



Microsemi Corp.

The diode experts

SCOTTSDALE, AZ

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**1N4678
thru
1N4717**

FEATURES

- LOW OPERATING CURRENT AT 50 μ A
- STANDARD $\pm 5\%$ VOLTAGE TOLERANCE
- GUARANTEED VOLTAGE REGULATION
- ALSO AVAILABLE IN DO-35 PACKAGE

MAXIMUM RATINGS

Junction and Storage Temperature: -65°C to $+200^{\circ}\text{C}$

DC Power Dissipation: 250mW (Capable of 400mW in DO-7 package supplied)

Power Derating: 1.66mW/ $^{\circ}\text{C}$ above 50°C Ambient (2.28mW/ $^{\circ}\text{C}$ above 25°C in DO-7)

Forward Voltage @ 100mA: 1.5 Volts

* ELECTRICAL CHARACTERISTICS @ 25°C

JEDEC TYPE NUMBER	NOMINAL ZENER VOLTAGE (NOTE 3)	ZENER TEST CURRENT	MAXIMUM VOLTAGE REGULATION (NOTE 2 & 3)	MAXIMUM REVERSE LEAKAGE CURRENT		MAXIMUM DC ZENER CURRENT
(NOTE 1)	V_Z	I_{ZT}	ΔV_Z	I_R @	V_R	I_{ZM}
	VOLTS *	μA	VOLTS	μA	VOLTS	mA
1N4678	1.8	50	0.70	7.5	1.0	120.0
1N4679	2.0	50	0.70	5.0	1.0	110.0
1N4680	2.2	50	0.75	4.0	1.0	100.0
1N4681	2.4	50	0.80	2.0	1.0	95.0
1N4682	2.7	50	0.85	1.0	1.0	90.0
1N4683	3.0	50	0.90	0.8	1.0	85.0
1N4684	3.3	50	0.95	7.5	1.5	80.0
1N4685	3.6	50	0.95	7.5	2.0	75.0
1N4686	3.9	50	0.97	5.0	2.0	70.0
1N4687	4.3	50	0.99	4.0	2.0	65.0
1N4688	4.7	50	0.99	10.0	3.0	60.0
1N4689	5.1	50	0.97	10.0	3.0	55.0
1N4690	5.6	50	0.96	10.0	4.0	50.0
1N4691	6.2	50	0.95	10.0	5.0	45.0
1N4692	6.8	50	0.90	10.0	5.1	35.0
1N4693	7.5	50	0.75	10.0	5.7	31.8
1N4694	8.2	50	0.50	1.0	6.2	29.0
1N4695	8.7	50	0.10	1.0	6.6	27.4
1N4696	9.1	50	0.08	1.0	6.9	26.2
1N4697	10.0	50	0.10	1.0	7.6	24.8
1N4698	11.0	50	0.11	0.05	8.4	21.6
1N4699	12.0	50	0.12	0.05	9.1	20.4
1N4700	13.0	50	0.13	0.05	9.8	19.0
1N4701	14.0	50	0.14	0.05	10.6	17.5
1N4702	15.0	50	0.15	0.05	11.4	16.3
1N4703	16.0	50	0.16	0.05	12.1	15.4
1N4704	17.0	50	0.17	0.05	12.9	14.5
1N4705	18.0	50	0.18	0.05	13.6	13.2
1N4706	19.0	50	0.19	0.05	14.4	12.5
1N4707	20.0	50	0.20	0.01	15.2	11.9
1N4708	22.0	50	0.22	0.01	16.7	10.8
1N4709	24.0	50	0.24	0.01	18.2	9.9
1N4710	25.0	50	0.25	0.01	19.0	9.5
1N4711	27.0	50	0.27	0.01	20.4	8.8
1N4712	28.0	50	0.28	0.01	21.2	8.5
1N4713	30.0	50	0.30	0.01	22.8	7.9
1N4714	33.0	50	0.33	0.01	25.0	7.2
1N4715	36.0	50	0.36	0.01	27.3	6.6
1N4716	39.0	50	0.39	0.01	29.6	6.1
1N4717	43.0	50	0.43	0.01	32.6	5.5

* JEDEC Registered Data

NOTE 1 All types as shown are $\pm 5\%$ tolerance. Also available in 2% and 1% tolerance, suffix C and D respectively.

NOTE 2 ΔV_Z @ 100 μA minus V_Z @ 10 μA .

NOTE 3 The electrical characteristics are measured after allowing the device to stabilize for 20 seconds when mounted with 3/8" minimum lead length from the base.

**SILICON
250 mW
ZENER DIODES**

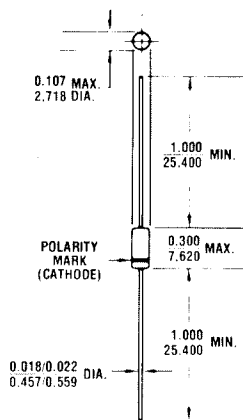


FIGURE 1

All dimensions in
INCH
m.m.

MECHANICAL CHARACTERISTICS

CASE: Hermetically sealed glass case. DO-7.

FINISH: All external surfaces are corrosion resistant and leads solderable.

THERMAL RESISTANCE: 300 $^{\circ}\text{C}/\text{W}$ (Typical) junction to lead at 0.375-inches from body.

POLARITY: Diode to be operated with the banded end positive with respect to the opposite end.

WEIGHT: 0.2 grams.

MOUNTING POSITION: Any.