

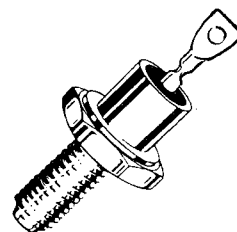
MOTOROLA SEMICONDUCTOR TECHNICAL DATA

1N3993 THRU 1N4000

ZENER DIODES

Low-voltage, alloy-junction zener diodes in hermetically sealed package with cathode connected to case. Supplied with mounting hardware.

10 WATTS
ZENER DIODES



4

MAXIMUM RATINGS

Junction and Storage Temperature: -65°C to $+175^{\circ}\text{C}$.
DC Power Dissipation: 10 Watts. (Derate 83.3 mW/ $^{\circ}\text{C}$ above 55°C).

The type numbers shown in the table have a standard tolerance on the nominal zener voltage of $\pm 10\%$. A standard tolerance of $\pm 5\%$ on individual units is also available and is indicated by suffixing "A" to the standard type number.

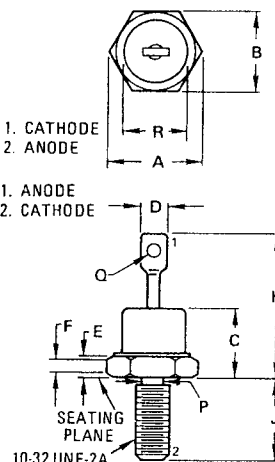
ELECTRICAL CHARACTERISTICS ($T_B = 30^{\circ}\text{C} \pm 3$,
 $V_F = 1.5 \text{ max @ } I_F = 2 \text{ amp for all units}$)

Type No.	Nominal Zener Voltage $V_Z @ I_{ZT}$ Volts	Test Current I_{ZT} mA	Max Zener Impedance		Max DC Zener Current I_{ZM} mA	Reverse Leakage Current	
			$Z_{ZT} @ I_{ZT}$ Ohms	$Z_{ZK} @ I_{ZK} = 1.0 \text{ mA}$ Ohms		I_R μA	V_R Volts
1N3993	3.9	640	2.0	400	2380	100	0.5
1N3994	4.3	580	1.5	400	2130	100	0.5
1N3995	4.7	530	1.2	500	1940	50	1.0
1N3996	5.1	490	1.1	550	1780	10	1.0
1N3997	5.6	445	1.0	600	1620	10	1.0
1N3998	6.2	405	1.1	750	1460	10	2.0
1N3999	6.8	370	1.2	500	1330	10	2.0
1N4000	7.5	335	1.3	250	1210	10	3.0

SPECIAL SELECTIONS AVAILABLE INCLUDE: (See Selector Guide for details)

STYLE 1:
TERM. 1. CATHODE
2. ANODE

STYLE 2:
TERM. 1. ANODE
2. CATHODE



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	11.94	12.83	0.470	0.505
B	10.77	11.10	0.424	0.437
C	—	10.29	—	0.405
D	—	6.35	—	0.250
E	1.91	4.45	0.075	0.175
F	1.52	—	0.060	—
J	10.72	11.51	0.422	0.453
K	—	20.32	—	0.800
P	4.14	4.80	0.163	0.189
Q	1.52	—	0.060	—
R	—	10.77	—	0.424

All JEDEC dimensions and notes apply

CASE 56-02
DO-203AA
METAL