

- 1N5518B THRU 1N5546B AVAILABLE IN JANHC AND JANKC PER MIL-PRF-19500/437
- ZENER DIODE CHIPS
- ALL JUNCTIONS COMPLETELY PROTECTED WITH SILICON DIOXIDE
- ELECTRICALLY EQUIVALENT TO 1N5518B THRU 1N5546B
- 0.5 WATT CAPABILITY WITH PROPER HEAT SINKING
- COMPATIBLE WITH ALL WIRE BONDING AND DIE ATTACH TECHNIQUES, WITH THE EXCEPTION OF SOLDER REFLOW

CD5518B
thru
CD5546B

MAXIMUM RATINGS

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

Storage Temperature: -65°C to +175°C

Forward Voltage @ 200 mA: 1.5 Volts Maximum

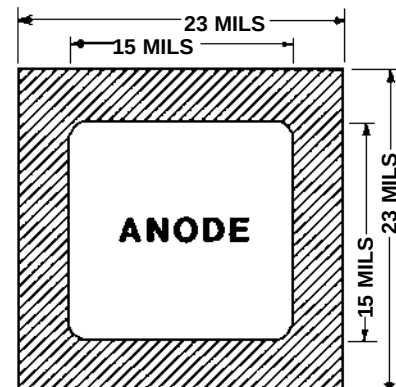
ELECTRICAL CHARACTERISTICS @ 25°C, unless otherwise specified

JEDEC TYPE NUMBER	NOMINAL ZENER VOLTAGE $V_Z @ I_{ZT}$ VOLTS (Note 1)	TEST CURRENT I_{ZT} mA	MAX. ZENER IMPEDANCE $Z_{ZT} @ I_{ZT}$ OHMS (Note 2)	MAX. REVERSE LEAKAGE CURRENT		REGULATION FACTOR ΔV_Z VOLTS (Note 3)	LOW V_Z CURRENT I_{ZL} mA
				I_R μ A	V_R VOLTS		
CD5518B	3.3	20	26	5.0	1.0	0.90	2.0
CD5519B	3.6	20	24	3.0	1.0	0.90	2.0
CD5520B	3.9	20	22	1.0	1.0	0.90	2.0
CD5521B	4.3	20	18	3.0	1.5	0.75	2.0
CD5522B	4.7	10	22	2.0	2.0	0.60	1.0
CD5523B	5.1	5.0	26	2.0	2.5	0.65	0.25
CD5524B	5.6	3.0	30	2.0	3.5	0.30	0.25
CD5525B	6.2	1.0	30	1.0	5.0	0.20	0.01
CD5526B	6.8	1.0	30	1.0	6.2	0.10	0.01
CD5527B	7.5	1.0	35	0.5	6.8	0.05	0.01
CD5528B	8.2	1.0	40	0.5	7.5	0.05	0.01
CD5529B	9.1	1.0	45	0.1	8.2	0.05	0.01
CD5530B	10.0	1.0	60	0.05	9.1	0.10	0.01
CD5531B	11.0	1.0	80	0.05	9.9	0.20	0.01
CD5532B	12.0	1.0	90	0.05	10.8	0.20	0.01
CD5533B	13.0	1.0	90	0.01	11.7	0.20	0.01
CD5534B	14.0	1.0	100	0.01	12.6	0.20	0.01
CD5535B	15.0	1.0	100	0.01	13.5	0.20	0.01
CD5536B	16.0	1.0	100	0.01	14.4	0.20	0.01
CD5537B	17.0	1.0	100	0.01	15.3	0.20	0.10
CD5538B	18.0	1.0	100	0.01	16.2	0.20	0.01
CD5539B	19.0	1.0	100	0.01	17.1	0.20	0.01
CD5540B	20.0	1.0	100	0.01	18.0	0.20	0.01
CD5541B	22.0	1.0	100	0.01	19.8	0.25	0.01
CD5542B	24.0	1.0	100	0.01	21.6	0.30	0.01
CD5543B	25.0	1.0	100	0.01	22.4	0.35	0.01
CD5544B	28.0	1.0	100	0.01	25.2	0.40	0.01
CD5545B	30.0	1.0	100	0.01	27.0	0.45	0.01
CD5546B	33.0	1.0	100	0.01	29.7	0.50	0.01

NOTE 1 Suffix "B" voltage range equals nominal Zener voltage $\pm 5\%$. Suffix "A" equals $\pm 10\%$. No Suffix equals $\pm 20\%$. Zener voltage is read using a pulse measurement, 10 milliseconds maximum. "C" suffix = $\pm 2\%$ and "D" suffix = $\pm 1\%$.

