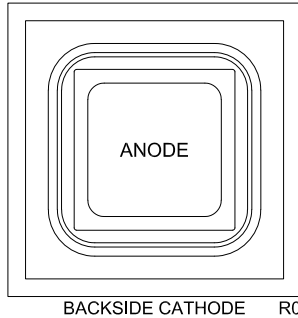


The CPZ48X-1N4099 thru CPZ48X-1N4135 are silicon Zener diodes ideal for all types of commercial, industrial, entertainment, and computer applications.



**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:** ( $T_A=25^\circ\text{C}$ )  $V_F=1.1\text{V MAX @ } I_F=200\text{mA}$  (for all types)

Type	Zener Voltage $V_Z @ I_{ZT}$			Test Current $I_{ZT}$	Maximum Zener Impedance $Z_{ZT} @ I_{ZT}$	Maximum Reverse Current		Maximum Zener Current $I_{ZM}$	Maximum Noise Density $N_D @ 250\mu\text{A}$
	MIN	NOM	MAX			$I_R @ V_R$			
	V	V	V			$\mu\text{A}$	V		
CPZ48X-1N4099	6.460	6.8	7.140	250	200	10	5.2	35.0	40
CPZ48X-1N4100	7.125	7.5	7.875	250	200	10	5.7	31.8	40
CPZ48X-1N4101	7.790	8.2	8.610	250	200	1.0	6.3	29.0	40
CPZ48X-1N4102	8.265	8.7	9.135	250	200	1.0	6.7	27.4	40
CPZ48X-1N4103	8.645	9.1	9.555	250	200	1.0	7.0	26.2	40
CPZ48X-1N4104	9.50	10	10.50	250	200	1.0	7.6	24.8	40
CPZ48X-1N4105	10.45	11	11.55	250	200	0.05	8.5	21.6	40
CPZ48X-1N4106	11.40	12	12.60	250	200	0.05	9.2	20.4	40
CPZ48X-1N4107	12.35	13	13.65	250	200	0.05	9.9	19.0	40
CPZ48X-1N4108	13.30	14	14.70	250	200	0.05	10.7	17.5	40
CPZ48X-1N4109	14.25	15	15.75	250	100	0.05	11.4	16.3	40
CPZ48X-1N4110	15.20	16	16.80	250	100	0.05	12.2	15.4	40
CPZ48X-1N4111	16.15	17	17.85	250	100	0.05	13.0	14.5	40
CPZ48X-1N4112	17.10	18	18.90	250	100	0.05	13.7	13.2	40
CPZ48X-1N4113	18.05	19	19.95	250	150	0.05	14.5	12.5	40
CPZ48X-1N4114	19.00	20	21.00	250	150	0.01	15.2	11.9	40
CPZ48X-1N4115	20.90	22	23.10	250	150	0.01	16.8	10.8	40
CPZ48X-1N4116	22.80	24	25.20	250	150	0.01	18.3	9.9	40
CPZ48X-1N4117	23.75	25	26.25	250	150	0.01	19.0	9.5	40
CPZ48X-1N4118	25.65	27	28.35	250	150	0.01	20.5	8.8	40

**CPZ48X-1N4099 THRU  
CPZ48X-1N4135  
Zener Diode Die  
250mW, 6.8 THRU 100 VOLT**

**ELECTRICAL CHARACTERISTICS - Continued: ( $T_A=25^\circ\text{C}$ )  $V_F=1.1\text{V MAX @ } I_F=200\text{mA}$  (for all types)**

Type	Zener Voltage $V_Z @ I_{ZT}$			Test Current	Maximum Zener Impedance	Maximum Reverse Current		Maximum Zener Current	Maximum Noise Density
	MIN	NOM	MAX	$I_{ZT}$	$Z_{ZT} @ I_{ZT}$	$I_R @ V_R$		$I_{ZM}$	$N_D @ 250\mu\text{A}$
	V	V	V	$\mu\text{A}$	$\Omega$	$\mu\text{A}$	V	mA	$\mu\text{V}/\sqrt{\text{Hz}}$
CPZ48X-1N4119	26.60	28	29.40	250	200	0.01	21.3	8.5	40
CPZ48X-1N4120	28.50	30	31.50	250	200	0.01	22.8	7.9	40
CPZ48X-1N4121	31.35	33	34.65	250	200	0.01	25.1	7.2	40
CPZ48X-1N4122	34.20	36	37.80	250	200	0.01	27.4	6.6	40
CPZ48X-1N4123	37.05	39	40.95	250	200	0.01	29.7	6.1	40
CPZ48X-1N4124	40.85	43	45.15	250	250	0.01	32.7	5.5	40
CPZ48X-1N4125	44.65	47	49.35	250	250	0.01	35.8	5.1	40
CPZ48X-1N4126	48.45	51	53.55	250	300	0.01	38.8	4.6	40
CPZ48X-1N4127	53.20	56	58.80	250	300	0.01	42.6	4.2	40
CPZ48X-1N4128	57.00	60	63.00	250	400	0.01	45.6	4.0	40
CPZ48X-1N4129	58.90	62	65.10	250	500	0.01	47.1	3.8	40
CPZ48X-1N4130	64.60	68	71.40	250	700	0.01	51.7	3.5	40
CPZ48X-1N4131	71.25	75	78.75	250	700	0.01	57.0	3.1	40
CPZ48X-1N4132	77.90	82	86.10	250	800	0.01	62.4	2.9	40
CPZ48X-1N4133	82.65	87	91.35	250	1.0K	0.01	66.2	2.7	40
CPZ48X-1N4134	86.45	91	95.55	250	1.2K	0.01	69.2	2.6	40
CPZ48X-1N4135	95.00	100	105.0	250	1.5K	0.01	76.0	2.3	40

## BARE DIE PACKING OPTIONS

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### 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)

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### UNSAWN WAFER

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

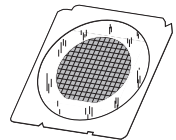
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### SAWN WAFER ON PLASTIC RING

**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](http://www.centrasemi.com/bdspecs)

## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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### 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

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### DESIGNER SUPPORT/SERVICES

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

- Free quick ship samples (2<sup>nd</sup> 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

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### 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).

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### 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](http://www.centrasemi.com)

**Worldwide Field Representatives:**  
[www.centrasemi.com/wwreps](http://www.centrasemi.com/wwreps)

**Worldwide Distributors:**  
[www.centrasemi.com/wwdistributors](http://www.centrasemi.com/wwdistributors)

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