

CMHZ4678 THRU CMHZ4717

**SURFACE MOUNT SILICON
LOW LEVEL ZENER DIODES
500mW, 1.8 THRU 43 VOLT
5% TOLERANCE**



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMHZ4678 series low level silicon Zener diode is a highly reliable voltage regulator designed for applications requiring an extremely low operating current and low leakage.

**MARKING CODE: SEE MARKING CODE ON
ELECTRICAL CHARACTERISTIC TABLE**



SOD-123 CASE

MAXIMUM RATINGS: ($T_L=75^\circ\text{C}$)

Power Dissipation
Operating and Storage Junction Temperature

SYMBOL

P_D
 T_J, T_{stg}

500
-65 to +150

UNIT

mW
 $^\circ\text{C}$

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 | | | TEST CURRENT | MAXIMUM REVERSE CURRENT | | MAXIMUM ZENER CURRENT | MAXIMUM NOISE DENSITY | MARKING CODE |
|----------|----------------|-------|-------|---------------|-------------------------|-----|-----------------------|--------------------------------|--------------|
| | $V_Z @ I_{ZT}$ | | | I_{ZT} | $I_R @ V_R$ | | I_{ZM} | $N_D @ I_{ZT}$ | |
| | MIN V | NOM V | MAX V | μA | μA | V | mA | $\mu\text{V}/\sqrt{\text{Hz}}$ | |
| CMHZ4678 | 1.710 | 1.8 | 1.890 | 50 | 7.5 | 1.0 | 120.0 | 1.0 | CCC |
| CMHZ4679 | 1.900 | 2.0 | 2.100 | 50 | 5.0 | 1.0 | 110.0 | 1.0 | CCD |
| CMHZ4680 | 2.090 | 2.2 | 2.310 | 50 | 4.0 | 1.0 | 100.0 | 1.0 | CCE |
| CMHZ4681 | 2.280 | 2.4 | 2.520 | 50 | 2.0 | 1.0 | 95.0 | 1.0 | CCF |
| CMHZ4682 | 2.565 | 2.7 | 2.835 | 50 | 1.0 | 1.0 | 90.0 | 1.0 | CCH |
| CMHZ4683 | 2.850 | 3.0 | 3.150 | 50 | 0.8 | 1.0 | 85.0 | 1.0 | CCJ |
| CMHZ4684 | 3.135 | 3.3 | 3.465 | 50 | 7.5 | 1.5 | 80.0 | 1.0 | CCK |
| CMHZ4685 | 3.420 | 3.6 | 3.780 | 50 | 7.5 | 2.0 | 75.0 | 1.0 | CCM |
| CMHZ4686 | 3.705 | 3.9 | 4.095 | 50 | 5.0 | 2.0 | 70.0 | 1.0 | CCN |
| CMHZ4687 | 4.085 | 4.3 | 4.515 | 50 | 4.0 | 2.0 | 65.0 | 1.0 | CCP |
| CMHZ4688 | 4.465 | 4.7 | 4.935 | 50 | 10 | 3.0 | 60.0 | 1.0 | CCT |
| CMHZ4689 | 4.845 | 5.1 | 5.355 | 50 | 10 | 3.0 | 55.0 | 2.0 | CCU |
| CMHZ4690 | 5.320 | 5.6 | 5.880 | 50 | 10 | 4.0 | 50.0 | 4.0 | CCV |
| CMHZ4691 | 5.890 | 6.2 | 6.510 | 50 | 10 | 5.0 | 45.0 | 5.0 | CCA |
| CMHZ4692 | 6.460 | 6.8 | 7.140 | 50 | 10 | 5.1 | 35.0 | 40 | CCX |
| CMHZ4693 | 7.125 | 7.5 | 7.875 | 50 | 10 | 5.7 | 31.8 | 40 | CCY |
| CMHZ4694 | 7.790 | 8.2 | 8.610 | 50 | 1.0 | 6.2 | 29.0 | 40 | CCZ |
| CMHZ4695 | 8.265 | 8.7 | 9.135 | 50 | 1.0 | 6.6 | 27.4 | 40 | CDC |
| CMHZ4696 | 8.645 | 9.1 | 9.555 | 50 | 1.0 | 6.9 | 26.2 | 40 | CDD |

