10.4	38	850	0.25	0.5	27.4	82
1N5939B	37.05	39	40.95	9.6	45	900	0.25	0.5	29.7	76
1N5940B	40.85	43	45.15	8.7	53	950	0.25	0.5	32.7	68
1N5941B	44.65	47	49.35	8	67	1000	0.25	0.5	35.8	62
1N5942B	48.45	51	53.55	7.3	70	1100	0.25	0.5	38.8	58
1N5943B	53.2	56	58.8	6.7	86	1300	0.25	0.5	42.6	52
1N5944B	58.9	62	65.1	6	100	1500	0.25	0.5	47.1	48
1N5945B	64.6	68	71.4	5.5	120	1700	0.25	0.5	51.7	44
1N5946B	71.25	75	78.75	5	140	2000	0.25	1	56	40
1N5947B	77.9	82	86.1	4.6	160	2500	0.25	1	62.2	36
1N5948B	86.45	91	95.55	4.1	200	3000	0.25	1	69.2	32
1N5949B	95	100	105	3.7	250	3100	0.25	1	76	30
1N5950B	104.5	110	115.5	3.4	300	4000	0.25	1	83.6	26
1N5951B	114	120	126	3.1	380	4500	0.25	1	91.2	24
1N5952B	123.5	130	136.5	2.9	450	5000	0.25	1	98.8	22
1N5953B	142.5	150	157.5	2.5	600	6000	0.25	1	114	20
1N5954B	152	160	168	2.3	700	6500	0.25	1	121.6	18
1N5955B	171	180	189	2.1	900	7000	0.25	1	136.8	16
1N5956B	190	200	210	1.9	1200	8000	0.25	1	152	14

Notes:

1. Measured under thermal equilibrium and DC test conditions, voltage tolerance is ±5% with suffix B
2. The zener impedance is derived from the 1KHZ AC voltage which results when an AC current having an RMS value equal to 10% of the Zener current (I_{ZT} or I_{ZK}) is superimposed on I_{ZT} or I_{ZK}. Zener impedance is measure at two points to insure a sharp knee on the breakdown curve and to eliminate unstable units
3. Valid provided that electrodes at a distance of 10mm from case are kept at ambient temperature
4. Thermal resistance at .375 (9.5mm) lead length, size of cooling copper sheet: length x width x thickness=10 x 10 mm x 2oz

