

- 1N4565AUR-1 THRU 1N4584AUR-1 AVAILABLE IN JAN, JANTX, JANTXV AND JANS 1N4565AUR-1 thru 1N4584AUR-1  
PER MIL-PRF-19500/452
- TEMPERATURE COMPENSATED ZENER REFERENCE DIODES
  - LEADLESS PACKAGE FOR SURFACE MOUNT
  - LOW CURRENT OPERATING RANGE: 0.5 TO 4.0 mA
  - METALLURGICALLY BONDED, DOUBLE PLUG CONSTRUCTION

#### MAXIMUM RATINGS

Operating Temperature: -65°C to +175°C  
Storage Temperature: -65°C to +175°C  
DC Power Dissipation: 500mW @ +50°C  
Power Derating: 4 mW / °C above +50°C

#### REVERSE LEAKAGE CURRENT

IR = 2μA @ 25°C & VR = 3Vdc

ELECTRICAL CHARACTERISTICS @ 25°C, unless otherwise specified.

| CDI TYPE NUMBER       | ZENER TEST CURRENT I <sub>ZT</sub> | EFFECTIVE TEMPERATURE COEFFICIENT | VOLTAGE TEMPERATURE STABILITY ΔV <sub>ZT</sub> MAX -55° to +100° (Note 1) | TEMPERATURE RANGE           | MAX.DYNAMIC ZENER IMPEDANCE Z <sub>VT</sub> (Note 2) |
|-----------------------|------------------------------------|-----------------------------------|---------------------------------------------------------------------------|-----------------------------|------------------------------------------------------|
|                       | mA                                 | %/°C                              | mV                                                                        | °C                          | OHMS                                                 |
| CDLL4565<br>CDLL4565A | .5<br>.5                           | .01<br>.01                        | 48<br>100                                                                 | 0 to +75°C<br>-55 to +100°C | 200<br>200                                           |
| CDLL4566<br>CDLL4566A | .5<br>.5                           | .005<br>.005                      | 24<br>50                                                                  | 0 to +75°C<br>-55 to +100°C | 200<br>200                                           |
| CDLL4567<br>CDLL4567A | .5<br>.5                           | .002<br>.002                      | 10<br>20                                                                  | 0 to +75°C<br>-55 to +100°C | 200<br>200                                           |
| CDLL4568<br>CDLL4568A | .5<br>.5                           | .001<br>.001                      | 5<br>10                                                                   | 0 to +75°C<br>-55 to +100°C | 200<br>200                                           |
| CDLL4569<br>CDLL4569A | .5<br>.5                           | .0005<br>.0005                    | 2.5<br>5                                                                  | 0 to +75°C<br>-55 to +100°C | 200<br>200                                           |
| CDLL4570<br>CDLL4570A | 1.0<br>1.0                         | .01<br>.01                        | 48<br>100                                                                 | 0 to +75°C<br>-55 to +100°C | 100<br>100                                           |
| CDLL4571<br>CDLL4571A | 1.0<br>1.0                         | .005<br>.005                      | 24<br>50                                                                  | 0 to +75°C<br>-55 to +100°C | 100<br>100                                           |
| CDLL4572<br>CDLL4572A | 1.0<br>1.0                         | .002<br>.002                      | 10<br>20                                                                  | 0 to +75°C<br>-55 to +100°C | 100<br>100                                           |
| CDLL4573<br>CDLL4573A | 1.0<br>1.0                         | .001<br>.001                      | 5<br>10                                                                   | 0 to +75°C<br>-55 to +100°C | 100<br>100                                           |
| CDLL4574<br>CDLL4574A | 1.0<br>1.0                         | .0005<br>.0005                    | 2.5<br>5                                                                  | 0 to +75°C<br>-55 to +100°C | 100<br>100                                           |
| CDLL4575<br>CDLL4575A | 2.0<br>2.0                         | .01<br>.01                        | 48<br>100                                                                 | 0 to +75°C<br>-55 to +100°C | 50<br>50                                             |
| CDLL4576<br>CDLL4576A | 2.0<br>2.0                         | .005<br>.005                      | 24<br>50                                                                  | 0 to +75°C<br>-55 to +100°C | 50<br>50                                             |
| CDLL4577<br>CDLL4577A | 2.0<br>2.0                         | .002<br>.002                      | 10<br>20                                                                  | 0 to +75°C<br>-55 to +100°C | 50<br>50                                             |
| CDLL4578<br>CDLL4578A | 2.0<br>2.0                         | .001<br>.001                      | 5<br>10                                                                   | 0 to +75°C<br>-55 to +100°C | 50<br>50                                             |
| CDLL4579<br>CDLL4579A | 2.0<br>2.0                         | .0005<br>.0005                    | 2.5<br>5                                                                  | 0 to +75°C<br>-55 to +100°C | 50<br>50                                             |
| CDLL4580<br>CDLL4580A | 4.0<br>4.0                         | .01<br>.01                        | 48<br>100                                                                 | 0 to +75°C<br>-55 to +100°C | 25<br>25                                             |
| CDLL4581<br>CDLL4581A | 4.0<br>4.0                         | .005<br>.005                      | 24<br>50                                                                  | 0 to +75°C<br>-55 to +100°C | 25<br>25                                             |
| CDLL4582<br>CDLL4582A | 4.0<br>4.0                         | .002<br>.002                      | 10<br>20                                                                  | 0 to +75°C<br>-55 to +100°C | 25<br>25                                             |
| CDLL4583<br>CDLL4583A | 4.0<br>4.0                         | .001<br>.001                      | 5<br>10                                                                   | 0 to +75°C<br>-55 to +100°C | 25<br>25                                             |
| CDLL4584<br>CDLL4584A | 4.0<br>4.0                         | .0005<br>.0005                    | 2.5<br>5                                                                  | 0 to +75°C<br>-55 to +100°C | 25<br>25                                             |

