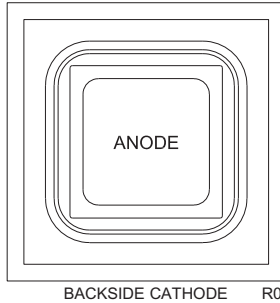


The CPZ28X-1N4678 thru CPZ28X-1N4717 are silicon Zener diodes ideal for all types of commercial, industrial, entertainment, and computer applications.



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 I_{ZT}	Maximum Reverse Leakage Current $I_R @ V_R$		Maximum Voltage Change* ΔV_Z	Maximum Regulator Current I_{ZM}
	MIN	NOM	MAX		μA	V		
	V	V	V					
CPZ28X-1N4678	1.710	1.8	1.890	50	7.5	1.0	0.70	120.0
CPZ28X-1N4679	1.900	2.0	2.100	50	5.0	1.0	0.70	110.0
CPZ28X-1N4680	2.090	2.2	2.310	50	4.0	1.0	0.75	100.0
CPZ28X-1N4681	2.280	2.4	2.520	50	2.0	1.0	0.80	95.0
CPZ28X-1N4682	2.565	2.7	2.835	50	1.0	1.0	0.85	90.0
CPZ28X-1N4683	2.850	3.0	3.150	50	0.8	1.0	0.90	85.0
CPZ28X-1N4684	3.135	3.3	3.465	50	7.5	1.5	0.95	80.0
CPZ28X-1N4685	3.420	3.6	3.780	50	7.5	2.0	0.95	75.0
CPZ28X-1N4686	3.705	3.9	4.095	50	5.0	2.0	0.97	70.0
CPZ28X-1N4687	4.085	4.3	4.515	50	4.0	2.0	0.99	65.0
CPZ28X-1N4688	4.465	4.7	4.935	50	10	3.0	0.99	60.0
CPZ28X-1N4689	4.845	5.1	5.355	50	10	3.0	0.97	55.0
CPZ28X-1N4690	5.320	5.6	5.880	50	10	4.0	0.96	50.0
CPZ28X-1N4691	5.890	6.2	6.510	50	10	5.0	0.95	45.0
CPZ28X-1N4692	6.460	6.8	7.140	50	10	5.1	0.90	35.0
CPZ28X-1N4693	7.125	7.5	7.875	50	10	5.7	0.75	31.8
CPZ28X-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 (26-June 2017)

