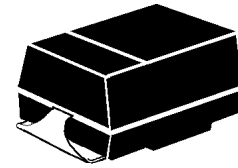


HSMBJ5913B thru HSMBJ5956B

SILICON 3.0 W ZENER DIODE



FEATURES:

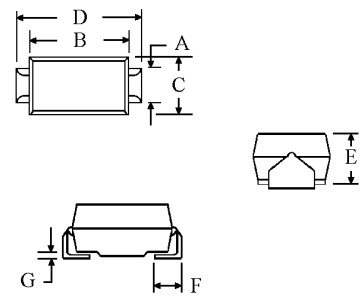
- Surface mount equivalent to 1N5913B thru 1N5956B
- Popular HSMBJ Package outline-Small and Rugged
- Zener voltage 3.3V to 200V
- Constructed with an Oxide Passivated All Diffused Die

MAXIMUM RATINGS:

- Junction and Storage Temperature: -55°C to +150°C
- DC Power Dissipation 3 W at Lead Temp. $T_L \leq 75^\circ\text{C}$
- Derate above +75°C: 40 mW/°C
- Forward voltage @ 200mA: 1.2Volts and $T_L = 30^\circ\text{C}$

Electrical Characteristics @ $T_L = 30^\circ\text{C}$

PART NUMBER	ZENER VOLTAGE V_Z (NOTE 1)	TEST CURRENT I_{ZT}	DYNAMIC IMPEDANCE Z_{ZT} (NOTE 2)	KNEE CURRENT I_{ZK}	KNEE IMPEDANCE Z_{ZK} (NOTE 2)	REVERSE CURRENT I_R	REVERSE VOLTAGE V_R	MAX DC CURRENT I_{ZM} (NOTE 3)
	Volts	mA	Ohms	mA	OHMS	μA dc	Volts	MA
HSMBJ5913B	3.3	113.6	10.0	1.0	500	100.0	1.0	749
HSMBJ5914B	3.6	104.2	9.0	1.0	500	75.0	1.0	686
HSMBJ5915B	3.9	96.1	7.5	1.0	500	25.0	1.0	633
HSMBJ5916B	4.3	87.2	6.0	1.0	500	5.0	1.0	574
HSMBJ5917B	4.7	79.8	5.0	1.0	500	5.0	1.5	526
HSMBJ5918B	5.1	73.5	4.0	1.0	350	5.0	2.0	485
HSMBJ5919B	5.6	66.9	2.0	1.0	250	5.0	3.0	440
HSMBJ5920B	6.2	60.5	2.0	1.0	200	5.0	4.0	397
HSMBJ5921B	6.8	55.1	2.5	1.0	200	5.0	5.2	363
HSMBJ5922B	7.5	50.0	3.0	0.5	400	5.0	6.0	330
HSMBJ5923B	8.2	45.7	3.5	0.5	400	5.0	6.5	300
HSMBJ5924B	9.1	41.2	4.0	0.5	500	5.0	7.0	270
HSMBJ5925B	10	37.5	4.5	0.25	500	5.0	8.0	247
HSMBJ5926B	11	34.1	5.5	0.25	550	1.0	8.4	206
HSMBJ5927B	12	31.2	6.5	0.25	550	1.0	9.1	206
HSMBJ5928B	13	28.9	7.0	0.25	550	1.0	9.9	189
HSMBJ5929B	15	25.0	9.0	0.25	600	1.0	11.4	165
HSMBJ5930B	16	23.4	10.0	0.25	600	1.0	12.2	153
HSMBJ5931B	18	20.8	12.0	0.25	650	1.0	13.7	137
HSMBJ5932B	20	18.7	14.0	0.25	650	1.0	15.2	124
HSMBJ5933B	22	17.0	17.5	0.25	650	1.0	16.7	112
HSMBJ5934B	24	15.6	19.0	0.25	700	1.0	18.2	102
HSMBJ5935B	27	13.9	23.0	0.25	700	1.0	20.6	91
HSMBJ5936B	30	12.5	28.0	0.25	750	1.0	22.8	83
HSMBJ5937B	33	11.4	33.0	0.25	800	1.0	25.1	74
HSMBJ5938B	36	10.4	38.0	0.25	850	1.0	27.4	68
HSMBJ5939B	39	9.6	45.0	0.25	900	1.0	29.7	63
HSMBJ5940B	43	8.7	53.0	0.25	950	1.0	32.7	56
HSMBJ5941B	47	8.0	67.0	0.25	1000	1.0	35.8	51
HSMBJ5942B	51	7.3	70.0	0.25	1100	1.0	38.8	48
HSMBJ5943B	56	6.7	86.0	0.25	1300	1.0	42.6	43
HSMBJ5944B	62	6.0	100	0.25	1500	1.0	47.1	40
HSMBJ5945B	68	5.5	120	0.25	1700	1.0	51.2	36
HSMBJ5946B	75	5.0	140	0.25	2000	1.0	56.0	33
HSMBJ5947B	82	4.6	160	0.25	2500	1.0	62.2	30
HSMBJ5948B	91	4.1	200	0.25	3000	1.0	69.2	26
HSMBJ5949B	100	3.7	250	0.25	3100	1.0	76.0	25
HSMBJ5950B	110	3.4	300	0.25	4000	1.0	83.6	22
HSMBJ5951B	120	3.1	280	0.25	4500	1.0	91.2	20
HSMBJ5952B	130	2.9	450	0.25	5000	1.0	98.8	18
HSMBJ5953B	150	2.5	600	0.25	6000	1.0	114.0	17
HSMBJ5954B	180	2.3	700	0.25	6500	1.0	121.6	15
HSMBJ5955B	180	2.1	900	0.25	7000	1.0	136.8	13
HSMBJ5956B	200	1.9	1200	0.25	8000	1.0	152.0	12



