DIGITRON™ Semiconductors

High-reliability discrete products
and engineering services since 1977

1N4678(UR)-1N4717(UR)

500mW AXIAL LEADED ZENER DIODES

FEATURES

- Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number.
- Available as non-RoHS (Sn/Pb plating), standard, and as RoHS by adding "-PBF" suffix.
- Available as surface mount by adding UR suffix.

MAXIMUM RATINGS

Operating and Storage Temperature:	-65 to +175°C
DC Power Dissipation:	500 mW @ +50°C
DC Power Derating:	4mW/°C above +50°C
Forward Voltage @ 200mA:	1.1 Volts maximum

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise specified)

Part number (note 1)	**Nominal Zener Voltage**	**Zener Test Current**	**Maximum Voltage Regulation** (note 2)	**Maximum Reverse Leakage Current**		**Maximum DC Zener Current**
	V_Z	**I_{ZT}**	**$\triangle V_Z$**	**I_R @ V_R**		**I_{ZM}**
	Volts	**µA**	**Volts**	**µA**	**Volts**	**mA**
1N4678(UR)	1.8	50	0.70	7.5	1.0	240
1N4679(UR)	2.0	50	0.70	5.0	1.0	220
1N4680(UR)	2.2	50	0.75	4.0	1.0	200
1N4681(UR)	2.4	50	0.80	2.0	1.0	190
1N4682(UR)	2.7	50	0.85	1.0	1.0	180
1N4683(UR)	3.0	50	0.90	0.8	1.0	170
1N4684(UR)	3.3	50	0.95	7.5	1.5	160
1N4685(UR)	3.6	50	0.95	7.5	2.0	150
1N4686(UR)	3.9	50	0.97	5.0	2.0	140
1N4687(UR)	4.3	50	0.99	4.0	2.0	130
1N4688(UR)	4.7	50	0.99	10.0	3.0	120
1N4689(UR)	5.1	50	0.97	10.0	3.0	110
1N4690(UR)	5.6	50	0.96	10.0	4.0	100
1N4691(UR)	6.2	50	0.95	10.0	5.0	90
1N4692(UR)	6.8	50	0.90	10.0	5.1	70
1N4693(UR)	7.5	50	0.75	10.0	5.7	63.6
1N4694(UR)	8.2	50	0.50	1.0	6.2	58.0
1N4695(UR)	8.7	50	0.10	1.0	6.6	54.8
1N4696(UR)	9.1	50	0.08	1.0	6.9	52.4
1N4697(UR)	10.0	50	0.10	1.0	7.6	49.6
1N4698(UR)	11.0	50	0.11	0.05	8.4	43.2
1N4699(UR)	12.0	50	0.12	0.05	9.1	40.8
1N4700(UR)	13.0	50	0.13	0.05	9.8	38.0
1N4701(UR)	14.0	50	0.14	0.05	10.6	35.0
1N4702(UR)	15.0	50	0.15	0.05	11.4	32.6
1N4703(UR)	16.0	50	0.16	0.05	12.1	30.8
1N4704(UR)	17.0	50	0.17	0.05	12.9	29.0

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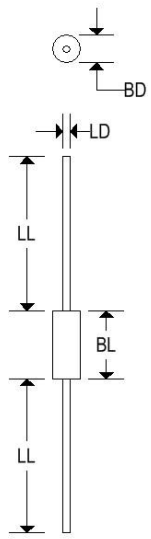
Part number (note 1)	Nominal Zener Voltage	Zener Test Current	Maximum Voltage Regulation (note 2)	Maximum Reverse Leakage Current		Maximum DC Zener Current
	V_Z	I_{ZT}	$\triangle V_Z$	I_R @ V_R		I_{ZM}
	Volts	µA	Volts	µA	Volts	mA
1N4705(UR)	18.0	50	0.18	0.05	13.6	26.4
1N4706(UR)	19.0	50	0.19	0.05	14.4	25.0
1N4707(UR)	20.0	50	0.20	0.01	15.2	23.8
1N4708(UR)	22.0	50	0.22	0.01	16.7	21.6
1N4709(UR)	24.0	50	0.24	0.01	18.2	19.8
1N4710(UR)	25.0	50	0.25	0.01	19.0	19.0
1N4711(UR)	27.0	50	0.27	0.01	20.4	17.6
1N4712(UR)	28.0	50	0.28	0.01	21.2	17.0
1N4713(UR)	30.0	50	0.30	0.01	22.8	15.8
1N4714(UR)	33.0	50	0.33	0.01	25.0	14.4
1N4715(UR)	36.0	50	0.36	0.01	27.3	13.2
1N4716(UR)	39.0	50	0.39	0.01	29.6	12.2
1N4717(UR)	43.0	50	0.43	0.01	32.6	11.0

Note 1: All part numbers shown above have a standard tolerance of +/-5% of the nominal zener volume. Vz is measured with the diode in thermal equilibrium at 25°C ±3°C.
Note 2: $\triangle V_Z$ @ 100µA minus V_Z @ 10µA.

MECHANICAL CHARACTERISTICS

Case:	DO-35 (Glass)
Marking:	Alpha Numeric
Polarity:	Cathode Band



	DO-35			
	Inches		Millimeters	
	Min	Max	Min	Max
BD	0.055	0.090	1.400	2.290
BL	0.120	0.200	3.050	5.080
LD	0.018	0.022	0.460	0.560
LL	1.000	1.500	25.400	38.100

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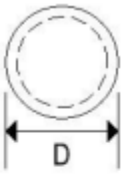
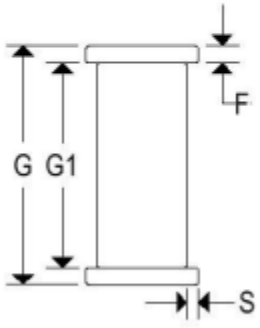
500mW AXIAL LEADED ZENER DIODES

Case:	SOD-80
Marking:	Alpha Numeric
Polarity:	Cathode Band





	SOD-80			
	Inches		Millimeters	
	Min	Max	Min	Max
D	0.055	0.067	1.397	1.702
F	-	0.022	-	0.559
G	0.130	0.146	3.302	3.708
G1	0.100 REF		2.540 REF	
S	0.001	-	0.025	-