**NOTE 1** The maximum allowable change observed over the entire temperature range i.e., the diode voltage will not exceed the specified mV at any discrete temperature between the established limits, per JEDEC standard No.5.

**NOTE 2** Zener impedance is derived by superimposing on I<sub>ZT</sub> A 60Hz rms a.c. current equal to 10% of I<sub>ZT</sub>.

and  
CDLL4565 thru CDLL4584A

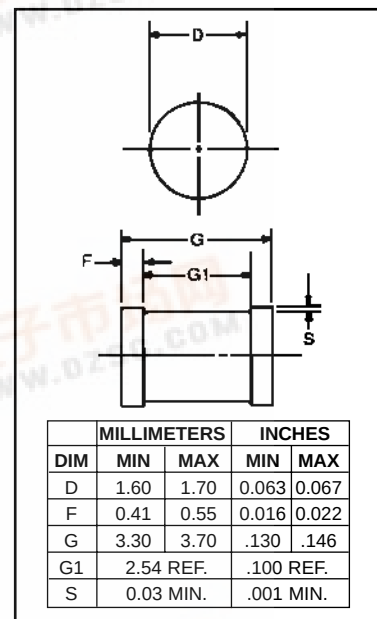


FIGURE 1

#### DESIGN DATA

**CASE:** DO-213AA, Hermetically sealed glass case. (MELF, SOD-80, LL34)

**LEAD FINISH:** Tin / Lead

**POLARITY:** Diode to be operated with the banded (cathode) end positive.

**MOUNTING POSITION:** Any.

**MOUNTING SURFACE SELECTION:**  
The Axial Coefficient of Expansion (COE) Of this Device is Approximately +6PPM/°C. The COE of the Mounting Surface System Should Be Selected To Provide A Suitable Match With This Device.



