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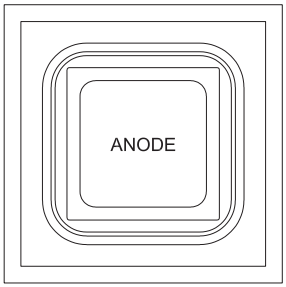
CPZ58X-1N5518B THRU CPZ58X-1N5546B
Zener Diode Die
400mW, 3.3 THRU 33 VOLT

The CPZ58X-1N5518B thru CPZ58X-1N5546B are silicon Zener diodes ideal for all types of commercial, industrial, entertainment, and computer applications.



BACKSIDE CATHODE R0

MECHANICAL SPECIFICATIONS:

Die Size	13 x 13 MILS
Die Thickness	5.5 MILS
Anode Bonding Pad Size	5.9 x 5.9 MILS
Top Side Metalization	AlSiCu – 35,000Å
Back Side Metalization	AuAs – 12,000Å
Scribe Alley Width	1.79 MILS
Wafer Diameter	6 INCHES
Gross Die Per Wafer	142,858

MAXIMUM RATINGS: **SYMBOL** **UNITS**

Operating and Storage Junction Temperature T_J, T_{stg} -65 to +150 °C

ELECTRICAL CHARACTERISTICS: (T_A=25°C) V_F=1.1V MAX @ I_F=200mA (for all types)

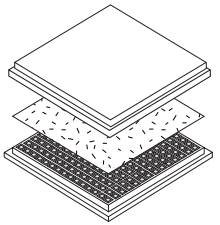
Type	Zener Voltage V_Z @ I_{ZT}			Test Current	Maximum Zener Impedance (Note 1)	Maximum Reverse Current		Maximum Voltage Regulation (Note 2)		Maximum Regulator Current	Maximum Noise Density (Note 3)	Maximum Temperature Coefficient @ I_{ZT}
	MIN	NOM	MAX	I_{ZT}	Z_{ZT} @ I_{ZT}	I_R @ V_R		ΔV_Z @ I_{ZL}		I_{ZM}	N_D @ 250µA	ΘV_Z
	V	V	V	mA	Ω	µA	V	V	mA	mA	µV/√Hz	% / °C
CPZ58X-1N5518B	3.135	3.3	3.465	20	26	5.0	1.0	0.9	2.0	115	0.5	-0.070
CPZ58X-1N5519B	3.420	3.6	3.780	20	24	3.0	1.0	0.9	2.0	105	0.5	-0.065
CPZ58X-1N5520B	3.705	3.9	4.095	20	22	1.0	1.0	0.85	2.0	98	0.5	-0.060
CPZ58X-1N5521B	4.085	4.3	4.515	20	18	3.0	1.5	0.75	2.0	88	0.5	-0.055 +0.020
CPZ58X-1N5522B	4.465	4.7	4.935	10	22	2.0	2.0	0.60	1.0	81	0.5	-0.043 +0.025
CPZ58X-1N5523B	4.845	5.1	5.355	5.0	26	2.0	2.5	0.65	0.25	75	0.5	-0.030 +0.030
CPZ58X-1N5524B	5.320	5.6	5.880	3.0	30	2.0	3.5	0.30	0.25	68	1.0	-0.030 +0.045
CPZ58X-1N5525B	5.890	6.2	6.510	1.0	30	1.0	5.0	0.20	0.01	61	1.0	+0.050
CPZ58X-1N5526B	6.460	6.8	7.140	1.0	30	1.0	6.2	0.10	0.01	56	1.0	+0.052
CPZ58X-1N5527B	7.125	7.5	7.875	1.0	35	0.5	6.8	0.05	0.01	51	2.0	+0.058
CPZ58X-1N5528B	7.790	8.2	8.610	1.0	40	0.5	7.5	0.05	0.01	46	4.0	+0.062
CPZ58X-1N5529B	8.645	9.1	9.555	1.0	45	0.1	8.2	0.05	0.01	42	4.0	+0.068
CPZ58X-1N5530B	9.500	10	10.50	1.0	60	0.05	9.1	0.10	0.01	38	4.0	+0.075
CPZ58X-1N5531B	10.45	11	11.55	1.0	80	0.05	9.9	0.20	0.01	35	5.0	+0.075
CPZ58X-1N5532B	11.40	12	12.60	1.0	90	0.05	10.8	0.20	0.01	32	10	+0.080
CPZ58X-1N5533B	12.35	13	13.65	1.0	90	0.01	11.7	0.20	0.01	29	15	+0.080
CPZ58X-1N5534B	13.30	14	14.70	1.0	100	0.01	12.6	0.20	0.01	27	20	+0.082
CPZ58X-1N5535B	14.25	15	15.75	1.0	100	0.01	13.5	0.20	0.01	25	20	+0.082
CPZ58X-1N5536B	15.20	16	16.80	1.0	100	0.01	14.4	0.20	0.01	24	20	+0.083
CPZ58X-1N5537B	16.15	17	17.85	1.0	100	0.01	15.3	0.20	0.01	22	20	+0.085
CPZ58X-1N5538B	17.10	18	18.90	1.0	100	0.01	16.2	0.20	0.01	21	20	+0.085