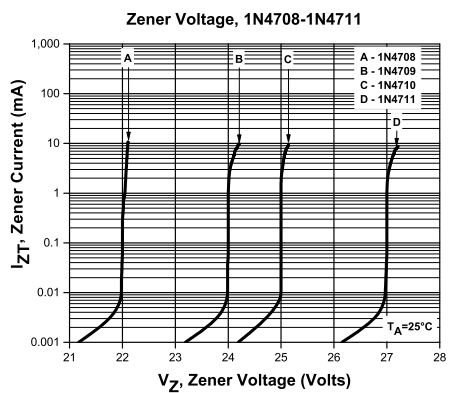
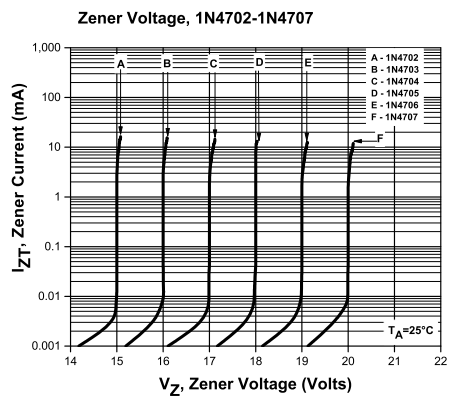
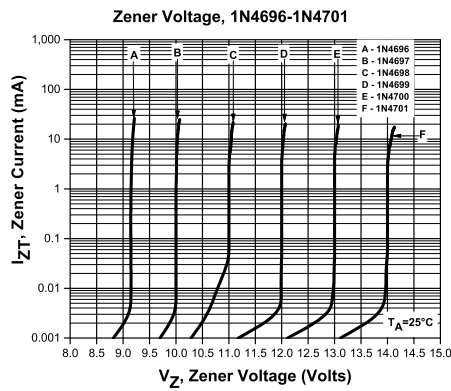
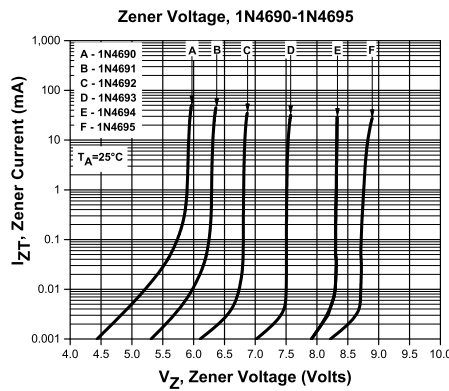
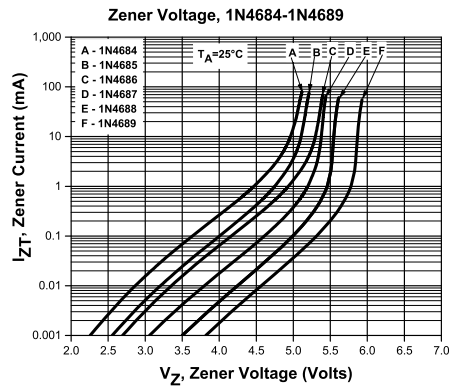
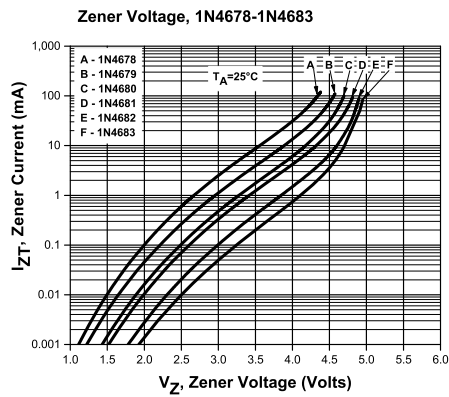
**CPZ28X-1N4678 THRU
CPZ28X-1N4717
Zener Diode Die
500mW, 1.8 THRU 43 VOLT**

