

Microsemi Corp.

The diode experts

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**1N4775
thru
1N4784A**

FEATURES

- ZENER VOLTAGE $8.5V \pm 5\%$ (See Note 4)
- TEMPERATURE COEFFICIENT RANGE: $0.01\%/^{\circ}C$ TO $0.0005\%/^{\circ}C$
- RADIATION HARDENED DEVICES AVAILABLE (SEE NOTE 1)

MAXIMUM RATINGS

Operating Temperature: $-65^{\circ}C$ to $+175^{\circ}C$

DC Power Dissipation: 250 mW

Power Derating: 2 mW/ $^{\circ}C$ above $50^{\circ}C$

*ELECTRICAL CHARACTERISTICS

@ $25^{\circ}C$, unless otherwise specified

JEDEC TYPE NUMBER	ZENER VOLTAGE (NOTE 5)	ZENER TEST CURRENT	MAXIMUM DYNAMIC IMPEDANCE (NOTE 2)	MAXIMUM VOLTAGE TEMPERATURE STABILITY (NOTES 3 & 5)	TEMPERATURE RANGE	EFFECTIVE TEMPERATURE COMPENSATIONS α_{VZ}
	$V_Z @ I_{ZT}$	I_{ZT}	Z_{ZT}	ΔV_{ZT}	$^{\circ}C$	$\%/^{\circ}C$
	VOLTS	mA	OHMS	mV		
1N4775	8.5	0.5	200	64	0 to +75	0.01
1N4775A	8.5	0.5	200	132	-55 to +100	0.01
1N4776	8.5	0.5	200	32	0 to +75	0.005
1N4776A	8.5	0.5	200	66	-55 to +100	0.005
1N4777	8.5	0.5	200	13	0 to +75	0.002
1N4777A	8.5	0.5	200	26	-55 to +100	0.002
1N4778	8.5	0.5	200	6	0 to +75	0.001
1N4778A	8.5	0.5	200	13	-55 to +100	0.001
1N4779	8.5	0.5	200	3	0 to +75	0.0005
1N4779A	8.5	0.5	200	7	-55 to +100	0.0005
1N4780	8.5	1.0	100	64	0 to +75	0.01
1N4780A	8.5	1.0	100	132	-55 to +100	0.01
1N4781	8.5	1.0	100	32	0 to +75	0.005
1N4781A	8.5	1.0	100	66	-55 to +100	0.005
1N4782	8.5	1.0	100	13	0 to +75	0.002
1N4782A	8.5	1.0	100	26	-55 to +100	0.002
1N4783	8.5	1.0	100	6	0 to +75	0.001
1N4783A	8.5	1.0	100	13	-55 to +100	0.001
1N4784	8.5	1.0	100	3	0 to +75	0.0005
1N4784A	8.5	1.0	100	7	-55 to +100	0.0005

*JEDEC Registered Data.

NOTE 1 Designate Radiation Hardened devices with "RH" prefix instead of "1N," i.e., RH4784A.

NOTE 2 Consult factory for TX, TXV or JANS equivalent SCDs.

**8.5 VOLT
TEMPERATURE
COMPENSATED
ZENER REFERENCE
DIODES**

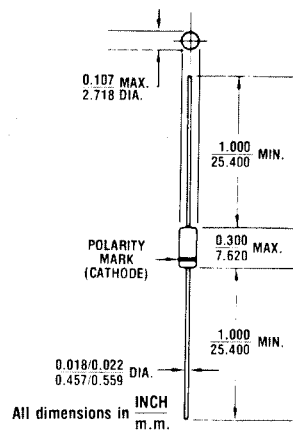


FIGURE 1

MECHANICAL CHARACTERISTICS

CASE: Hermetically sealed glass case, DO-7.

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

THERMAL RESISTANCE: $300^{\circ}C/W$ (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.

1N4775 thru 1N4784A

NOTE 2 Measured by superimposing I_z ac rms on I_z DC @ 25°C where I_z ac rms = 10% I_z DC.

NOTE 3 Maximum allowable change between any two discrete temperatures over the specified temperature change.

NOTE 4 When ordering devices with a tighter tolerance than specified, use a nominal center voltage of 8.8 volts.

NOTE 5 Voltage measurements to be performed 15 seconds after application of DC current.

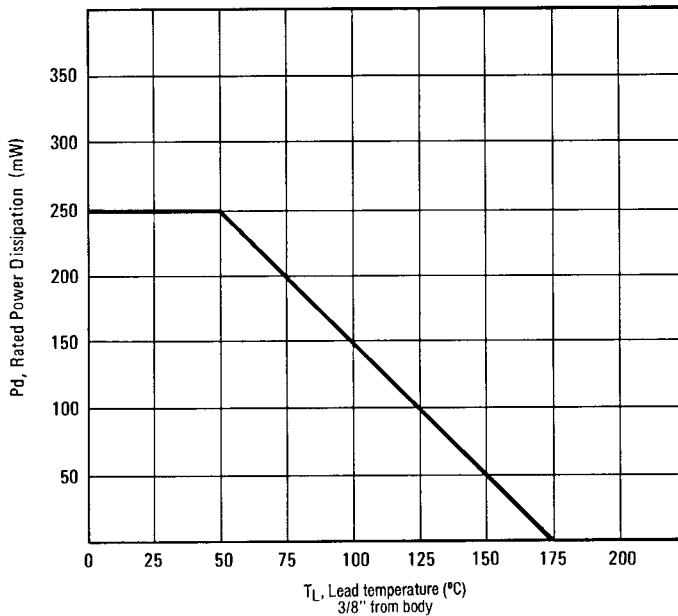


FIGURE 2 POWER DERATING CURVE