Typical Characteristics Curves

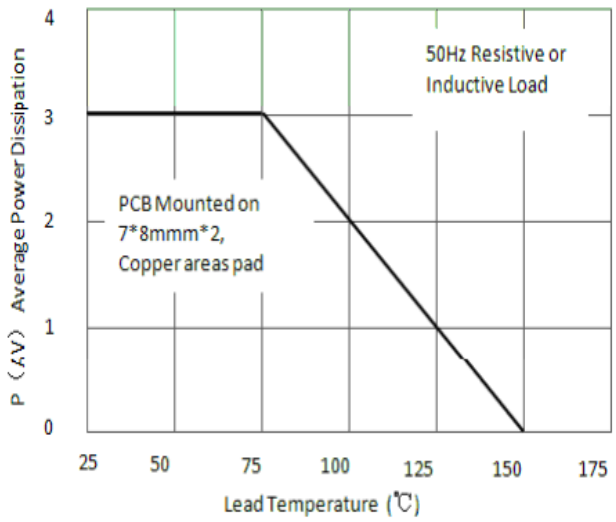


Fig.1 Maximum Continuous Power Dissipation

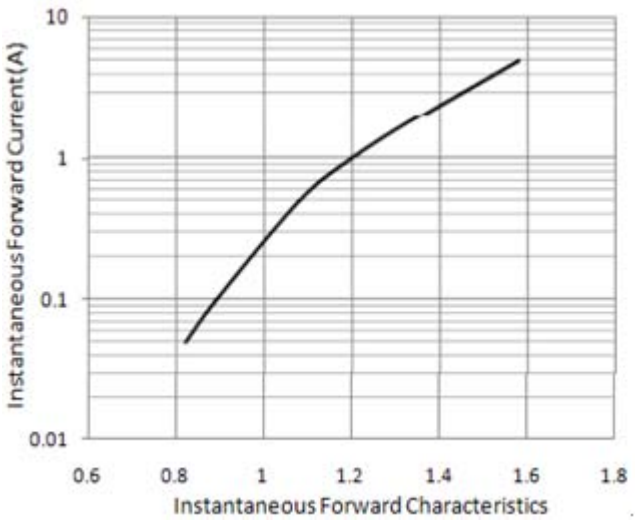


Fig. 2 Typical Instantaneous Forward Characteristics

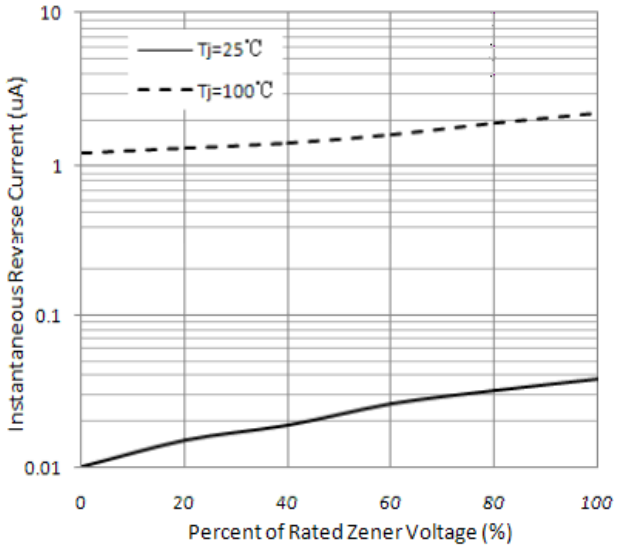


Fig. 3 Typical Reverse Characteristics

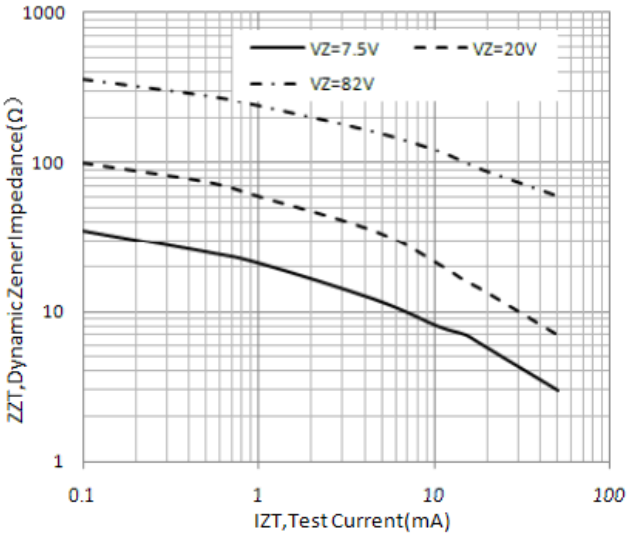
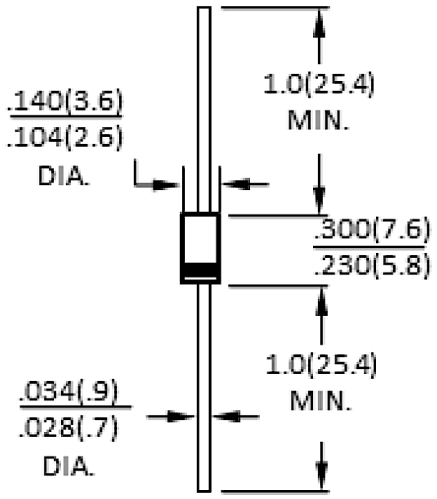


Fig. 4 Typical Zener Impedance

Package Outline Dimensions DO-204AC (DO-15)



Dimensions in inches and (millimeters)