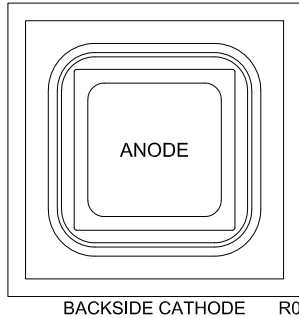


The CPZ48X-1N4678 thru CPZ48X-1N4717 are silicon Zener diodes ideal for all types of commercial, industrial, entertainment, and computer applications.



MECHANICAL SPECIFICATIONS:

Die Size	13 x 13 MILS
Die Thickness	5.5 MILS
Anode Bonding Pad Size	7.0 x 7.0 MILS
Top Side Metalization	Ti/Al – 13,000Å
Back Side Metalization	Au-As – 9,000Å
Scribe Alley Width	1.97 MILS
Wafer Diameter	5 INCHES
Gross Die Per Wafer	101,184

MAXIMUM RATINGS:

Operating and Storage Junction Temperature

SYMBOL

T_J, T_{stg}

-65 to +150

UNITS

°C

ELECTRICAL CHARACTERISTICS: ($T_A=25^\circ\text{C}$) $V_F=1.5\text{V MAX @ } I_F=100\text{mA}$ (for all types)

Type	Zener Voltage $V_Z @ I_{ZT}$			Test Current	Maximum Reverse Leakage Current		Maximum Voltage Change*	Maximum Regulator Current
	MIN	NOM	MAX	I_{ZT}	I_R	@ V_R	ΔV_Z	I_{ZM}
	V	V	V	μA	μA	V	V	mA
CPZ48X-1N4678	1.710	1.8	1.890	50	7.5	1.0	0.70	120.0
CPZ48X-1N4679	1.900	2.0	2.100	50	5.0	1.0	0.70	110.0
CPZ48X-1N4680	2.090	2.2	2.310	50	4.0	1.0	0.75	100.0
CPZ48X-1N4681	2.280	2.4	2.520	50	2.0	1.0	0.80	95.0
CPZ48X-1N4682	2.565	2.7	2.835	50	1.0	1.0	0.85	90.0
CPZ48X-1N4683	2.850	3.0	3.150	50	0.8	1.0	0.90	85.0
CPZ48X-1N4684	3.135	3.3	3.465	50	7.5	1.5	0.95	80.0
CPZ48X-1N4685	3.420	3.6	3.780	50	7.5	2.0	0.95	75.0
CPZ48X-1N4686	3.705	3.9	4.095	50	5.0	2.0	0.97	70.0
CPZ48X-1N4687	4.085	4.3	4.515	50	4.0	2.0	0.99	65.0
CPZ48X-1N4688	4.465	4.7	4.935	50	10	3.0	0.99	60.0
CPZ48X-1N4689	4.845	5.1	5.355	50	10	3.0	0.97	55.0
CPZ48X-1N4690	5.320	5.6	5.880	50	10	4.0	0.96	50.0
CPZ48X-1N4691	5.890	6.2	6.510	50	10	5.0	0.95	45.0
CPZ48X-1N4692	6.460	6.8	7.140	50	10	5.1	0.90	35.0
CPZ48X-1N4693	7.125	7.5	7.875	50	10	5.7	0.75	31.8
CPZ48X-1N4694	7.790	8.2	8.610	50	1.0	6.2	0.50	29.0

* $\Delta V_Z = V_Z @ 100\mu\text{A}$ Minus $V_Z @ 10\mu\text{A}$

R0 (29-April 2019)

**CPZ48X-1N4678 THRU
CPZ48X-1N4717
Zener Diode Die
500mW, 1.8 THRU 43 VOLT**



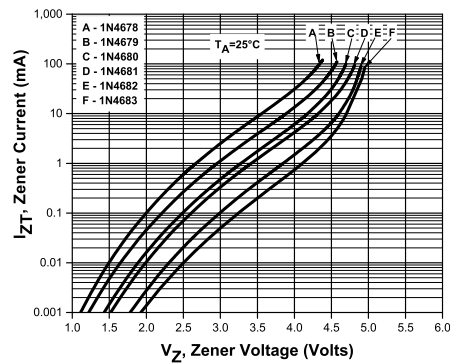
ELECTRICAL CHARACTERISTICS - Continued: ($T_A=25^{\circ}\text{C}$) $V_F=1.5\text{V MAX @ } I_F=100\text{mA}$ (for all types)