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

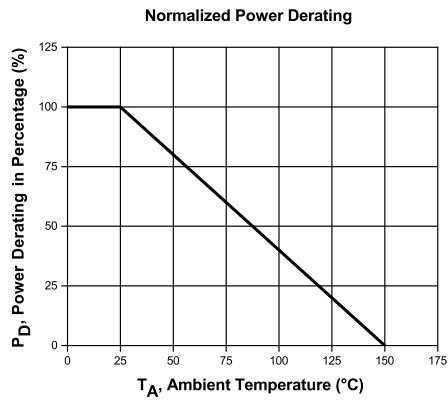
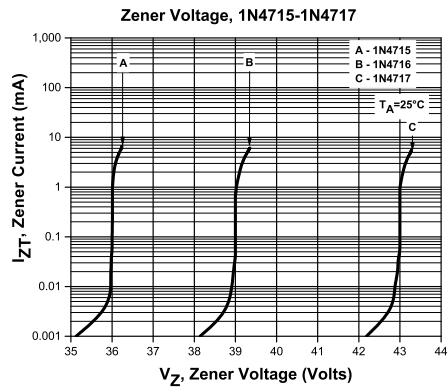
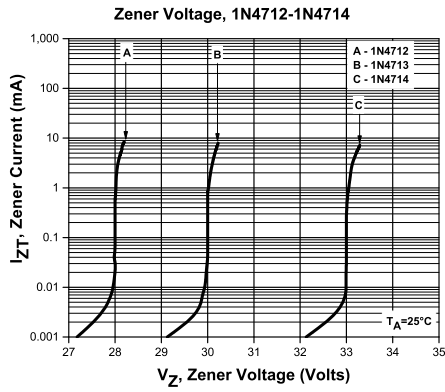
Type	Zener Voltage $V_Z @ I_{ZT}$			Test Current I_{ZT}	Maximum Reverse Leakage Current $I_R @ V_R$		Maximum Voltage Change* ΔV_Z	Maximum Regulator Current I_{ZM}
	MIN	NOM	MAX		μA	V		
	V	V	V	μA	V	V	mA	
CPZ28X-1N4695	8.265	8.7	9.135	50	1.0	6.6	0.10	27.6
CPZ28X-1N4696	8.645	9.1	9.555	50	1.0	6.9	0.08	26.2
CPZ28X-1N4697	9.500	10	10.50	50	1.0	7.6	0.10	24.8
CPZ28X-1N4698	10.45	11	11.55	50	0.05	8.4	0.11	21.6
CPZ28X-1N4699	11.40	12	12.60	50	0.05	9.1	0.12	20.4
CPZ28X-1N4700	12.35	13	13.65	50	0.05	9.8	0.13	19.0
CPZ28X-1N4701	13.30	14	14.70	50	0.05	10.6	0.14	17.5
CPZ28X-1N4702	14.25	15	15.75	50	0.05	11.4	0.15	16.3
CPZ28X-1N4703	15.20	16	16.80	50	0.05	12.1	0.16	15.4
CPZ28X-1N4704	16.15	17	17.85	50	0.05	12.9	0.17	14.5
CPZ28X-1N4705	17.10	18	18.90	50	0.05	13.6	0.18	13.2
CPZ28X-1N4706	18.05	19	19.95	50	0.05	14.4	0.19	12.5
CPZ28X-1N4707	19.00	20	21.00	50	0.01	15.2	0.20	11.9
CPZ28X-1N4708	20.90	22	23.10	50	0.01	16.7	0.22	10.8
CPZ28X-1N4709	22.80	24	25.20	50	0.01	18.2	0.24	9.9
CPZ28X-1N4710	23.75	25	26.25	50	0.01	19.0	0.25	9.5
CPZ28X-1N4711	25.65	27	28.35	50	0.01	20.4	0.27	8.8
CPZ28X-1N4712	26.60	28	29.40	50	0.01	21.2	0.28	8.5
CPZ28X-1N4713	28.50	30	31.50	50	0.01	22.8	0.30	7.9
CPZ28X-1N4714	31.35	33	34.65	50	0.01	25.0	0.33	7.2
CPZ28X-1N4715	34.20	36	37.80	50	0.01	27.3	0.36	6.6
CPZ28X-1N4716	37.05	39	40.95	50	0.01	29.6	0.39	6.1
CPZ28X-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 $V_Z @ 10\mu\text{A}$

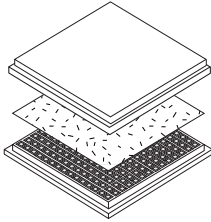
CPZ28X-1N4678 THRU
 CPZ28X-1N4717
 Typical Electrical Characteristics



CPZ28X-1N4678 THRU
 CPZ28X-1N4717
 Typical Electrical Characteristics



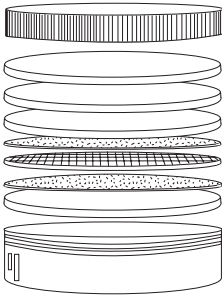
BARE DIE PACKING OPTIONS



BARE DIE IN TRAY (WAFFLE) PACK

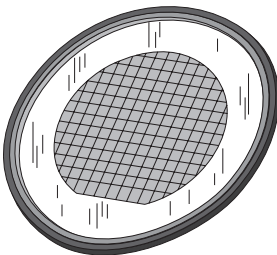
CT: Singulated die in tray (waffle) pack.
(example: CP211-PART NUMBER-CT)

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

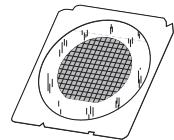
WN: Full wafer, unsawn, 100% tested with reject die inked.
(example: CP211-PART NUMBER-WN)



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
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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



Product End of Life Notification

PDN ID:	PDN01257
Notification Date:	5/31/23
Last Buy Date:	Stock Only
Last Shipment Date:	Stock Only

<https://www.centrasemi.com>

Please be advised that Central Semiconductor must immediately discontinue the product(s) listed in the attached PDN notice. Orders can only be accepted for products with available inventory on hand.