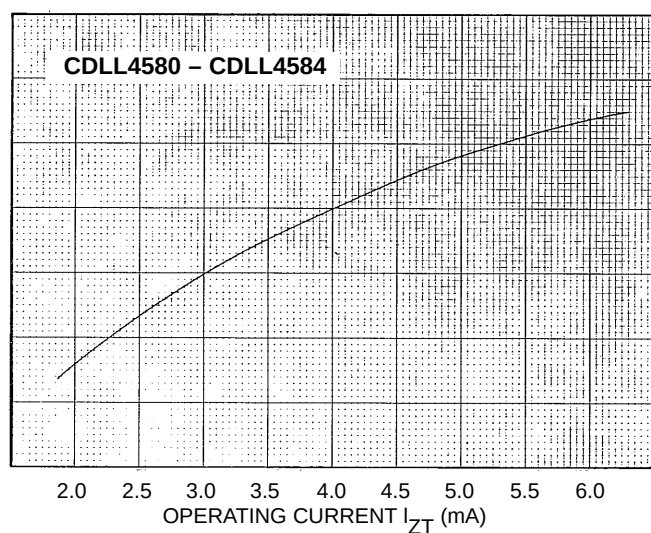
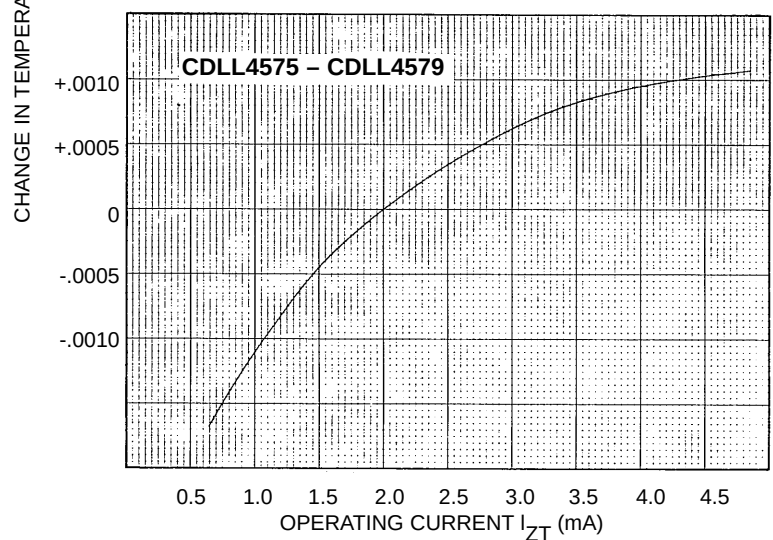
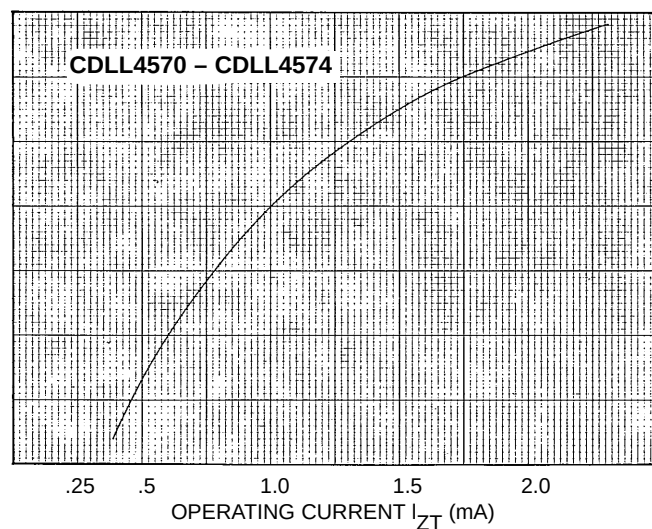
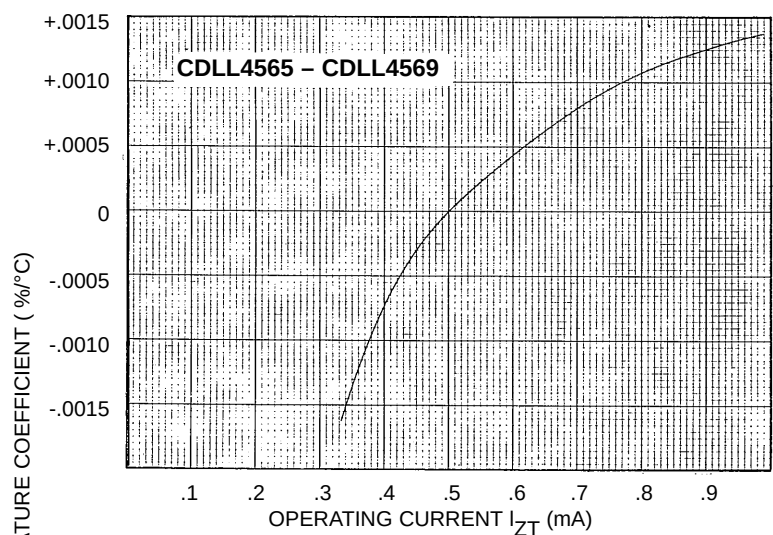
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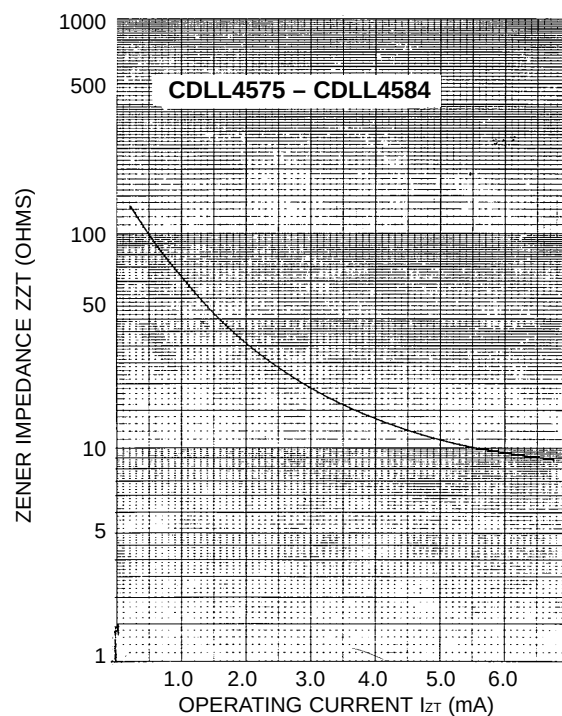