Type	Zener Voltage $V_Z @ I_{ZT}$			Test Current I_{ZT}	Maximum Reverse Leakage Current $I_R @ V_R$		Maximum Voltage Change* ΔV_Z	Maximum Regulator Current I_{ZM}
	MIN	NOM	MAX		I_R	V_R		
	V	V	V		μA	V	V	mA
CPZ48X-1N4695	8.265	8.7	9.135	50	1.0	6.6	0.10	27.6
CPZ48X-1N4696	8.645	9.1	9.555	50	1.0	6.9	0.08	26.2
CPZ48X-1N4697	9.500	10	10.50	50	1.0	7.6	0.10	24.8
CPZ48X-1N4698	10.45	11	11.55	50	0.05	8.4	0.11	21.6
CPZ48X-1N4699	11.40	12	12.60	50	0.05	9.1	0.12	20.4
CPZ48X-1N4700	12.35	13	13.65	50	0.05	9.8	0.13	19.0
CPZ48X-1N4701	13.30	14	14.70	50	0.05	10.6	0.14	17.5
CPZ48X-1N4702	14.25	15	15.75	50	0.05	11.4	0.15	16.3
CPZ48X-1N4703	15.20	16	16.80	50	0.05	12.1	0.16	15.4
CPZ48X-1N4704	16.15	17	17.85	50	0.05	12.9	0.17	14.5
CPZ48X-1N4705	17.10	18	18.90	50	0.05	13.6	0.18	13.2
CPZ48X-1N4706	18.05	19	19.95	50	0.05	14.4	0.19	12.5
CPZ48X-1N4707	19.00	20	21.00	50	0.01	15.2	0.20	11.9
CPZ48X-1N4708	20.90	22	23.10	50	0.01	16.7	0.22	10.8
CPZ48X-1N4709	22.80	24	25.20	50	0.01	18.2	0.24	9.9
CPZ48X-1N4710	23.75	25	26.25	50	0.01	19.0	0.25	9.5
CPZ48X-1N4711	25.65	27	28.35	50	0.01	20.4	0.27	8.8
CPZ48X-1N4712	26.60	28	29.40	50	0.01	21.2	0.28	8.5
CPZ48X-1N4713	28.50	30	31.50	50	0.01	22.8	0.30	7.9
CPZ48X-1N4714	31.35	33	34.65	50	0.01	25.0	0.33	7.2
CPZ48X-1N4715	34.20	36	37.80	50	0.01	27.3	0.36	6.6
CPZ48X-1N4716	37.05	39	40.95	50	0.01	29.6	0.39	6.1
CPZ48X-1N4717	40.85	43	45.15	50	0.01	32.6	0.43	5.5

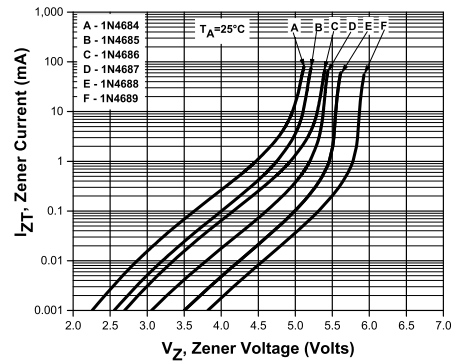
* $\Delta V_Z = V_Z @ 100\mu\text{A}$ Minus $V_Z @ 10\mu\text{A}$

