

1.5 Watt Voidless**1N4461
thru
1N4496****Zener Diodes**

Applications

For use in hostile environments such as military and aerospace.

Used where performance, surge and small footprint are important.

This zener series is ideal to use for regulation, clipping or protection.

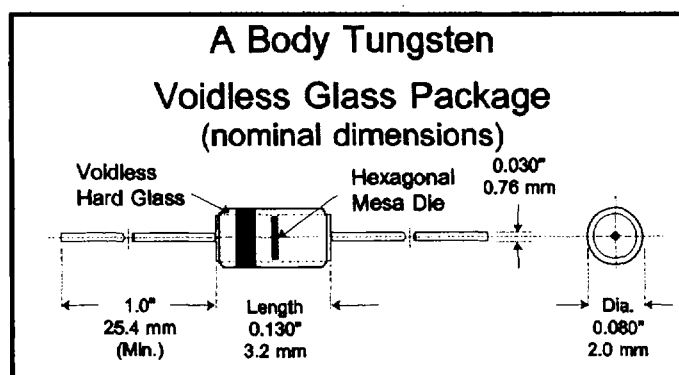
Available in JAN / TX / TXV per MIL-S-19500 / 406.

The family can be processed to S level with source control drawings.

**Hard Glass
Tungsten Package**

Features

- Six Sigma quality
- High surge capability
- Microminiature package
- Humidity proof hard glass
- No thermal fatigue
- Metallurgically bonded
- Thermally matched system
- Zero solderability defects
- Sigma Bond™ plated contacts
- Available in commercial versions



Absolute Maximum Ratings	Symbol	Value	Unit
Power Dissipation at 3/8" from case, $T_L = 75^\circ\text{C}$	P_D	1.5	Watts
Maximum Operating Temperature Range	T_{Op}	-65 to +175	$^\circ\text{C}$
Storage Temperature Range	T_{St}	-65 to +200	$^\circ\text{C}$
Exponential peak power surge for 1 mSec. @ 50% of I_p	P_{pk}	100	Watts

Characteristics at $T = 25^\circ\text{C}$	Symbol	Limit	Unit
Power Derating at 3/8" from case, $T_L = 75^\circ\text{C}$	P_{DR}	15 (Max)	mW/ $^\circ\text{C}$
BKC Forward Voltage at $I_F = 1.0\text{ A}$	V_F	1.2 (Max)	Volts

To order Mil types, use the listed ✓ part numbers with the appropriate JAN, JTX or JTXV prefix.

DETAILED SPECIFICATIONS ON REVERSE



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Telephone (508) 681-0392 • FAX (508) 681-9135

BKC5094

1.5 Watt Voidless**Zener Diodes**

**1N4461
thru
1N4496 series**

**1.5 watt A-Body
Detail
Specifications**

Type	Nominal Zener Voltage (V_Z) @ I_{ZT} Volts	Test Current I_{ZT} mA	Maximum Zener Impedance			Maximum Reverse Leakage Current		Maximum Surge Current (I_{ZSM}) Amps	Maximum Regulator Current (I_{ZM}) mA
			(Z_{ZT}) @ I_{ZT} Ohms	(Z_{ZK}) @ I_{ZK} Ohms	I_{ZK} mA	(I_R) μ A	@ V_R Volts		
1N4461 ■	6.9	37	2.5	200	1	5	4.08	5	200
1N4462 ■	7.5	34	2.5	400	0.5	1	4.5	4.5	180
1N4463 ■	8.2	31	3	400	0.5	0.5	4.92	3.9	165
1N4464 ✓	9.1	28	4	500	0.5	0.3	5.46	3.4	150
1N4465 ✓	10	25	5	500	0.25	0.3	8	3.0	135
1N4466 ✓	11	23	6	550	0.25	0.3	8.8	2.6	123
1N4467 ✓	12	21	7	550	0.25	0.2	9.6	2.4	113
1N4468 ✓	13	19	8	550	0.25	0.05	10.4	2.2	104
1N4469 ✓	15	17	9	600	0.25	0.05	12	1.8	90
1N4470 ✓	16	15.5	10	600	0.25	0.05	12.8	1.6	85
1N4471 ✓	18	14	11	650	0.25	0.05	14.4	1.4	75
1N4472 ✓	20	12.5	12	650	0.25	0.05	16	1.2	68
1N4473 ✓	22	11.5	14	650	0.25	0.05	17.6	1.1	62
1N4474 ✓	24	10.5	16	700	0.25	0.05	19.2	0.90	57
1N4475 ✓	27	9.5	18	700	0.25	0.05	21.6	0.80	50
1N4476 ✓	30	8.5	20	750	0.25	0.05	24	0.75	45
1N4477 ✓	33	7.5	25	800	0.25	0.05	26.4	0.66	41
1N4478 ✓	36	7.0	27	850	0.25	0.05	28.8	0.60	38
1N4479 ✓	39	6.5	30	900	0.25	0.05	31.2	0.54	35
1N4480 ✓	43	6.0	40	950	0.25	0.05	34.4	0.48	32
1N4481 ✓	47	5.5	50	1000	0.25	0.05	37.6	0.45	29
1N4482 ✓	51	5.0	60	1100	0.25	0.05	40.8	0.42	27
1N4483 ✓	56	4.5	70	1300	0.25	0.25	44.8	0.39	25
1N4484 ✓	62	4.0	80	1500	0.25	0.25	49.6	0.35	22
1N4485 ✓	68	3.7	100	1700	0.25	0.25	54.4	0.32	20
1N4486 ✓	75	3.3	130	2000	0.25	0.25	60.4	0.29	18
1N4487 ✓	82	3.0	160	2500	0.25	0.25	65.6	0.26	17
1N4488 ✓	91	2.8	200	3000	0.25	0.25	72.8	0.23	16
1N4489 ✓	100	2.5	250	3100	0.25	0.25	80	0.20	14
1N4490 ✓	110	2.0	300	4000	0.25	0.25	88	0.19	13
1N4491 ✓	120	2.0	400	4500	0.25	0.25	96	0.18	12
1N4492 ✓	130	1.9	500	5000	0.25	0.25	104	0.16	11
1N4493 ✓	150	1.7	700	6000	0.25	0.25	120	0.14	9.5
1N4494 ✓	160	1.6	1000	6500	0.25	0.25	128	0.12	8.9
1N4495 ✓	180	1.4	1300	7000	0.25	0.25	144	0.10	7.9
1N4496 ✓	200	1.2	1500	8000	0.25	0.25	160	0.08	7.2

Nominal zener voltage is $\pm 5\%$ tolerance.

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■ Under Development, Please Consult Factory



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Incorporated**

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