

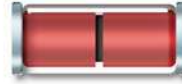


# Silicon Zener Diode Series

## 1N957BUR-1 thru 1N986BUR-1

### Features

- Available in JAN, JANTX and JANTXV per MIL-PRF-19500/117
- Standard voltage tolerences are plus/minus 5% with B suffix, 10% with A suffix identification.
- Tight tolerences available in plus or minus 2% or 1% with C or D suffix respectively.
- 500 mW power handling
- Hermetically sealed axial-leaded glass DO-213AA package.



### Maximum Ratings

Operating & Storage Temperature: -65°C to +175°C

Thermal Resistance: 250°C/W

Steady-State Power: 0.5 watts

Foward Voltage @200 MA: 1.1 V for 1N957BUR-1 – 1N986BUR-1

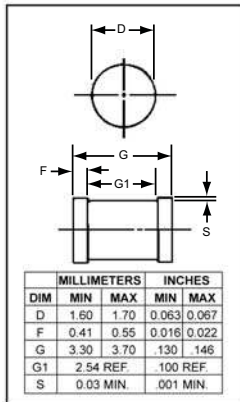
### Electrical Specifications @ +25 °C (Unless Otherwise Specified)

JEDEC TYPE Number (Note 1)	Normal Zener Voltage	Zener Test Current	Maximum Zener Impedance			Maximum DC Zener Current	Maxmum Surge Current	Maximum Reverse Leakage		Maximum Temperature Coefficient
	V <sub>Z</sub> Volts	I <sub>ZT</sub> mA	Z <sub>ZT</sub> @ I <sub>ZT</sub> Ohms	Z <sub>ZK</sub> @ I <sub>ZK</sub> Ohms	I <sub>ZK</sub> mA	I <sub>ZM</sub> mA	I <sub>ZSM</sub> mA	I <sub>R</sub> @ V <sub>R</sub> µA	V <sub>R</sub> Volts	α <sub>VZ</sub> %/°C
1N957BUR-1	6.8	18.5	4.5	700	1.0	55	300	150	5.2	+0.05
1N958BUR-1	7.5	16.5	5.5	700	.5	50	275	75	5.7	+0.058
1N959BUR-1	8.2	15.0	6.5	700	.5	45	250	50	6.2	+0.065
1N960BUR-1	9.1	14.0	7.5	700	.5	41	225	25	6.9	+0.068
1N961BUR-1	10	12.5	8.5	700	.25	38	200	10	7.6	+0.075
1N962BUR-1	11	11.5	9.5	700	.25	32	175	5	8.4	+0.076
1N963BUR-1	12	10.5	11.5	700	.25	31	160	5	9.1	+0.077
1N964BUR-1	13	9.5	13	700	.25	28	150	5	9.9	+0.079
1N965BUR-1	15	8.5	16	700	.25	25	130	5	11.4	+0.082
1N966BUR-1	16	7.8	17	700	.25	24	120	5	12.2	+0.083
1N967BUR-1	18	7.0	21	750	.25	20	110	5	13.7	+0.085
1N968BUR-1	20	6.2	25	750	.25	18	100	5	15.2	+0.086
1N969BUR-1	22	5.6	29	750	.25	16	90	5	16.7	+0.087
1N970BUR-1	24	5.2	33	750	.25	15	80	5	18.2	+0.088
1N971BUR-1	27	4.6	41	750	.25	13	70	5	20.6	+0.090
1N972BUR-1	30	4.2	49	1000	.25	12	65	5	22.8	+0.091
1N973BUR-1	33	3.8	58	1000	.25	11	60	5	25.1	+0.092
1N974BUR-1	36	3.4	70	1000	.25	10	55	5	27.4	+0.093
1N975BUR-1	39	3.2	80	1000	.25	9.5	46	5	29.7	+0.094
1N976BUR-1	43	3.0	93	1000	.25	8.8	44	5	32.7	+0.095
1N977BUR-1	47	2.7	105	1500	.25	7.9	40	5	35.8	+0.095
1N978BUR-1	51	2.5	125	1500	.25	7.4	37	5	38.8	+0.096
1N979BUR-1	56	2.2	150	2000	.25	6.8	35	5	42.6	+0.096
1N980BUR-1	62	2.0	185	2000	.25	6.0	30	5	47.1	+0.097
1N981BUR-1	68	1.8	230	2000	.25	5.5	28	5	51.7	+0.097
1N982BUR-1	75	1.7	270	2000	.25	5.0	26	5	56.0	+0.098
1N983BUR-1	82	1.5	330	3000	.25	4.6	23	5	62.2	+0.098
1N984BUR-1	91	1.4	400	3000	.25	4.1	21	5	69.2	+0.099
1N985BUR-1	100	1.3	500	3000	.25	3.7	18	5	76.0	+0.11
1N986BUR-1	110	1.1	750	4000	.25	3.3	16	5	83.6	+0.11

NOTE 1: The JEDEC type numbers shown (B Suffix) have a ±5% tolerance on nominal Zener Voltage. The suffix A is used to identify ±10% tolerance; suffix C is used to identify ±2%; and suffix D is used identify ±1%; no suffix indicates ±20%.



Outline Drawing



LEADED DESIGN DATA

CASE: DO-213AA, Hermetically sealed glass case. (MELF, SOD-80, LL34)

LEAD FINISH: Tin / Lead

THERMAL RESISTANCE: ( $R_{\theta JEC}$ ): 100 °C/W maximum at L = 0 inch

THERMAL IMPEDANCE: ( $Z_{\theta JX}$ ): 25 °C/W maximum

POLARITY: Diode to be operated with the banded (cathode) end positive.

MOUNTING POSITION: Any.

MOUNTING SURFACE SELECTION: The Axial Coefficient of Expansion (COE) Of this Device is Approximately +6 PPM/°C. The COE of the Mounting Surface System Should Be Selected To Provide A Suitable Match With This Device.

Graphs

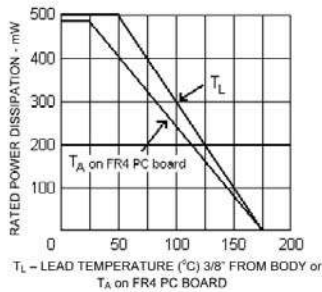


FIGURE 1  
POWER DERATING CURVE

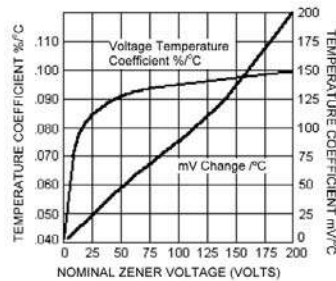


FIGURE 2  
ZENER VOLTAGE TEMPERATURE COEFFICIENT vs. ZENER VOLTAGE

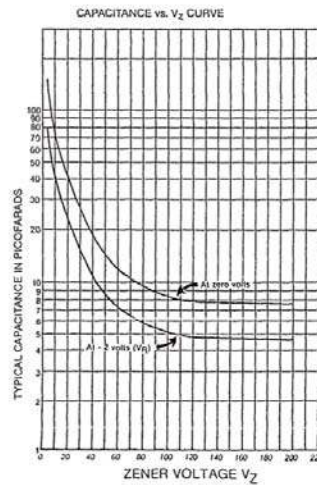


FIGURE 3  
CAPACITANCE vs. ZENER VOLTAGE (TYPICAL)

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