

CMHZ4678
THRU
CMHZ4717

LOW LEVEL ZENER DIODE
1.8 VOLTS THRU 43 VOLTS
500mW, 5% TOLERANCE

CentralTM
Semiconductor Corp.

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMHZ4678 Series Silicon Low Level Zener Diode is a high quality voltage regulator designed for applications requiring an extremely low operating current and low leakage.



SOD-123 CASE

ABSOLUTE MAXIMUM RATINGS:

Power Dissipation (@T_A=25°C)
Operating and Storage Temperature

SYMBOL

P_D
T_J, T_{stg}

500
-65 to +200

UNIT

mW
°C

ELECTRICAL CHARACTERISTICS: (T_A=25°C), V_F=1.5V MAX @ I_F=100mA FOR ALL TYPES.

| TYPE | ZENER VOLTAGE V _Z @ I _{ZT} | | | TEST CURRENT | MAXIMUM REVERSE LEAKAGE CURRENT | | MAXIMUM VOLTAGE CHANGE** | MAXIMUM ZENER CURRENT | MARKING CODE |
|----------|---|-------|-------|-----------------|---------------------------------|-------|--------------------------|-----------------------|--------------|
| | MIN | NOM | MAX | I _{ZT} | I _R @ V _R | | ΔV _Z | I _{ZM} | |
| | VOLTS | VOLTS | VOLTS | μA | μA | VOLTS | VOLTS | mA | |
| CMHZ4678 | 1.710 | 1.8 | 1.890 | 50 | 7.5 | 1.0 | 0.70 | 120.0 | CCC |
| CMHZ4679 | 1.900 | 2.0 | 2.100 | 50 | 5.0 | 1.0 | 0.70 | 110.0 | CCD |
| CMHZ4680 | 2.090 | 2.2 | 2.310 | 50 | 4.0 | 1.0 | 0.75 | 100.0 | CCE |
| CMHZ4681 | 2.280 | 2.4 | 2.520 | 50 | 2.0 | 1.0 | 0.80 | 95.0 | CCF |
| CMHZ4682 | 2.565 | 2.7 | 2.835 | 50 | 1.0 | 1.0 | 0.85 | 90.0 | CCH |
| CMHZ4683 | 2.850 | 3.0 | 3.150 | 50 | 0.8 | 1.0 | 0.90 | 85.0 | CCJ |
| CMHZ4684 | 3.135 | 3.3 | 3.465 | 50 | 7.5 | 1.5 | 0.95 | 80.0 | CCK |
| CMHZ4685 | 3.420 | 3.6 | 3.780 | 50 | 7.5 | 2.0 | 0.95 | 75.0 | CCM |
| CMHZ4686 | 3.705 | 3.9 | 4.095 | 50 | 5.0 | 2.0 | 0.97 | 70.0 | CCN |
| CMHZ4687 | 4.085 | 4.3 | 4.515 | 50 | 4.0 | 2.0 | 0.99 | 65.0 | CCP |
| CMHZ4688 | 4.465 | 4.7 | 4.935 | 50 | 10 | 3.0 | 0.99 | 60.0 | CCT |
| CMHZ4689 | 4.845 | 5.1 | 5.355 | 50 | 10 | 3.0 | 0.97 | 55.0 | CCU |
| CMHZ4690 | 5.320 | 5.6 | 5.880 | 50 | 10 | 4.0 | 0.96 | 50.0 | CCV |
| CMHZ4691 | 5.890 | 6.2 | 6.510 | 50 | 10 | 5.0 | 0.95 | 45.0 | CCA |
| CMHZ4692 | 6.460 | 6.8 | 7.140 | 50 | 10 | 5.1 | 0.90 | 35.0 | CCX |
| CMHZ4693 | 7.125 | 7.5 | 7.875 | 50 | 10 | 5.7 | 0.75 | 31.8 | CCY |
| CMHZ4694 | 7.790 | 8.2 | 8.610 | 50 | 1.0 | 6.2 | 0.50 | 29.0 | CCZ |
| CMHZ4695 | 8.265 | 8.7 | 9.135 | 50 | 1.0 | 6.6 | 0.10 | 27.4 | CDC |
| CMHZ4696 | 8.645 | 9.1 | 9.555 | 50 | 1.0 | 6.9 | 0.08 | 26.2 | CDD |

