

**IV. Zener Diode**

**Zener Diode (1.0 Watt)  
1N4728A~1EZ400A**

**(Package: DO-41 (Glass, Plastic))**

<p><b>FEATURES</b></p> <ul style="list-style-type: none"> <li>Low zener impedance</li> <li>Low regulation factor</li> <li>Glass passivated junction</li> <li>High temperature soldering guaranteed : 260 /10 seconds/9.5mm lead length at 5 lbs tension</li> </ul> <p><b>MECHANICAL DATA</b></p> <ul style="list-style-type: none"> <li>Case : JEDEC DO-41(Glass, Plastic) molded body</li> <li>Terminals : Plated axial leads, solderable per MIL-STD-750, Method 2026</li> <li>Polarity : Color band denotes cathode end</li> <li>Mounting Position : Any</li> <li>Weight : 0.012 ounce, 0.35 grams</li> </ul>	<p style="text-align: center;">Case1: DO-41 (Glass)    Case2: DO-41 (Plastic) Dimensions in inches and (millimeters)</p>
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**Electrical Characteristics (Ta = 25 unless otherwise noted)**

Device Type	Nominal Zener Voltage V <sub>Z</sub> @ I <sub>ZT</sub> Volts	Test Current I <sub>ZT</sub> mA	Maximum Zener Impedance		Maximum Reverse Leakage Current		I <sub>ZK</sub> mA	Maximum Surge Current I <sub>ZSM</sub> @ 25 mA	Typical Temperature Coefficient (% / °C)	Maximum Regulator Current I <sub>ZM</sub> mA
			Z <sub>ZT</sub> @ I <sub>ZT</sub>	Z <sub>ZK</sub> @ I <sub>ZK</sub>	I <sub>R</sub>	@ V <sub>R</sub>				
			Ω	Ω	μA	Volts				
1N4728A	3.3	76	10	400	100	1	1	1380	-0.070	276
1N4729A	3.6	69	10	400	100	1	1	1260	-0.065	252
1N4730A	3.9	64	9	400	50	1	1	1170	-0.060	234
1N4731A	4.3	58	9	400	10	1	1	1085	±0.055	217
1N4732A	4.7	53	8	500	10	1	1	965	±0.030	193
1N4733A	5.1	49	7	550	10	1	1	890	±0.030	178
1N4734A	5.6	45	5	600	10	2	1	810	+0.038	162
1N4735A	6.2	41	2	700	10	3	1	730	+0.045	146
1N4736A	6.8	37	3.5	700	10	4	1	660	+0.050	133
1N4737A	7.5	34	4	700	10	5	0.5	605	+0.058	121
1N4738A	8.2	31	4.5	700	10	6	0.5	550	+0.062	110
1N4739A	9.1	28	5	700	10	7	0.5	500	+0.068	100
1N4740A	10	25	7	700	10	7.6	0.25	454	+0.075	91
1N4741A	11	23	8	700	5	8.4	0.25	414	+0.076	83
1N4742A	12	21	9	700	5	9.1	0.25	380	+0.077	76
1N4743A	13	19	10	700	5	9.9	0.25	344	+0.079	69
1N4744A	15	17	14	700	5	11.4	0.25	304	+0.082	61
1N4745A	16	15.5	16	700	5	12.2	0.25	285	+0.083	57
1N4746A	18	14	20	750	5	13.7	0.25	250	+0.085	50
1N4747A	20	12.5	22	750	5	15.2	0.25	225	+0.086	45
1N4748A	22	11.5	23	750	5	16.7	0.25	205	+0.087	41
1N4749A	24	10.5	25	750	5	18.2	0.25	190	+0.088	38
1N4750A	27	9.5	35	750	5	20.6	0.25	170	+0.090	34
1N4751A	30	8.5	40	1000	5	22.8	0.25	150	+0.091	30
1N4752A	33	7.5	45	1000	5	25.1	0.25	135	+0.092	27
1N4753A	36	7	50	1000	5	27.4	0.25	125	+0.093	25
1N4754A	39	6.5	60	1000	5	29.7	0.25	115	+0.094	23
1N4755A	43	6	70	1500	5	32.7	0.25	110	+0.095	22
1N4756A	47	5.5	80	1500	5	35.8	0.25	95	+0.095	19
1N4757A	51	5	95	1500	5	38.8	0.25	90	+0.096	18
1N4758A	56	4.5	110	2000	5	42.6	0.25	80	+0.096	16
1N4759A	62	4	125	2000	5	47.1	0.25	70	+0.096	14
1N4760A	68	3.7	150	2000	5	51.7	0.25	65	+0.096	13
1N4761A	75	3.3	175	2000	5	56	0.25	60	+0.096	12
1N4762A	82	3	200	3000	5	62.2	0.25	55	+0.096	11
1N4763A	91	2.8	250	3000	5	69.2	0.25	50	+0.096	10
1N4764A	100	2.5	350	3000	5	76	0.25	45	+0.096	9