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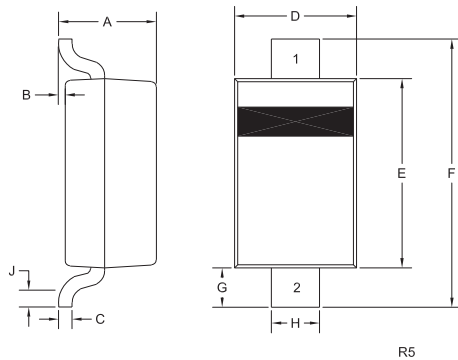
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ELECTRICAL CHARACTERISTICS - Continued: ($T_A=25^\circ\text{C}$), $V_F=1.5\text{V MAX @ } I_F=100\text{mA}$ (for all types)

| TYPE | ZENER VOLTAGE | | | TEST CURRENT I_{ZT} | MAXIMUM REVERSE CURRENT $I_R @ V_R$ | | MAXIMUM ZENER CURRENT I_{ZM} | MAXIMUM NOISE DENSITY $N_D @ I_{ZT}$ | MARKING CODE |
|----------|----------------|-------|-------|--------------------------|--|---------------|-----------------------------------|---|--------------|
| | $V_Z @ I_{ZT}$ | | | | μA | μA | | | |
| | MIN V | NOM V | MAX V | mA | | | $\mu\text{V}/\sqrt{\text{Hz}}$ | | |
| CMHZ4697 | 9.500 | 10 | 10.50 | 50 | 1.0 | 7.6 | 24.8 | 40 | CDE |
| CMHZ4698 | 10.45 | 11 | 11.55 | 50 | 0.05 | 8.4 | 21.6 | 40 | CDF |
| CMHZ4699 | 11.40 | 12 | 12.60 | 50 | 0.05 | 9.1 | 20.4 | 40 | CDH |
| CMHZ4700 | 12.35 | 13 | 13.65 | 50 | 0.05 | 9.8 | 19.0 | 40 | CDJ |
| CMHZ4701 | 13.30 | 14 | 14.70 | 50 | 0.05 | 10.6 | 17.5 | 40 | CDK |
| CMHZ4702 | 14.25 | 15 | 15.75 | 50 | 0.05 | 11.4 | 16.3 | 40 | CDM |
| CMHZ4703 | 15.20 | 16 | 16.80 | 50 | 0.05 | 12.1 | 15.4 | 40 | CDN |
| CMHZ4704 | 16.15 | 17 | 17.85 | 50 | 0.05 | 12.9 | 14.5 | 40 | CDP |
| CMHZ4705 | 17.10 | 18 | 18.90 | 50 | 0.05 | 13.6 | 13.2 | 40 | CDT |
| CMHZ4706 | 18.05 | 19 | 19.95 | 50 | 0.05 | 14.4 | 12.5 | 40 | CDU |
| CMHZ4707 | 19.00 | 20 | 21.00 | 50 | 0.01 | 15.2 | 11.9 | 40 | CDV |
| CMHZ4708 | 20.90 | 22 | 23.10 | 50 | 0.01 | 16.7 | 10.8 | 40 | CDA |
| CMHZ4709 | 22.80 | 24 | 25.20 | 50 | 0.01 | 18.2 | 9.9 | 40 | CDZ |
| CMHZ4710 | 23.75 | 25 | 26.25 | 50 | 0.01 | 19.0 | 9.5 | 40 | CDY |
| CMHZ4711 | 25.65 | 27 | 28.35 | 50 | 0.01 | 20.4 | 8.8 | 40 | CEA |
| CMHZ4712 | 26.60 | 28 | 29.40 | 50 | 0.01 | 21.2 | 8.5 | 40 | CEC |
| CMHZ4713 | 28.50 | 30 | 31.50 | 50 | 0.01 | 22.8 | 7.9 | 40 | CED |
| CMHZ4714 | 31.35 | 33 | 34.65 | 50 | 0.01 | 25.0 | 7.2 | 40 | CEE |
| CMHZ4715 | 34.20 | 36 | 37.80 | 50 | 0.01 | 27.3 | 6.6 | 40 | CEF |
| CMHZ4716 | 37.05 | 39 | 40.95 | 50 | 0.01 | 29.6 | 6.1 | 40 | CEH |
| CMHZ4717 | 40.85 | 43 | 45.15 | 50 | 0.01 | 32.6 | 5.5 | 40 | CEJ |

