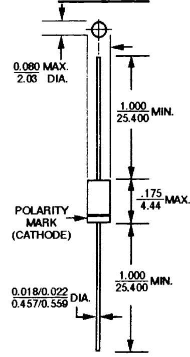
JGD

1N5518 THRU 1N5546

0.4W LOW VOLTAGE AVALANCHE DIODES

VOLTAGE RANGE
3.3 to 33 Volts

DO-35



All dimensions in $\frac{\text{Inches}}{\text{mm}}$

FEATURES

- Low zener noise specified
- Low zener impedance
- Low leakage current
- Hermetically sealed glass package

MECHANICAL CHARACTERISTICS

- CASE: Hermetically sealed glass case. DO-35.
- LEAD MATERIAL: Tinned copper clad steel.
- MARKING: Body painted, alphanumeric.
- POLARITY: banded end is cathode.
- THERMAL RESISTANCE: 200℃/W (Typical) junction to lead at 0.375 - inches from body. Metallurgically bonded DO-35's exhibit less than 100℃/Watt at zero distance from body.

MAXIMUM RATINGS

Operating temperature: -65℃ to +200℃; Storage temperature: -65℃ to +200℃

ELECTRICAL CHARACTERISTICS

(T_A = 25℃ unless otherwise noted. Based on dc measurements at thermal equilibrium V_F = 1.1 MAX @ I_F = 200 mA for all types)

JEDEC TYPE NO. (Note 1)	NOMINAL ZENER VOLTAGE V_Z @ I_{ZT} VOLTS (Note 2)	TEST CURRENT I_{ZT} mAdc	MAX. ZENER IMPEDANCE B-C-D SRFFIX Z_{ZT} @ I_{ZT} OHMS (Note 3)	MAX. REVERSE LEAKAGE CURRENT I_R µAdc (Note 4)	V_R - VOLTS NON & A SUFFIX	V_R - VOLTS B-C-D SUFFIX	B-C-D SUFFIX MAXIMUM DC ZENER CURRENT I_{ZM} mAdc (Note 5)	B-C-D SUFFIX MAX. NOISE DENSITY AT I_Z = 250µA ND (MICRO-VOLTS PER SQUARE ROOT CYCLE)	REGULATION FACTOR $\triangle V_Z$ VOLTS (Note 6)	LOW V_Z CURRENT I_{ZL} mAdc
1N5518	3.3	20	26	5.0	0.90	1.0	115	0.5	0.90	2.0
1N5519	3.6	20	24	3.0	0.90	1.0	105	0.5	0.90	2.0
1N5520	3.9	20	22	1.0	0.90	1.0	98	0.5	0.85	2.0
1N5521	4.3	20	18	3.0	1.0	1.5	88	0.5	0.75	2.0
1N5522	4.7	10	22	2.0	1.5	2.0	81	0.5	0.60	1.0
1N5523	5.1	5.0	26	2.0	2.0	2.5	75	0.5	0.65	0.25
1N5524	5.6	3.0	30	2.0	3.0	3.5	68	1.0	0.30	0.25
1N5525	6.2	1.0	30	1.0	4.5	5.0	61	1.0	0.20	0.01
1N5526	6.8	1.0	30	1.0	5.5	6.2	56	1.0	0.10	0.01
1N5527	7.5	1.0	35	0.5	6.0	6.8	51	2.0	0.05	0.01
1N5528	8.2	1.0	40	0.5	6.5	7.5	46	4.0	0.05	0.01
1N5529	9.1	1.0	45	0.1	7.0	8.2	42	4.0	0.05	0.01
1N5530	10.0	1.0	60	0.05	8.0	9.1	38	4.0	0.10	0.01
1N5531	11.0	1.0	80	0.05	9.0	9.9	35	5.0	0.20	0.01
1N5532	12.0	1.0	90	0.05	9.5	10.8	32	10	0.20	0.01
1N5533	13.0	1.0	90	0.01	10.5	11.7	29	15	0.20	0.01
1N5534	14.0	1.0	100	0.01	11.5	12.6	27	20	0.20	0.01
1N5535	15.0	1.0	100	0.01	12.5	13.5	25	20	0.20	0.01
1N5536	16.0	1.0	100	0.01	13.0	14.4	24	20	0.20	0.01
1N5537	17.0	1.0	100	0.01	14.0	15.3	22	20	0.20	0.01
1N5538	18.0	1.0	100	0.01	15.0	16.2	21	20	0.20	0.01
1N5539	19.0	1.0	100	0.01	16.0	17.1	20	20	0.20	0.01
1N5540	20.0	1.0	100	0.01	17.0	18.0	19	20	0.20	0.01
1N5541	22.0	1.0	100	0.01	18.0	19.8	17	20	0.25	0.01
1N5542	24.0	1.0	100	0.01	20.0	21.6	16	20	0.30	0.01
1N5543	25.0	1.0	100	0.01	21.0	22.4	15	20	0.35	0.01
1N5544	28.0	1.0	100	0.01	23.0	25.2	14	20	0.40	0.01
1N5545	30.0	1.0	100	0.01	24.0	27.0	13	20	0.45	0.01
1N5546	33.0	1.0	100	0.01	28.0	29.7	12	20	0.50	0.01

NOTE 1 - TOLERANCE AND VOLTAGE DESIGNATION
The JEDEC type numbers shown are ± 20% with guaranteed limits for only V_Z, I_R, and V_F. Units with A suffix are ± 10% with guaranteed limits for only V_Z, I_R, and V_F. Units with guaranteed limits for all six parameters are indicated by a B suffix for ± 5.0% units, C suffix for ± 2.0% and D suffix for ± 1.0%.

NOTE 2 - ZENER (V_Z) VOLTAGE MEASUREMENT
Nominal zener voltage is measured with the device junction in thermal equilibrium with ambient temperature of 25℃.

NOTE 3 - ZENER IMPEDANCE (Z_Z) DERIVATION
The zener impedance is derived from the 60 Hz ac voltage, which results when an ac current having an rms value equal to 10% of the dc zener current (I_{ZT} is superimposed on I_{ZT}.

NOTE 4 - REVERSE LEAKAGE CURRENT(I_R)
Reverse leakage currents are guaranteed and are measured at V_R as shown on the table.

NOTE 5 - MAXIMUM REGULATOR CURRENT(I_{ZM})
The maximum current shown is based on the maximum voltage of a 5.0% type unit, therefore, it applies only to the B suffix device. The actual I_{ZM} for any device may not exceed the value of 400 milliwatts divided by the actual V_Z of the device.

NOTE 6 - MAXIMUM REGULATION FACTOR($\triangle V_Z$)
$\triangle V_Z$ is the maximum difference between V_Z at I_{ZT} and V_Z at I_{ZL} measured with the device junction in thermal equilibrium.