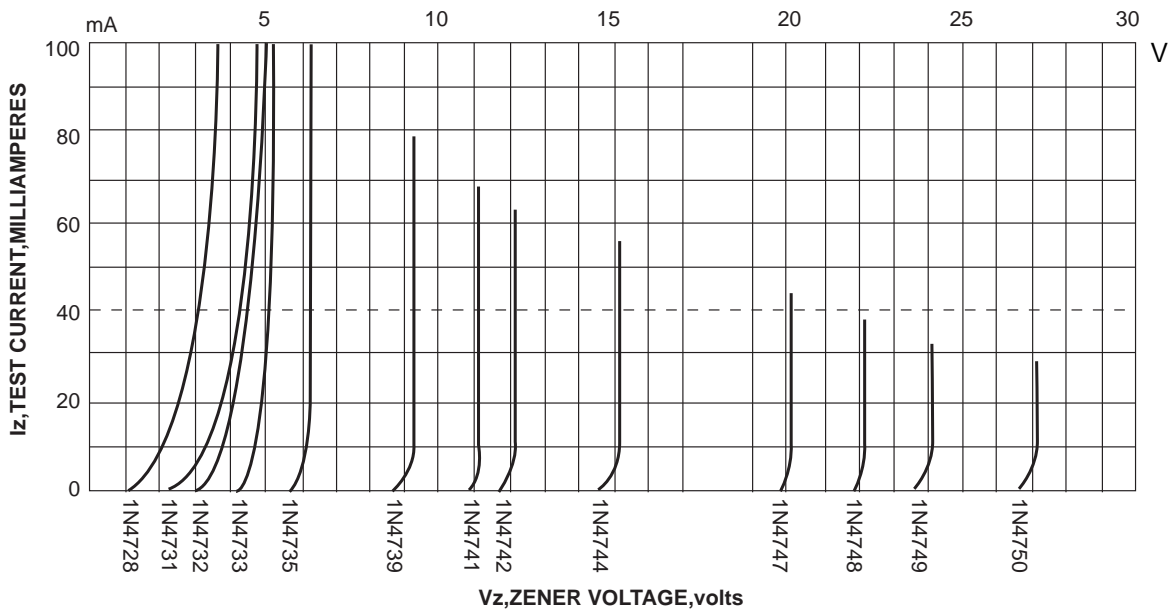
**Note:**  
 1. Forward voltage at I<sub>F</sub> = 200mA, V<sub>F</sub> = 1.2 Volts  
 2. Junction temperature, T<sub>J</sub> : 200  
 3. Storage temperature range, T<sub>stg</sub> : -65 to +200  
 4. Suffix "A": +/-5% tolerance  
 5. Package: 1N4728A~1N4756A (DO-41, Glass) ; 1N4736A~1EZ400A (DO-41, Plastic)

**Electrical Characteristics of 1N4728A~1EZ400A (Cont'd)**

Device Type	Nominal Zener Voltage $V_Z @ I_{ZT}$	Test Current $I_{ZT}$	Maximum Zener Impedance		Maximum Reverse Leakage Current		$I_{ZK}$	Maximum Surge Current $I_R @ 25$	Typical Temperature Coefficient	Maximum Regulator Current $I_{ZM}$
	Volts		mA	$Z_{ZT} @ I_{ZT}$	$Z_{ZK} @ I_{ZK}$	$I_R$				
					$\mu A$	Volts	mA	mA	(% / )	mA
1EZ110A	110	2.3	450	4000	5.0	83.6	0.25	-	+0.095	-
1EZ120A	120	2.0	550	4500	5.0	91.2	0.25	-	+0.095	-
1EZ130A	130	1.9	700	5000	5.0	98.8	0.25	-	+0.096	-
1EZ150A	150	1.7	1000	6000	5.0	114.0	0.25	-	+0.096	-
1EZ160A	160	1.6	1100	6500	5.0	121.6	0.25	-	+0.096	-
1EZ180A	180	1.4	1200	7000	5.0	136.8	0.25	-	+0.096	-
1EZ200A	200	1.2	1500	8000	5.0	152.0	0.25	-	+0.096	-
1EZ240A	240	0.93	1800	8500	5.0	182.4	0.25	-	+0.096	-
1EZ250A	250	0.9	2000	9000	5.0	190.0	0.25	-	+0.096	-
1EZ270A	270	0.82	2100	9000	5.0	205.0	0.25	-	+0.096	-
1EZ300A	300	0.75	2300	9500	5.0	228.0	0.25	-	+0.096	-
1EZ330A	330	0.7	2500	9500	5.0	250.0	0.25	-	+0.096	-
1EZ380A	380	0.6	2700	9500	5.0	288.0	0.25	-	+0.096	-
1EZ390A	390	0.6	2800	9500	5.0	295.0	0.25	-	+0.096	-
1EZ400A	400	0.7	4000	13000	5.0	304.0	0.25	-	+0.096	-

**Ratings and Characteristic Curves of 1N4728A~1EZ400A**

**Breakdown characteristics**



**Admissible power dissipation versus ambient temperature**

Valid provided that leads are kept at ambient temperature at a distance of 10mm from case