SOD-123 CASE - MECHANICAL OUTLINE



| SYMBOL | DIMENSIONS | | | |
|--------|------------|-------|-------------|------|
| | INCHES | | MILLIMETERS | |
| | MIN | MAX | MIN | MAX |
| A | 0.037 | 0.053 | 0.95 | 1.35 |
| B | 0.000 | 0.005 | 0.00 | 0.12 |
| C | - | 0.008 | - | 0.20 |
| D | 0.055 | 0.071 | 1.40 | 1.80 |
| E | 0.098 | 0.110 | 2.50 | 2.80 |
| F | 0.142 | 0.154 | 3.60 | 3.90 |
| G | 0.016 | - | 0.40 | - |
| H | 0.020 | 0.028 | 0.50 | 0.70 |
| J | 0.010 | - | 0.25 | - |

SOD-123 (REV:R5)

Lead Code:
1) Cathode
2) Anode

R5

R7 (23-September 2015)

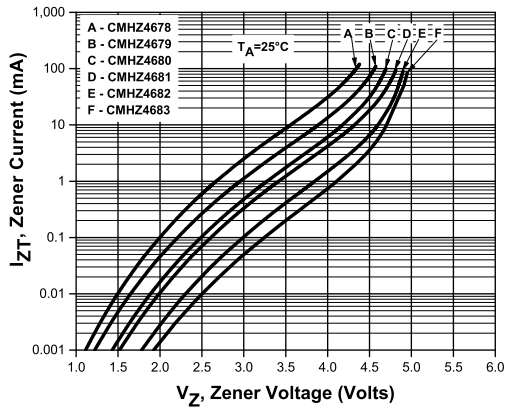
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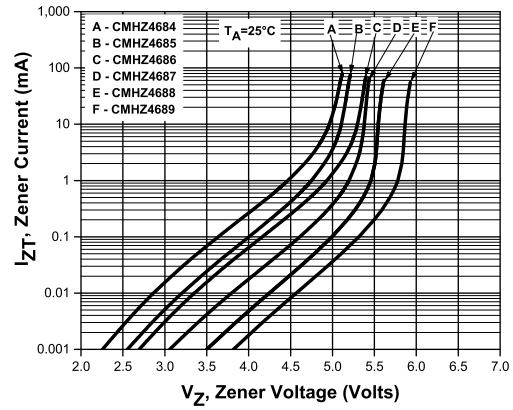