NOTE 2 Zener impedance is derived by superimposing on I_{ZT} A 60Hz rms a.c. current equal to 10% of I_{ZT} .

NOTE 3 ΔV_Z is the maximum difference between $V_Z @ I_{ZT}$ and $V_Z @ I_{ZL}$ measured with the device junction in thermal equilibrium at an ambient temperature of $+25^\circ \pm 3^\circ \text{C}$.



BACKSIDE IS CATHODE

DESIGN DATA

METALLIZATION:
Top: (Anode).....Al
Back: (Cathode).....Au

AL THICKNESS.....25,000 Å Min

GOLD THICKNESS.....4,000 Å Min

CHIP THICKNESS.....10 Mils

CIRCUIT LAYOUT DATA:
For Zener operation, cathode must be operated positive with respect to anode.

TOLERANCES: ALL Dimensions ± 2 mils, Except Anode Pad Where Tolerance is ± 0.1 mils.



COMPENSATED DEVICES INCORPORATED

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CD5518B thru CD5546B

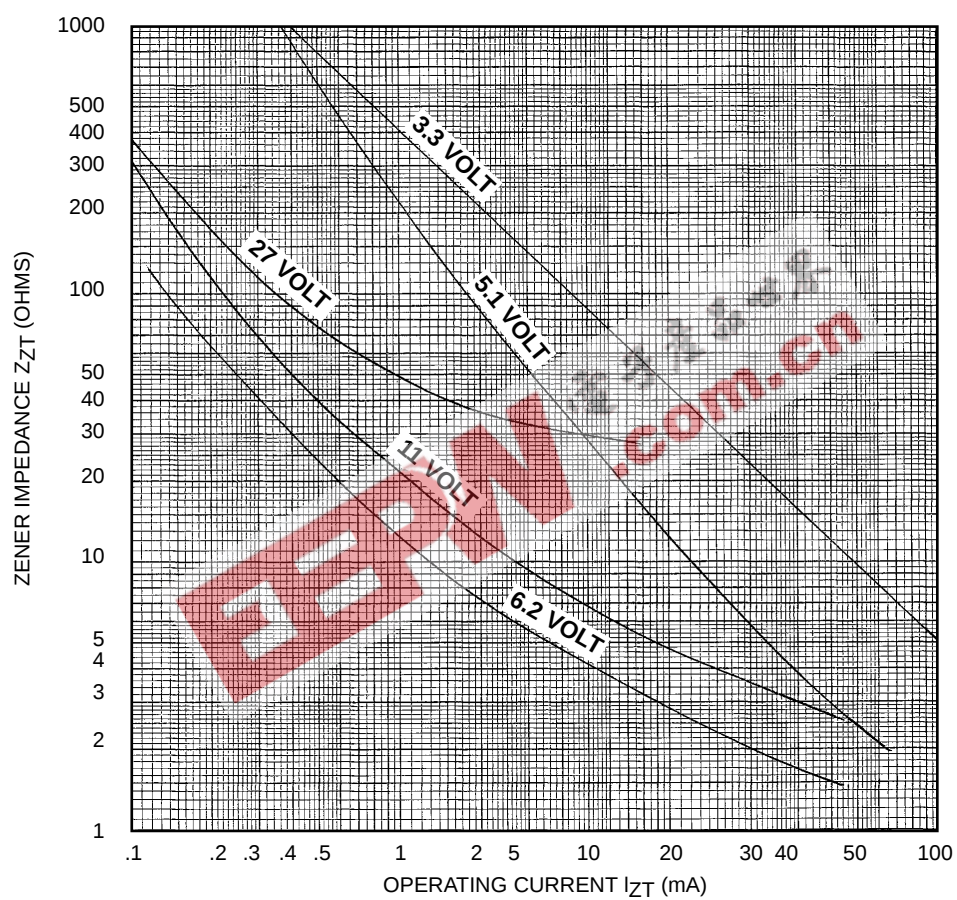


FIGURE 3

ZENER IMPEDANCE VS. OPERATING CURRENT