CD957B thru CD986B

Zener Diode Chip Series

Rev. V5

Features

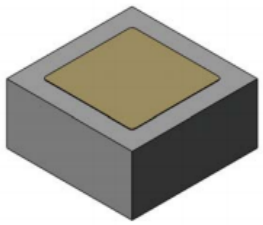
- 0.5 W Capability with Proper Heat Sinking
- Electrically Equivalent to 1N957B - 1N986B
- All Junction Protected with Silicon Dioxide

Description

These 0.5 W zener diodes are electrically equivalent to the 1N957B - 1N986B series diodes. They are compatible with all wire bonding and die attach techniques with the exception of solder reflow.

These diodes are available in JANHC and JANKC per MIL-PRF-19500/117.

Die



Electrical Specifications: T_A = +25°C (unless otherwise specified)

Part #	Nominal Zener Voltage	Zener Test Current	Maximum Zener Impedance[2]			Maximum Reverse Leakage Current		Maximum Zener Current
	V_Z @ I_{ZT}[1]	I_{ZT}	Z_{ZT} @ I_{ZT}	Z_{ZK} @ I_{ZK}		I_R @ V_R		I_{ZM}
	V	mA	Ω	Ω	mA	µA	V	mA
CD957B	6.8	18.5	4.5	700	1.0	5.0	5.2	55
CD958B	7.5	16.5	5.5	700	0.5	5.0	5.7	50
CD959B	8.2	15.0	3.5	700	0.5	5.0	6.2	45
CD960B	9.1	14.0	7.5	700	0.5	5.0	6.9	41
CD961B	10	12.5	8.5	700	0.25	2.0	7.6	38
CD962B	11	11.5	9.5	700	0.25	1.0	8.4	32
CD963B	12	10.5	11.5	700	0.25	1.0	9.1	31
CD964B	13	9.5	13	700	0.25	0.5	9.9	28
CD965B	15	8.5	16	700	0.25	0.5	11	25
CD966B	16	7.8	17	700	0.25	0.5	12	24
CD967B	18	7.0	21	750	0.25	0.5	14	20
CD968B	20	6.2	25	750	0.25	0.5	15	18
CD969B	22	5.6	29	750	0.25	0.5	17	16
CD970B	24	5.2	33	750	0.25	0.5	18	15
CD971B	27	4.6	41	750	0.25	0.5	21	13
CD972B	30	4.2	49	1000	0.25	0.5	23	12
CD973B	33	3.8	58	1000	0.25	0.5	25	11
CD974B	36	3.4	70	1000	0.25	0.5	27	10
CD975B	39	3.2	90	1000	0.25	0.5	30	9.5
CD976B	43	3.0	93	1500	0.25	0.5	33	8.8
CD977B	47	2.7	105	1500	0.25	0.5	36	7.9
CD978B	51	2.5	125	1500	0.25	0.5	39	7.4
CD979B	56	2.2	150	2000	0.25	0.5	43	6.8
CD980B	62	2.0	185	2000	0.25	0.5	47	6.0
CD981B	68	1.8	230	2000	0.25	0.5	52	5.5
CD982B	75	1.7	270	2000	0.25	0.5	56	5.0
CD983B	82	1.5	330	3000	0.25	0.5	62	4.6
CD984B	91	1.4	400	3000	0.25	0.5	69	4.1
CD985B	100	1.3	500	3000	0.25	0.5	76	3.7
CD986B	110	1.1	750	4000	0.25	0.5	84	3.3

1. Zener voltage range equals nominal voltage ±5% for “B” suffix. “A suffix denotes ±10%, No suffix denotes ±20%, “C” suffix = ±2% and “D” suffix = ±1%. Zener voltage is read using a pulse measurement, 10 milliseconds maximum.
2. Zener impedance is derived by superimposing on I_{ZT} at 60 HZ RMS AC current equal to 10% of I_{ZT}.

CD957B thru CD986B

Zener Diode Chip Series

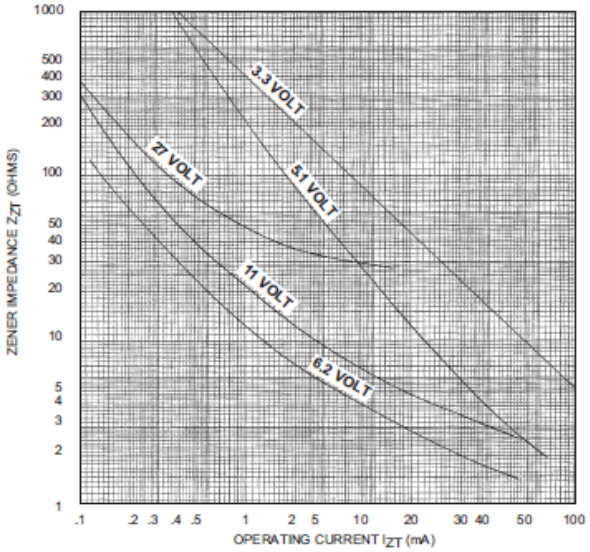
Rev. V5

Absolute Maximum Ratings[5,6]

Parameter	Absolute Maximum
Forward Voltage	1.5 V @ 200 mA
Operating Temperature	-65°C to +175°C
Storage Temperature	-65°C to +175°C

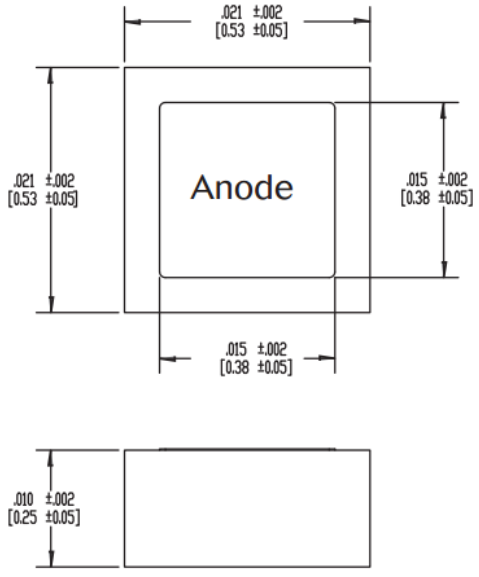
5. Exceeding any one or combination of these limits may cause permanent damage to this device.
6. VPT Components does not recommend sustained operation near these survivability limits.

Zener Impedance vs. Operating Current



ZENER IMPEDANCE VS. OPERATING CURRENT

Die



Metallization:	Top: (anode) AL Back: (cathode) Au
AL Thickness:	25,000 Å Minimum
Gold Thickness:	4,000 Å Minimum
Chip Thickness:	10 mils
Circuit Layout Data:	For Zener operation, cathode must be operated positive with respect to anode.