You may have purchased one or more of the products listed. Please do not hesitate to contact your local Central Semiconductor sales representative with any questions or needs you may have. Central regrets any inconvenience this may cause.

Sincerely,

Central Semiconductor Corp.

DISCLAIMER: This End of Life (EOL) notification is in accordance with JEDEC standard JESD48 - Product Discontinuance. Central Semiconductor will make every effort to offer life-time buy (LTB) opportunities and/or offer replacement devices to existing customers for discontinued devices, however, one or both may not be possible for all devices. Please contact your local Central Semiconductor sales representative for LTB opportunities/additional information.



<https://www.centalsemi.com>

Product End of Life Notification

PDN ID:	PDN01257
Notification Date:	5/31/23
Last Buy Date:	Stock Only
Last Shipment Date	Stock Only

Summary: The CPZ28X chip process is discontinued and the following items are now classified as End of Life (EOL).

Although Central Semiconductor makes every effort to continue to produce devices that have been proclaimed EOL (End of Life) by other manufacturers, it is an accepted industry practice to discontinue certain devices when customer demand falls below a minimum level of sustainability. Accordingly, the following product(s) have been transitioned to End of Life status as part of Central's ongoing Product Portfolio Management. Any replacement products are noted below. The effective date for placing last purchase orders will be six (6) months from the date of this notice and twelve (12) months from the notice date for final shipments, and minimum order quantities may apply. The last purchase and shipment dates may be extended if inventory is available.

*** All Plating types (PBFREE,TIN/LEAD) for each item listed are included in this notice.**

Central Part Number	Suggested Replacement
CPZ28X-BZX55C3V3-CM	CPZ58X-BZX55C3V3-CM
CPZ28X-BZX55C3V3-CT	CPZ58X-BZX55C3V3-CT
CPZ28X-BZX55C3V3-WN	CPZ58X-BZX55C3V3-WN
CPZ28X-BZX55C6V8-CT	CPZ58X-BZX55C6V8-CT
CPZ28X-BZX55C6V8-WN	CPZ58X-BZX55C6V8-WN
CPZ28X-BZX84B5V1-CT	CPZ58X-BZX84B5V1-CT
CPZ28X-BZX84B5V1-WN	CPZ58X-BZX84B5V1-WN
CPZ28X-CMPZ5226B-WR	CPZ58X-CMPZ5226B-WR
CPZ28X-CMPZ5235B-CT	CPZ58X-CMPZ5235B-CT
CPZ28X-CMPZ5235B-WN	CPZ58X-CMPZ5235B-WN
CPZ28X-C5235B-CT20	N/A
CPZ28X-1N4099-CT	CPZ58X-1N4099-CT
CPZ28X-1N4099-WN	CPZ58X-1N4099-WN
CPZ28X-1N4623-CT	CPZ58X-1N4623-CT
CPZ28X-1N4623-WN	CPZ58X-1N4623-WN
CPZ28X-1N4692-CT	CPZ58X-1N4692-CT
CPZ28X-1N4692-WN	CPZ58X-1N4692-WN
CPZ28X-1N5237B-CT	CPZ58X-1N5237B-CT
CPZ28X-1N968B-WN	CPZ59X-1N968B-WN

Central would be happy to assist you by providing additional information or technical data to help locate an alternate source if we have no replacement available. If you would like assistance, please visit <https://my.centalsemi.com/submit-inquiry?type=ER> to submit an online inquiry.

DISCLAIMER: This End of Life (EOL) notification is in accordance with JEDEC standard JESD48 - Product Discontinuance. Central Semiconductor will make every effort to offer life-time buy (LTB) opportunities and/or offer replacement devices to existing customers for discontinued devices, however, one or both may not be possible for all devices. Please contact your local Central Semiconductor sales representative for LTB opportunities/additional information.