TYPICAL ELECTRICAL CHARACTERISTICS

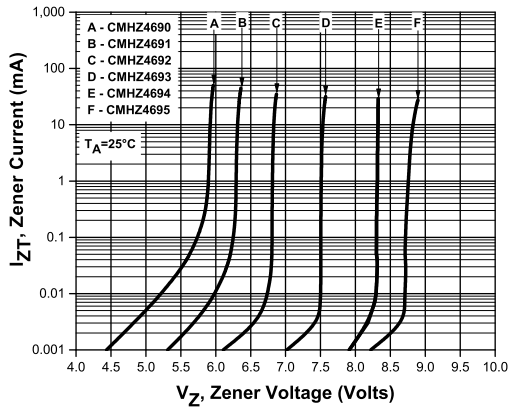
Zener Voltage, CMHZ4678-CMHZ4683



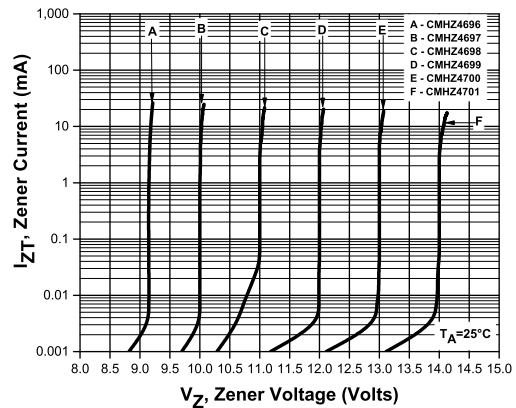
Zener Voltage, CMHZ4684-CMHZ4689



Zener Voltage, CMHZ4690-CMHZ4695



Zener Voltage, CMHZ4696-CMHZ4701



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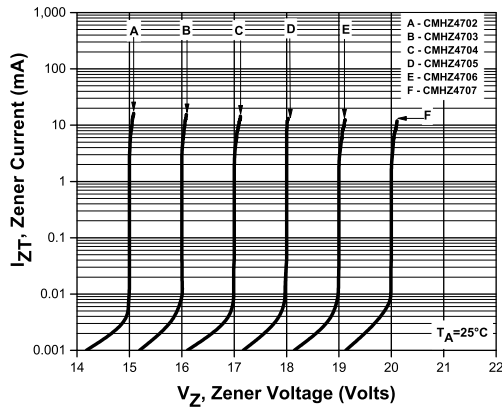
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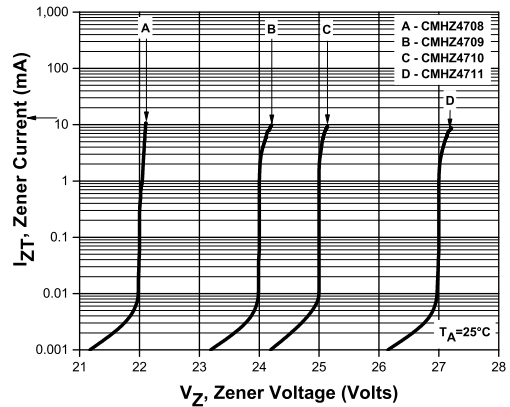


TYPICAL ELECTRICAL CHARACTERISTICS

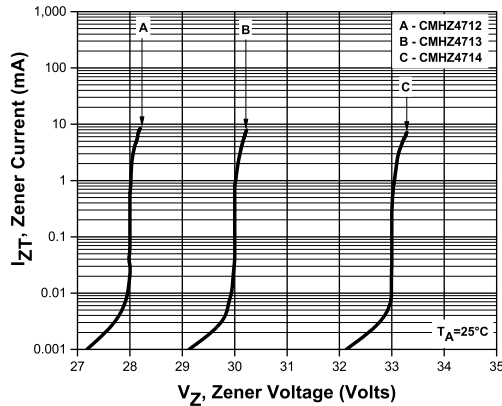
Zener Voltage, CMHZ4702-CMHZ4707



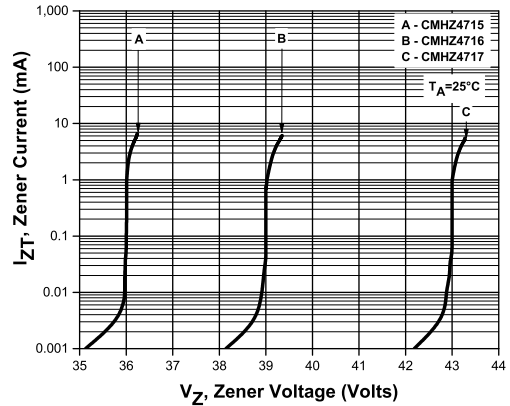
Zener Voltage, CMHZ4708-CMHZ4711



Zener Voltage, CMHZ4712-CMHZ4714



Zener Voltage, CMHZ4715-CMHZ4717



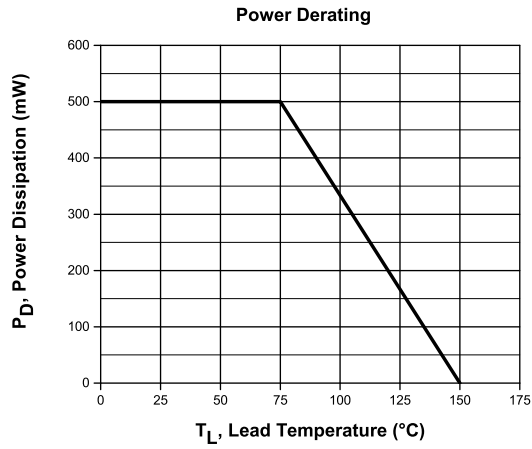
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TYPICAL ELECTRICAL CHARACTERISTICS



R7 (23-September 2015)



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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