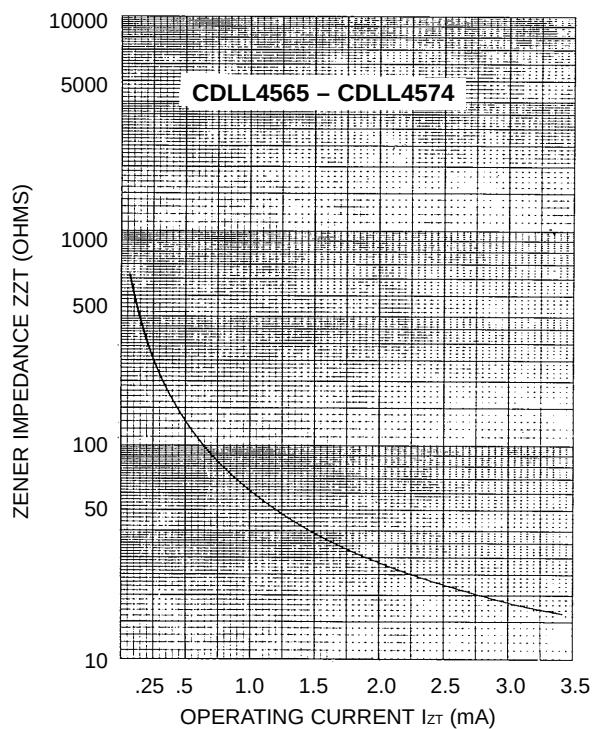
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# CDLL4565 thru CDLL4584A



Typical Change of Temperature Coefficient with Change in Operating Current



Zener Impedance vs. Operating Current