DIM	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	.073	.087	1.85	2.21
B	.160	.180	4.06	4.57
C	.130	.155	3.30	3.94
D	.205	.220	5.21	5.59
E	.075	.130	1.91	3.30
F	.030	.060	.76	1.52
G	.006	.016	.15	.41

Mechanical Characteristics

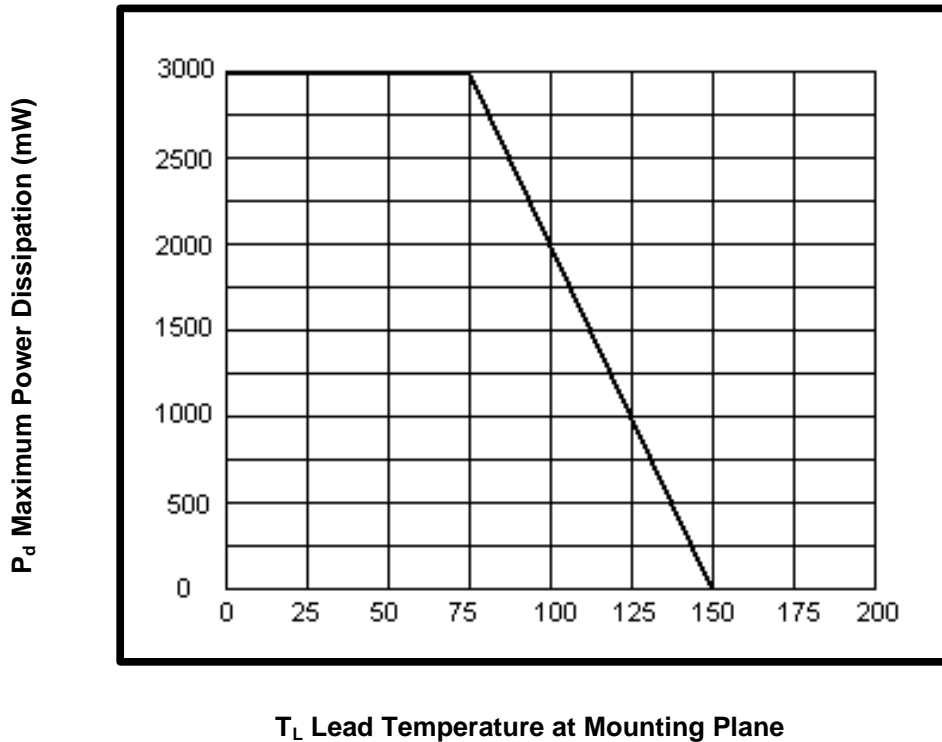
- Case: Similar to DO-214AA
- Terminals: Leads tin plated
- Thermal resistance: 25°C/W (maximum) junction to lead at mounting plane
- Polarity: Cathode indicated by a band
- Packaging: Standard 12 mm tape 2500 per 13 inch reel see (EIA Standard RS-481)

HSMBJ5913B thru HSMBJ5956B

NOTE 1: No suffix indicates a $\pm 20\%$ tolerance on nominal V_Z . Suffix A denotes a $\pm 10\%$ tolerance, B denotes a $\pm 5\%$ tolerance, C denotes $\pm 2\%$ tolerance, and D denotes a $\pm 1\%$ tolerance. V_Z is measured with diode T_L at 30°C and thermal equilibrium.

NOTE 2: Zener impedance is derived from the 1 kHz ac voltage which results when an ac current having an rms value equal to 10% of dc zener current (I_{ZT} or I_{ZK}) superimposed on I_{ZT} or I_{ZK} .

NOTE 3: Based upon 3 W maximum power dissipation. Allowance has been made for the higher voltage associated with higher currents and temperature. For determination of voltage change with current deviations from I_{ZT} see Micro Note 202.



T_L Lead Temperature at Mounting Plane