

# New Jersey Semi-Conductor Products, Inc.

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## 1N4460 - 1N4496 1N6485 - 1N6491

$V_z$  : 3.3 - 200 Volts  
 $P_D$  : 1.5 Watts

### FEATURES :

- \* Silicon power zener diodes
- \* Complete Voltage Range 3.3 to 200 Volts
- \* High peak reverse power dissipation
- \* High reliability
- \* Low leakage current

### MECHANICAL DATA :

- \* Case : M1A Molded plastic
- \* Epoxy : UL94V-O rate flame retardant
- \* Lead : Axial lead solderable per MIL-STD-202, method 208 guaranteed
- \* Polarity : Color band denotes cathode end
- \* Mounting position : Any
- \* Weight : 0.20 gram (approximately)

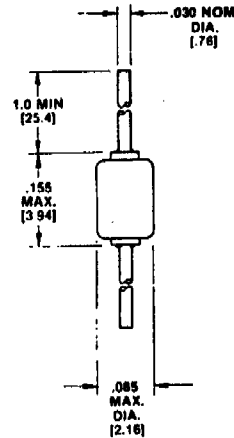


FIGURE 1  
 PACKAGE A

### MECHANICAL CHARACTERISTICS

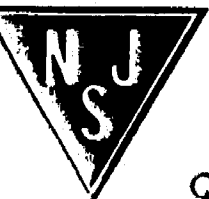
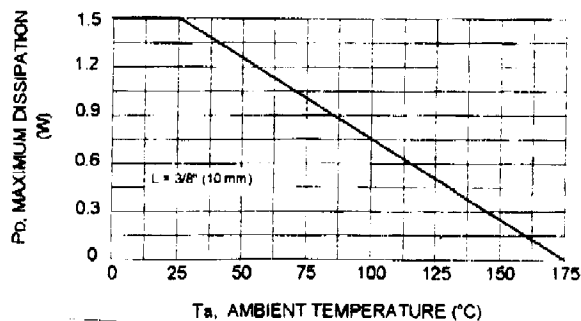
Case: Hermetically sealed glass case.  
 Lead Material: Tinned copper.  
 Marking: Body painted, alpha numeric with JEDEC number.  
 Polarity: Cathode band.

### MAXIMUM RATINGS (Rating at 25 °C ambient temperature unless otherwise specified)

Rating	Symbol	Value	Unit
Power Dissipation at $T_a = 25\text{ }^\circ\text{C}$	$P_D$	1.5	W
Maximum Forward Voltage at $I_F = 200\text{ mA}$	$V_F$	1.0	V
Thermal Resistance, Junction to Lead (Note 1)	$R_{\theta JA}$	42	$^\circ\text{C/W}$
Operating Temperature	$T_J$	-65 to +175	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-65 to +175	$^\circ\text{C}$

Note : (1) At 3/8" (10 mm) lead length form body.

Fig. 1 POWER TEMPERATURE DERATING CURVE



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## ELECTRICAL CHARACTERISTICS (Rating at 25 °C ambient temperature unless otherwise specified)

TYPE NO.	Nominal Zener Voltage	Test Current	Maximum Dynamic Impedance	Maximum Zener Impedance		Maximum Reverse Current		Maximum Continuous Current	Maximum Surge Current
	$V_Z @ I_{ZT}$ (V)	$I_{ZT}$ (mA)	$Z_{ZT} @ I_{ZT}$ ( $\Omega$ )	$Z_{ZK} @ I_{ZK}$ ( $\Omega$ )	$I_{ZK}$ (mA)	$I_R @ V_R$ ( $\mu$ A)	$V_R$ (V)	$I_{ZM}$ (mA)	$I_{ZSM}$ (A)
1N6485	3.3	76.0	10	400	1.0	50	1.0	433	4.2
1N6486	3.6	69.0	10	400	1.0	50	1.0	397	3.9
1N6487	3.9	64.0	9	400	1.0	35	1.0	366	3.6
1N6488	4.3	58.0	9	400	1.0	5.0	1.0	332	3.3
1N6489	4.7	53.0	8	500	1.0	4.0	1.0	304	3.0
1N6490	5.1	49.0	7	500	1.0	1.0	1.0	280	2.7
1N6491	5.6	45.0	5	600	1.0	0.5	2.0	255	2.5
1N4460	6.2	40.0	4.0	200	1.0	10	3.72	230	2.3
1N4461	6.8	37.0	2.5	200	1.0	5.0	4.08	210	2.1
1N4462	7.5	34.0	2.5	400	0.5	1.0	4.50	191	1.9
1N4463	8.2	31.0	3.0	400	0.5	0.5	4.92	174	1.7
1N4464	9.1	28.0	4.0	500	0.5	0.3	5.46	157	1.6
1N4465	10	25.0	5.0	500	0.25	0.3	8.00	143	1.4
1N4466	11	23.0	6.0	550	0.25	0.3	8.60	130	1.3
1N4467	12	21.0	7.0	550	0.25	0.2	9.60	119	1.2
1N4468	13	19.0	8.0	550	0.25	0.05	10.4	110	1.1
1N4469	15	17.0	9.0	600	0.25	0.05	12.0	95	0.95
1N4470	16	15.5	10	600	0.25	0.05	12.8	90	0.90
1N4471	18	14.0	11	650	0.25	0.05	14.4	79	0.79
1N4472	20	12.5	12	650	0.25	0.05	16.0	71	0.71
1N4473	22	11.5	14	650	0.25	0.05	17.6	65	0.65
1N4474	24	10.5	16	700	0.25	0.05	19.2	60	0.60
1N4475	27	9.5	18	700	0.25	0.05	21.6	53	0.53
1N4476	30	8.5	20	750	0.25	0.05	24.0	48	0.48
1N4477	33	7.5	25	800	0.25	0.05	26.4	43	0.43
1N4478	36	7.0	27	850	0.25	0.05	28.8	40	0.40
1N4479	39	6.5	30	900	0.25	0.05	31.2	37	0.37
1N4480	43	6.0	40	950	0.25	0.05	34.4	33	0.33
1N4481	47	5.5	50	1000	0.25	0.05	37.6	30	0.30
1N4482	51	5.0	60	1100	0.25	0.05	40.8	28	0.28
1N4483	56	4.5	70	1300	0.25	0.25	44.8	26	0.26
1N4484	62	4.0	80	1500	0.25	0.25	49.6	23	0.23
1N4485	68	3.7	100	1700	0.25	0.25	54.4	21	0.21
1N4486	75	3.3	130	2000	0.25	0.25	60.4	19	0.19
1N4487	82	3.0	160	2500	0.25	0.25	65.6	17	0.17
1N4488	91	2.8	200	3000	0.25	0.25	72.8	16	0.16
1N4489	100	2.5	250	3100	0.25	0.25	80.0	14	0.14
1N4490	110	2.0	300	4000	0.25	0.25	88.0	13	0.13
1N4491	120	2.0	400	4500	0.25	0.25	96.0	12	0.12
1N4492	130	1.9	500	5000	0.25	0.25	104.0	11	0.11
1N4493	150	1.7	700	6000	0.25	0.25	120.0	9.5	0.095
1N4494	160	1.6	1000	6500	0.25	0.25	128.0	8.9	0.089
1N4495	180	1.4	1300	7000	0.25	0.25	144.0	7.9	0.079
1N4496	200	1.2	1500	8000	0.25	0.25	160.0	7.2	0.072

Note : (1) The type number listed have a standard tolerance on the nominal zener voltage of  $\pm 5\%$ .