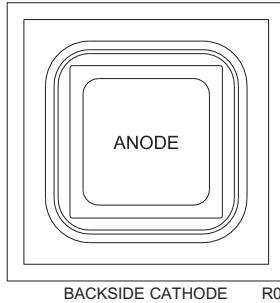


The CPZ28X-BZX84C2V4 thru CPZ28X-BZX84C47 are silicon Zener diodes ideal for all types of commercial, industrial, entertainment, and computer applications.



**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: ( $T_A=25^\circ\text{C}$ )  $V_F=0.9\text{V MAX @ } I_F=10\text{mA}$  (for all types)**

TYPE	ZENER VOLTAGE $V_Z @ I_{ZT}$			TEST CURRENT	MAXIMUM ZENER IMPEDANCE			MAXIMUM REVERSE CURRENT		MAXIMUM ZENER CURRENT	MAXIMUM TEMPERATURE COEFFICIENT
	MIN	NOM	MAX	$I_{ZT}$	$Z_{ZT} @ I_{ZT}$	$Z_{ZK} @ I_{ZK}$	$I_R @ V_R$	$I_{ZM}$	$\Theta V_Z$		
	V	V	V	mA	$\Omega$	$\Omega$	$\mu\text{A}$	V	mA	% / °C	
CPZ28X-BZX84C2V4	2.2	2.4	2.6	5.0	100	600	1.0	50	1.0	104	-0.06
CPZ28X-BZX84C2V7	2.5	2.7	2.9	5.0	100	600	1.0	20	1.0	92	-0.06
CPZ28X-BZX84C3V0	2.8	3.0	3.2	5.0	95	600	1.0	10	1.0	83	-0.06
CPZ28X-BZX84C3V3	3.1	3.3	3.5	5.0	95	600	1.0	5.0	1.0	76	-0.06
CPZ28X-BZX84C3V6	3.4	3.6	3.8	5.0	90	600	1.0	5.0	1.0	69	-0.06
CPZ28X-BZX84C3V9	3.7	3.9	4.1	5.0	90	600	1.0	3.0	1.0	64	-0.06
CPZ28X-BZX84C4V3	4.0	4.3	4.6	5.0	90	600	1.0	3.0	1.0	58	-0.05
CPZ28X-BZX84C4V7	4.4	4.7	5.0	5.0	80	500	1.0	3.0	2.0	53	-0.03
CPZ28X-BZX84C5V1	4.8	5.1	5.4	5.0	60	480	1.0	2.0	2.0	49	0.02
CPZ28X-BZX84C5V6	5.2	5.6	6.0	5.0	40	400	1.0	1.0	2.0	45	0.03
CPZ28X-BZX84C6V2	5.8	6.2	6.6	5.0	10	150	1.0	3.0	4.0	40	0.04
CPZ28X-BZX84C6V8	6.4	6.8	7.2	5.0	15	80	1.0	2.0	4.0	37	0.05
CPZ28X-BZX84C7V5	7.0	7.5	7.9	5.0	15	80	1.0	1.0	5.0	33	0.05
CPZ28X-BZX84C8V2	7.7	8.2	8.7	5.0	15	80	1.0	0.7	5.0	30	0.06
CPZ28X-BZX84C9V1	8.5	9.1	9.6	5.0	15	100	1.0	0.5	6.0	27	0.06
CPZ28X-BZX84C10	9.4	10	10.6	5.0	20	150	1.0	0.2	7.0	25	0.07
CPZ28X-BZX84C11	10.4	11	11.6	5.0	20	150	1.0	0.1	8.0	23	0.07

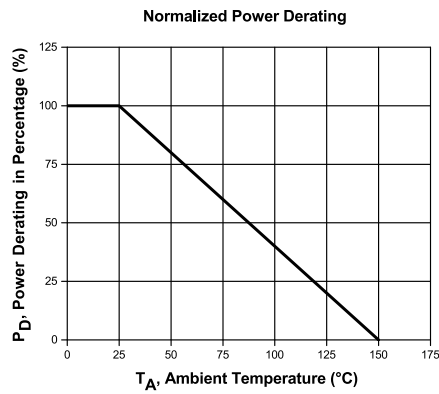
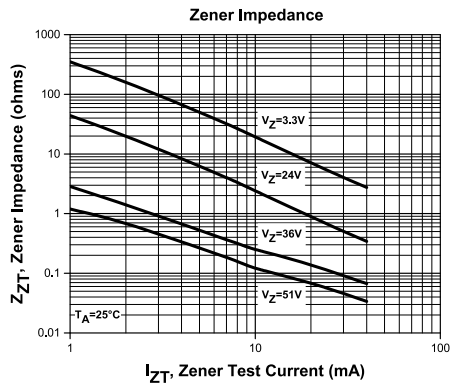
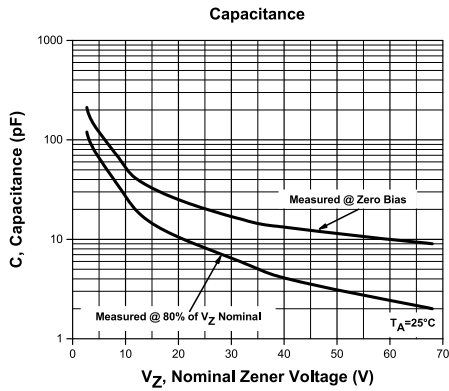
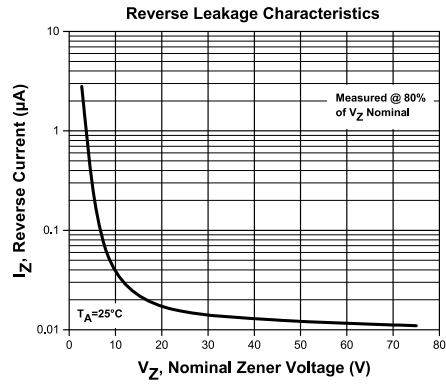
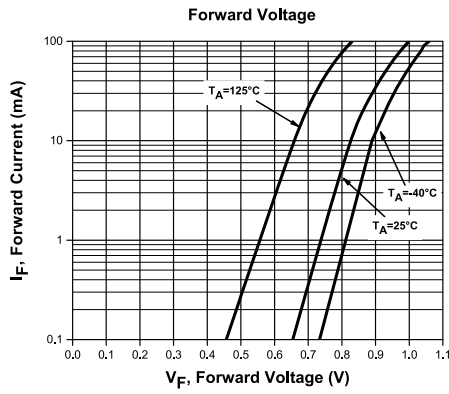
**CPZ28X-BZX84C2V4 THRU  
CPZ28X-BZX84C47  
Zener Diode Die  
350mW, 2.4 THRU 47 VOLT**