ELECTRICAL CHARACTERISTICS - Continued: (T_A=25°C) V_F=1.1V MAX @ I_F=200mA (for all types)

Type	Zener Voltage V_Z @ I_{ZT}			Test Current	Maximum Zener Impedance (Note 1)	Maximum Reverse Current		Maximum Voltage Regulation (Note 2)		Maximum Regulator Current	Maximum Noise Density (Note 3)	Maximum Temperature Coefficient @ I_{ZT}
	MIN	NOM	MAX	I_{ZT}	Z_{ZT} @ I_{ZT}	I_R @ V_R		ΔV_Z @ I_{ZL}		I_{ZM}	N_D @ 250µA	ΘV_Z
	V	V	V	mA	Ω	µA	V	V	mA	mA	µV/$\sqrt{Hz}$	% / °C
CPZ58X-1N5539B	18.05	19	19.95	1.0	100	0.01	17.1	0.20	0.01	20	20	+0.086
CPZ58X-1N5540B	19.00	20	21.00	1.0	100	0.01	18.0	0.20	0.01	19	20	+0.086
CPZ58X-1N5541B	20.90	22	23.10	1.0	100	0.01	19.8	0.25	0.01	17	20	+0.087
CPZ58X-1N5542B	22.80	24	25.20	1.0	100	0.01	21.6	0.30	0.01	16	20	+0.088
CPZ58X-1N5543B	23.75	25	26.25	1.0	100	0.01	22.4	0.35	0.01	15	20	+0.090
CPZ58X-1N5544B	26.60	28	29.40	1.0	100	0.01	25.2	0.40	0.01	14	20	+0.091
CPZ58X-1N5545B	28.50	30	31.50	1.0	100	0.01	27.0	0.45	0.01	13	20	+0.091
CPZ58X-1N5546B	31.35	33	34.65	1.0	100	0.01	29.7	0.50	0.01	12	20	+0.092

Notes: 1. Measured with 10%, 60Hz AC superimposed on I_{ZT}.
2. Difference between V_Z @ I_{ZT} and I_{ZL}.
3. Measured from 1.0kHz to 3.0kHz.

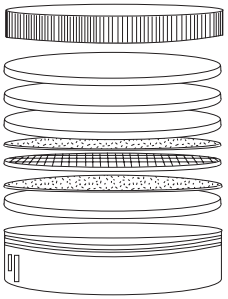
BARE DIE PACKING OPTIONS



BARE DIE IN TRAY (WAFFLE) PACK

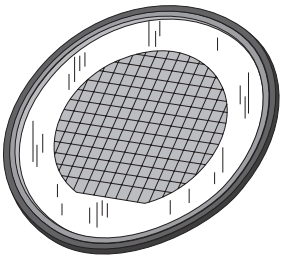
CT: Singulated die in tray (waffle) pack.
(example: CP211-PART NUMBER-CT)

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)



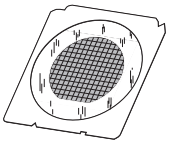
UNSAWN WAFER

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.centralsemi.com/bdspecs

R2 (3-April 2017)

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

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