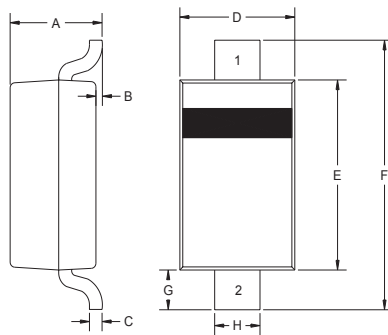
** ΔV_Z=V_Z @ 100μA MINUS V_Z @ 10μA

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 | MAXIMUM REVERSE LEAKAGE CURRENT | | MAXIMUM VOLTAGE CHANGE** | MAXIMUM ZENER CURRENT | MARKING CODE |
|----------|---------------------------------|-------|-------|---------------|---------------------------------|-------|--------------------------|-----------------------|--------------|
| | MIN | NOM | MAX | I_{ZT} | $I_R @ V_R$ | | ΔV_Z | I_{ZM} | |
| | VOLTS | VOLTS | VOLTS | μA | μA | VOLTS | VOLTS | mA | |
| CMHZ4697 | 9.500 | 10 | 10.50 | 50 | 1.0 | 7.6 | 0.10 | 24.8 | CDE |
| CMHZ4698 | 10.45 | 11 | 11.55 | 50 | 0.05 | 8.4 | 0.11 | 21.6 | CDF |
| CMHZ4699 | 11.40 | 12 | 12.60 | 50 | 0.05 | 9.1 | 0.12 | 20.4 | CDH |
| CMHZ4700 | 12.35 | 13 | 13.65 | 50 | 0.05 | 9.8 | 0.13 | 19.0 | CDJ |
| CMHZ4701 | 13.30 | 14 | 14.70 | 50 | 0.05 | 10.6 | 0.14 | 17.5 | CDK |
| CMHZ4702 | 14.25 | 15 | 15.75 | 50 | 0.05 | 11.4 | 0.15 | 16.3 | CDM |
| CMHZ4703 | 15.20 | 16 | 16.80 | 50 | 0.05 | 12.1 | 0.16 | 15.4 | CDN |
| CMHZ4704 | 16.15 | 17 | 17.85 | 50 | 0.05 | 12.9 | 0.17 | 14.5 | CDP |
| CMHZ4705 | 17.10 | 18 | 18.90 | 50 | 0.05 | 13.6 | 0.18 | 13.2 | CDT |
| CMHZ4706 | 18.05 | 19 | 19.95 | 50 | 0.05 | 14.4 | 0.19 | 12.5 | CDU |
| CMHZ4707 | 19.00 | 20 | 21.00 | 50 | 0.01 | 15.2 | 0.20 | 11.9 | CDV |
| CMHZ4708 | 20.90 | 22 | 23.10 | 50 | 0.01 | 16.7 | 0.22 | 10.8 | CDA |
| CMHZ4709 | 22.80 | 24 | 25.20 | 50 | 0.01 | 18.2 | 0.24 | 9.9 | CDZ |
| CMHZ4710 | 23.75 | 25 | 26.25 | 50 | 0.01 | 19.0 | 0.25 | 9.5 | CDY |
| CMHZ4711 | 25.65 | 27 | 28.35 | 50 | 0.01 | 20.4 | 0.27 | 8.8 | CEA |
| CMHZ4712 | 26.60 | 28 | 29.40 | 50 | 0.01 | 21.2 | 0.28 | 8.5 | CEC |
| CMHZ4713 | 28.50 | 30 | 31.50 | 50 | 0.01 | 22.8 | 0.30 | 7.9 | CED |
| CMHZ4714 | 31.35 | 33 | 34.65 | 50 | 0.01 | 25.0 | 0.33 | 7.2 | CEE |
| CMHZ4715 | 34.20 | 36 | 37.80 | 50 | 0.01 | 27.3 | 0.36 | 6.6 | CEF |
| CMHZ4716 | 37.05 | 39 | 40.95 | 50 | 0.01 | 29.6 | 0.39 | 6.1 | CEH |
| CMHZ4717 | 40.85 | 43 | 45.15 | 50 | 0.01 | 32.6 | 0.43 | 5.5 | CEJ |

** $\Delta V_Z = V_Z @ 100\mu\text{A}$ MINUS $V_Z @ 10\mu\text{A}$

SOD-123 CASE - MECHANICAL OUTLINE



| SYMBOL | DIMENSIONS | | | |
|--------|------------|-------|-------------|------|
| | INCHES | | MILLIMETERS | |
| | MIN | MAX | MIN | MAX |
| A | 0.037 | 0.053 | 0.95 | 1.35 |
| B | - | 0.005 | - | 0.12 |
| C | - | 0.008 | - | 0.20 |
| D | 0.055 | 0.071 | 1.40 | 1.80 |
| E | 0.098 | 0.112 | 2.50 | 2.84 |
| F | 0.140 | 0.154 | 3.55 | 3.90 |
| G | 0.010 | - | 0.25 | - |
| H | 0.020 | 0.028 | 0.50 | 0.70 |

SOD-123 (REV:R3)

Lead Code:

- 1) Cathode
- 2) Anode

R3

R0 (29-August 2001)