CPZ48X-1N4678 THRU CPZ48X-1N4717 Typical Electrical Characteristics

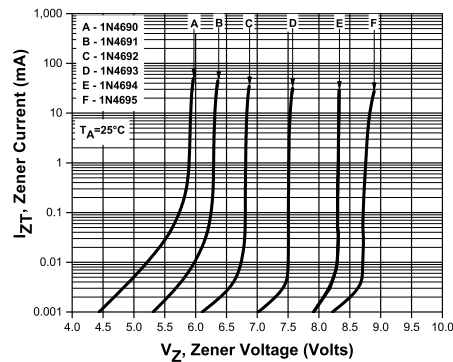
Zener Voltage, 1N4678-1N4683



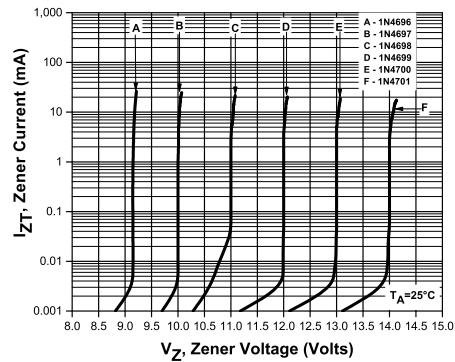
Zener Voltage, 1N4684-1N4689



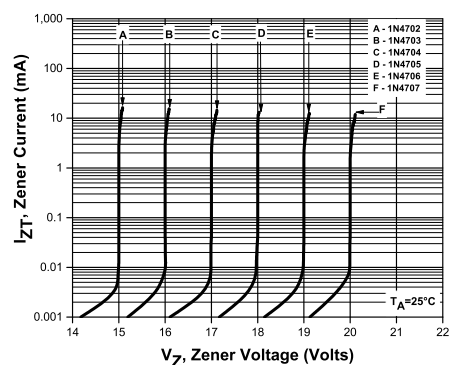
Zener Voltage, 1N4690-1N4695



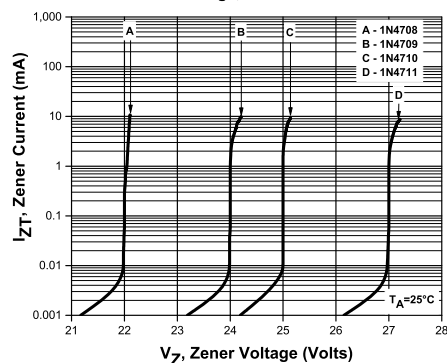
Zener Voltage, 1N4696-1N4701



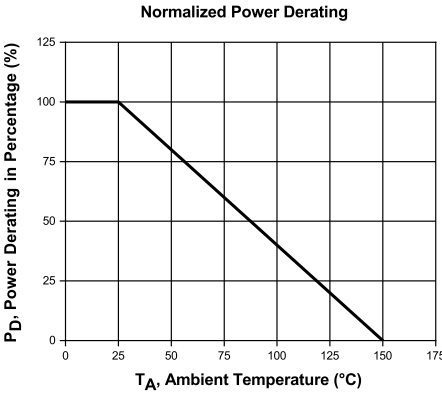
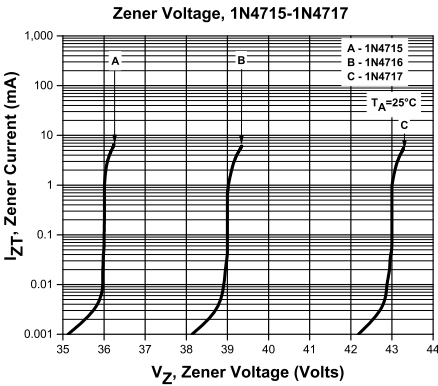
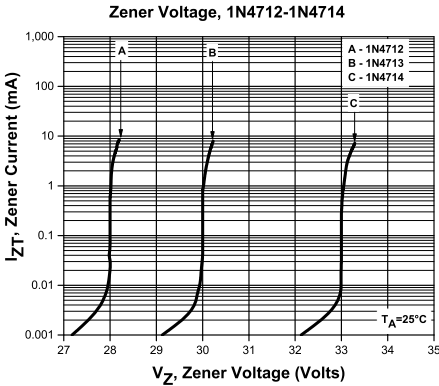
Zener Voltage, 1N4702-1N4707



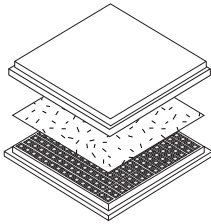
Zener Voltage, 1N4708-1N4711



CPZ48X-1N4678 THRU
CPZ48X-1N4717
Typical Electrical Characteristics



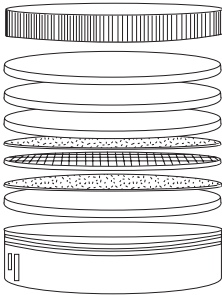
BARE DIE PACKING OPTIONS



BARE DIE IN TRAY (WAFFLE) PACK

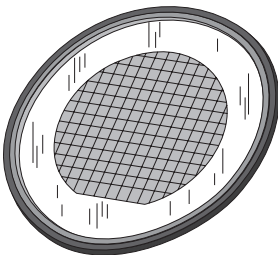
CT: Singulated die in tray (waffle) pack.
(example: CP211-PART NUMBER-CT)

CM: Singulated die in tray (waffle) pack 100% visually inspected as per MIL-STD-750, (method 2072 transistors, method 2073 diodes).
(example: CP211-PART NUMBER-CM)



UNSAWN WAFER

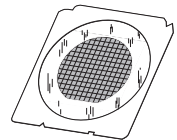
WN: Full wafer, unsawn, 100% tested with reject die inked.
(example: CP211-PART NUMBER-WN)



SAWN WAFER ON PLASTIC RING

WR: Full wafer, sawn and mounted on plastic ring,
100% tested with reject die inked.
(example: CP211-PART NUMBER-WR)

Please note: Sawn Wafer on Metal Frame (WS) is possible as a special order. Please contact your Central Sales Representative at 631-435-1110.



Visit the Central website for a complete listing of specifications:
www.centrasemi.com/bdspecs

OUTSTANDING SUPPORT AND SUPERIOR SERVICES



PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2nd day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix "TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix "PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

CONTACT US

Corporate Headquarters & Customer Support Team

Central Semiconductor Corp.
145 Adams Avenue
Hauppauge, NY 11788 USA
Main Tel: (631) 435-1110
Main Fax: (631) 435-1824
Support Team Fax: (631) 435-3388
www.centrasemi.com

Worldwide Field Representatives:
www.centrasemi.com/wwreps

Worldwide Distributors:
www.centrasemi.com/wwdistributors

For the latest version of Central Semiconductor's **LIMITATIONS AND DAMAGES DISCLAIMER**, which is part of Central's Standard Terms and Conditions of sale, visit: www.centrasemi.com/terms