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IN4156, IN4157, IN4453, IN4829, IN4830, IN5179 STABISTORS

Also, Tight Tolerance

MPD100 thru MPD400A
or
MZ2360 and MZ2361

APPLICATION

These axial lead diodes represent configurations of one to four* p-n junctions in series which may be used in any application requiring tight tolerance, low voltage levels versus current. This method of low voltage regulation is comparitively superior in dynamic impedence (voltage change versus current) than low voltage zeners where tunneling instead of avalanche current is dominant. Typical applications include use as signal limiters, level shifters in transistor logic, meter protectors, and low voltage regulators. For computer circuit applications, a controlled stored charge selection is provided as well.

In addition, these devices may be used for temperature compensation wherein each p-n junction contributes approximately -2 mV/°C each.

*Consult factory for more than four p-n junction configurations.

DESCRIPTION/FEATURES

- ☑ Hermetically Sealed Glass Packages (DO-35)
- ☑ High Reverse Breakdown and Low Leakage
- ☑ Excellent Low Voltage Regulation
- ☑ Controlled Stored Charge
- ☑ Planar Passivated Die Elements

MAXIMUM RATINGS

500 mW dc Power Rating**

Power Derating 4.0 mW/°C above 50°C

Junction and Storage Temperatures: −65°C to +175°C

**Consult factory for ratings up to 1.5W.

PACKAGE DIMENSIONS

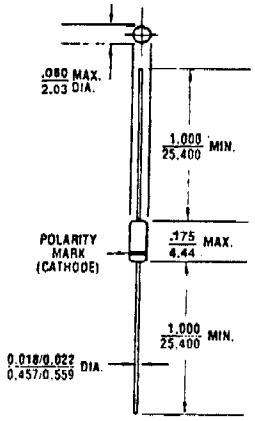


FIGURE 1

All dimensions in INCH / m.m.

DO-35

MECHANICAL CHARACTERISTICS

***Case:** Hermetically sealed glass DO-35. DO-7 and DO-41 glass are optional. Single p-n junction devices also offered in DO-41 plastic.

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

Thermal Resistance: 200° C/W typical for DO-35 at 0.375 inches from body.

Mounting Position: Any.

Polarity: Cathode marked with band. To be operated with cathode negative for normal low voltage operation.

* Designate case size when ordering.

NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.

TYPE	MAXIMUM REVERSE CURRENT I_R			MINIMUM REVERSE BREAKDOWN VOLTAGE V_{BR} (VOLTS) AT 5 μA	FORWARD VOLTAGE V_F (VOLTS) AT I_F @ 25°C										STORED CHARGE AT 1.00 mA Q_S (pC)		MAXIMUM CAPACITANCE C (pF) AT 0 VOLTS	NUMBER OF p-n JUNCTIONS
					I_F .010 mA		I_F 0.10 mA		I_F 1.00 mA		I_F 10.0 mA		I_F 100.0 mA					
	25°C nA	150°C μA	@ V_R VOLTS		MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.		
IN4156	50	50	20	30	0.740	1.090	0.970	1.220	1.210	1.410	1.380	1.580	1.540	1.840	50	500	25	2
IN4157	50	50	20	30	1.190	1.540	1.520	1.770	1.850	2.050	2.120	2.320	2.360	2.660	50	500	20	3
IN4453	50	50	20	30	—	—	0.510	0.630	0.600	0.710	0.690	0.800	0.800	0.920	50	500	30	1
IN4829	100	25@ 100°C	20	30 @ 100 μA	—	—	0.840	1.25	0.99	1.44	1.16	1.61	1.35	1.87	—	—	25	2
IN4830	100	25@ 100°C	20	30 @ 100 μA	—	—	1.35	1.80	1.63	2.08	1.90	2.35	2.15	2.69	—	—	20	3
IN5179	50	—	20	30	—	—	1.80	2.50	2.20	2.80	2.60	3.20	3.00	3.70	50	500	20	4
MPD100	30	50	30	30	0.45	0.500	0.535	0.590	0.618	0.677	0.700	0.765	0.790	0.880	75	300	30	1
MPD100A	30	50	30	30	0.45	0.500	0.535	0.590	0.618	0.677	0.700	0.765	0.790	0.880	800*	—	40	1
MPD200	30	50	30	30	0.900	1.00	1.05	1.16	1.22	1.34	1.39	1.54	1.60	1.76	75	400	30	2
MPD200A	30	50	30	30	0.900	1.00	1.05	1.16	1.22	1.34	1.39	1.54	1.60	1.76	800*	—	40	2
MPD300	30	50	30	60	1.40	1.54	1.62	1.78	1.84	2.03	2.10	2.33	2.40	2.65	75	400	30	3
MPD300A	30	50	30	60	1.40	1.54	1.62	1.78	1.84	2.03	2.10	2.33	2.40	2.65	800*	—	40	3
MPD400	30	50	30	90	1.82	2.01	2.14	2.36	2.47	2.71	2.80	3.07	3.16	3.52	60	300	30	4
MPD400A	30	50	30	90	1.82	2.01	2.14	2.36	2.47	2.71	2.80	3.07	3.16	3.52	800*	—	40	4
**MZ2360	10μA	—	5.0	—	—	—	—	—	—	—	0.63	0.71	—	—	—	—	—	1
**MZ2361	10μA	—	5.0	—	—	—	—	—	—	—	1.24	1.38	—	—	—	—	—	2

*Q_S at 10.0 mA **Optionally supplied in DO-41 glass or plastic with P_D = 1.5 W.