**ELECTRICAL CHARACTERISTICS - Continued:** ( $T_A=25^{\circ}\text{C}$ )  $V_F=0.9\text{V MAX @ } I_F=10\text{mA}$  (for all types)

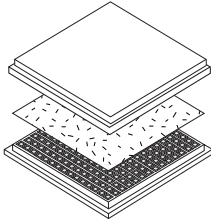
TYPE	ZENER VOLTAGE $V_Z @ I_{ZT}$			TEST CURRENT	MAXIMUM ZENER IMPEDANCE			MAXIMUM REVERSE CURRENT		MAXIMUM ZENER CURRENT	MAXIMUM TEMPERATURE COEFFICIENT
	MIN	NOM	MAX	$I_{ZT}$	$Z_{ZT} @ I_{ZT}$	$Z_{ZK} @ I_{ZK}$		$I_R @ V_R$		$I_{ZM}$	$\Theta V_Z$
	V	V	V	mA	$\Omega$	$\Omega$	mA	$\mu\text{A}$	V	mA	% / $^{\circ}\text{C}$
CPZ28X-BZX84C12	11.4	12	12.7	5.0	25	150	1.0	0.1	8.0	21	0.07
CPZ28X-BZX84C13	12.4	13	14.1	5.0	30	170	1.0	0.1	8.0	19	0.08
CPZ28X-BZX84C15	13.8	15	15.6	5.0	30	200	1.0	0.05	10.5	17	0.08
CPZ28X-BZX84C16	15.3	16	17.1	5.0	40	200	1.0	0.05	11.2	16	0.08
CPZ28X-BZX84C18	16.8	18	19.1	5.0	45	225	1.0	0.05	12.6	14	0.08
CPZ28X-BZX84C20	18.8	20	21.2	5.0	55	225	1.0	0.05	14.0	12	0.08
CPZ28X-BZX84C22	20.8	22	23.3	5.0	55	250	1.0	0.05	15.4	11	0.09
CPZ28X-BZX84C24	22.8	24	25.6	5.0	70	250	1.0	0.05	16.8	10	0.09
CPZ28X-BZX84C27	25.1	27	28.9	2.0	80	300	0.5	0.05	18.9	9	0.09
CPZ28X-BZX84C30	28.0	30	32.0	2.0	80	300	0.5	0.05	21.0	8	0.09
CPZ28X-BZX84C33	31.0	33	35.0	2.0	80	325	0.5	0.05	23.1	7	0.09
CPZ28X-BZX84C36	34.0	36	38.0	2.0	90	350	0.5	0.05	25.2	6.9	0.09
CPZ28X-BZX84C39	37.0	39	41.0	2.0	130	350	0.5	0.05	27.3	6.4	0.09
CPZ28X-BZX84C43	40.0	43	46.0	2.0	150	375	0.5	0.05	30.1	5.8	0.10
CPZ28X-BZX84C47	44.0	47	50.0	2.0	170	375	0.5	0.05	32.9	5.3	0.10

CPZ28X-BZX84C2V4 THRU  
 CPZ28X-BZX84C47  
 Typical Electrical Characteristics



## BARE DIE PACKING OPTIONS

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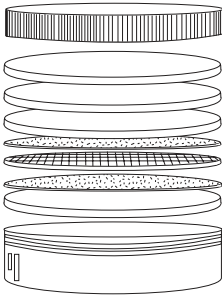


### BARE DIE IN TRAY (WAFFLE) PACK

**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)

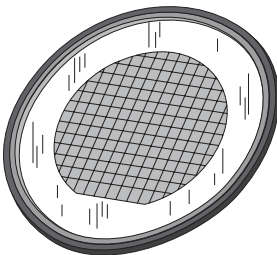
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### UNSAWN WAFER

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

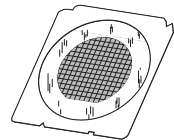
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### SAWN WAFER ON PLASTIC RING

**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

---

### 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

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

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