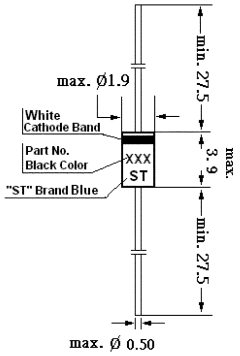
FUKUCOM COMPANY LTD.
福 靈 有 限 公 司
FLAT P, 3/F., EVEREST INDUSTRIAL CENTRE, 396 KWUN TONG ROAD,
KWUN TONG, KOWLOON, HONG KONG.
TEL: 852-2790 0314 FAX: 852-2790 0206

1N4678 THRU 1N4702, 1N4705, 1N4713

500 MILLIWATT DO-35 GLASS ZENER VOLTAGE REGULATOR DIODES
GENERAL DATA APPLICABLE TO ALL SERIES IN THIS GROUP

Features

- Complete Voltage Range-1.8 to 200 Volts.
- DO-204AH Package-Smaller than Conventional DO-204AA Package.
- Double Slug Type Construction.
- Metallurgically Bonded Construction.
- Low level oxide passivated zener diodes for applications requiring extremely low operating currents,low leakage, and sharp breakdown voltage.
- Zener Voltage Specified @ I_{ZT}=50μA.
- Maximum Delta V_Z Given from 10 to 100μA.



Glass case JEDEC DO-35
Dimensions in mm

Absolute Maximum Ratings (Motorola Devices)*

	Symbol	Value	Unit
DC Power Dissipation and @ $T_L \leq 75\ ^{O}C$ Lead Length=3/8” Derate above $T_L = 75\ ^{O}C$	P_D	 500 4	 mW mW/ ^{O}C
Operating and Storage Temperature Range	T_J, T_S	-65 to+200	^{O}C

*Some part number series have lower JEDEC registered ratings.

SEMTECH
Dated : 22/07/2005

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Characteristics (T_A = 25°C ,V_F = 1.5V Max at I_F = 100mA for all types)

TYPE (Note1)	Zener Voltage V_Z@I_{ZT}=50μA Volts			Maximum Reverse Current I_R μA (Note 3)	Test Voltage V_R Volts	Maximum Zener Current I_{ZM} mA (Note 2)	Maximum Voltage Change ΔV_Z Volts (Note 4)
	Nom(Note 1)	Min	Max				
1N4678	1.8	1.71	1.89	7.5	1	120	0.7
1N4679	2	1.9	2.1	5	1	110	0.7
1N4680	2.2	2.09	2.31	4	1	100	0.75
1N4681	2.4	2.28	2.52	2	1	95	0.8
1N4682	2.7	2.565	2.835	1	1	90	0.85
1N4683	3	2.85	3.15	0.8	1	85	0.9
1N4684	3.3	3.135	3.465	7.5	1.5	80	0.95
1N4685	3.6	3.42	3.78	7.5	2	75	0.95
1N4686	3.9	3.705	4.095	5	2	70	0.97
1N4687	4.3	4.085	4.515	4	2	65	0.99
1N4688	4.7	4.465	4.935	10	3	60	0.99
1N4689	5.1	4.845	5.355	10	3	55	0.97
1N4690	5.6	5.32	5.88	10	4	50	0.96
1N4691	6.2	5.89	6.51	10	5	45	0.95
1N4692	6.8	6.46	7.14	10	5.1	35	0.9
1N4693	7.5	7.125	7.875	10	5.7	31.8	0.75
1N4694	8.2	7.79	8.61	1	6.2	29	0.5
1N4695	8.7	8.265	9.135	1	6.6	27.4	0.1
1N4696	9.1	8.645	9.555	1	6.9	26.2	0.08
1N4697	10	9.5	10.5	1	7.6	24.8	0.1
1N4698	11	10.45	11.55	0.05	8.4	21.6	0.11
1N4699	12	11.4	12.6	0.05	9.1	20.4	0.12
1N4700	13	12.35	13.65	0.05	9.8	19	0.13
1N4701	14	13.3	14.7	0.05	10.6	17.5	0.14
1N4702	15	14.25	15.75	0.05	11.4	16.3	0.15
1N4705	18	17.1	18.9	0.05	13.6	13.2	0.18
1N4713	30	28.5	31.5	0.01	22.8	7.9	0.3

NOTE 1.TOLERANCE AND VOLTAGE DESIGNATION (V_Z)

The type numbers shown have a standard tolerance of ±5% on the nominal Zener voltage, C for ±2%.

NOTE 2. MAXIMUM ZENER CURRENT RATINGS(I_{ZM})

Maximum Zener current ratings are based on maximum Zener voltage of the individual units and JEDEC 250 mW rating.

NOTE 3.REVERSE LEAKAGE CURRENT(I_R)

Reverse leakage currents are guaranteed and measured at V_R as shown on the table.

NOTE 4.MAXIMUM VOLTAGE CHANGE(ΔV_Z)

Voltage change is equal to the difference between V_Z at 100μA and V_Z at 10μA.

NOTE 5.ZENER VOLTAGE(V_Z) MEASUREMENT

Nominal Zener voltage is measured with the device junction in thermal equilibrium at the lead temperature 30°C ±1°C and 3/8" lead length.

NOTE 6. Tested with pulses tp = 20 ms.

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