

- 1N4565A THRU 1N4584A AVAILABLE IN JANHC AND JANKC PER MIL-PRF-19500/452
- ALL JUNCTIONS COMPLETELY PROTECTED WITH SILICON DIOXIDE
- 6.4 VOLT ZENER VOLTAGE  $\pm 5\%$
- ELECTRICALLY EQUIVALENT TO 1N4565 THRU 1N4584A
- COMPATIBLE WITH ALL WIRE BONDING AND DIE ATTACH TECHNIQUES, WITH THE EXCEPTION OF SOLDER RELOW

**CD4565**  
thru  
**CD4584A**

#### MAXIMUM RATINGS

Operating Temperature: -65°C to +175°C

Storage Temperature: -65°C to +175°C

#### REVERSE LEAKAGE CURRENT

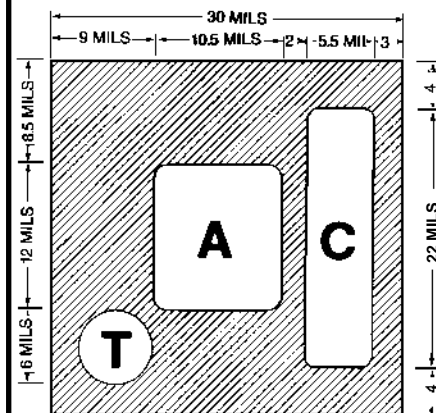
$I_R = 2 \mu A$  @ 25°C &  $V_R = 3 V_{dc}$

ELECTRICAL CHARACTERISTICS @ 25°C, unless otherwise specified.

| TYPE<br>NUMBER<br>6.4V $\pm 5\%$ | ZENER<br>TEST<br>CURRENT<br>$I_{ZT}$ | EFFECTIVE<br>TEMPERATURE<br>COEFFICIENT | VOLTAGE<br>TEMPERATURE<br>STABILITY<br>$\Delta V_{ZT} \text{ MAX}$<br>-55° to +100°<br>(Note 2) | TEMPERATURE<br>RANGE        | MAXIMUM<br>ZENER<br>IMPEDANCE<br>$Z_{ZT}$<br><br>(Note 1) |
|----------------------------------|--------------------------------------|---|---|-----------------------------|---|
|                                  | mA                                   | %/°C                                    | mV  | °C                          | OHMS  |
| CD4565<br>CD4565A                | .5<br>.5                             | .01<br>.01                              | 48<br>100   | 0 to +75°C<br>-55 to +100°C | 200<br>200  |
| CD4566<br>CD4566A                | .5<br>.5                             | .005<br>.005                            | 24<br>50  | 0 to +75°C<br>-55 to +100°C | 200<br>200  |
| CD4567<br>CD4567A                | .5<br>.5                             | .002<br>.002                            | 10<br>20  | 0 to +75°C<br>-55 to +100°C | 200<br>200  |
| CD4568<br>CD4568A                | .5<br>.5                             | .001<br>.001                            | 5<br>10   | 0 to +75°C<br>-55 to +100°C | 200<br>200  |
| CD4569<br>CD4569A                | .5<br>.5                             | .0005<br>.0005                          | 2.5<br>5  | 0 to +75°C<br>-55 to +100°C | 200<br>200  |
| CD4570<br>CD4570A                | 1.0<br>1.0                           | .01<br>.01                              | 48<br>100   | 0 to +75°C<br>-55 to +100°C | 100<br>100  |
| CD4571<br>CD4571A                | 1.0<br>1.0                           | .005<br>.005                            | 24<br>50  | 0 to +75°C<br>-55 to +100°C | 100<br>100  |
| CD4572<br>CD4572A                | 1.0<br>1.0                           | .002<br>.002                            | 10<br>20  | 0 to +75°C<br>-55 to +100°C | 100<br>100  |
| CD4573<br>CD4573A                | 1.0<br>1.0                           | .001<br>.001                            | 5<br>10   | 0 to +75°C<br>-55 to +100°C | 100<br>100  |
| CD4574<br>CD4574A                | 1.0<br>1.0                           | .0005<br>.0005                          | 2.5<br>5  | 0 to +75°C<br>-55 to +100°C | 100<br>100  |
| CD4575<br>CD4575A                | 2.0<br>2.0                           | .01<br>.01                              | 48<br>100   | 0 to +75°C<br>-55 to +100°C | 50<br>50  |
| CD4576<br>CD4576A                | 2.0<br>2.0                           | .005<br>.005                            | 24<br>50  | 0 to +75°C<br>-55 to +100°C | 50<br>50  |
| CD4577<br>CD4577A                | 2.0<br>2.0                           | .002<br>.002                            | 10<br>20  | 0 to +75°C<br>-55 to +100°C | 50<br>50  |
| CD4578<br>CD4578A                | 2.0<br>2.0                           | .001<br>.001                            | 5<br>10   | 0 to +75°C<br>-55 to +100°C | 50<br>50  |
| CD4579<br>CD4579A                | 2.0<br>2.0                           | .0005<br>.0005                          | 2.5<br>5  | 0 to +75°C<br>-55 to +100°C | 50<br>50  |
| CD4580<br>CD4580A                | 4.0<br>4.0                           | .01<br>.01                              | 48<br>100   | 0 to +75°C<br>-55 to +100°C | 25<br>25  |
| CD4581<br>CD4581A                | 4.0<br>4.0                           | .005<br>.005                            | 24<br>50  | 0 to +75°C<br>-55 to +100°C | 25<br>25  |
| CD4582<br>CD4582A                | 4.0<br>4.0                           | .002<br>.002                            | 10<br>20  | 0 to +75°C<br>-55 to +100°C | 25<br>25  |
| CD4583<br>CD4583A                | 4.0<br>4.0                           | .001<br>.001                            | 5<br>10   | 0 to +75°C<br>-55 to +100°C | 25<br>25  |
| CD4584<br>CD4584A                | 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** Zener impedance is derived by superimposing on  $I_{ZT}$  A 60Hz rms a.c. current equal to 10% of  $I_{ZT}$ .

**NOTE 2** 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.



Backside is not cathode and must be electrically isolated.

T = Metallization Test Pad

#### DESIGN DATA

##### METALLIZATION:

Top: C (Cathode) .....Al  
A (Anode) .....Al  
Back: .....Au

AL THICKNESS.....25,000 Å Min

GOLD THICKNESS.....4,000 Å Min

CHIP THICKNESS.....10 Mils

##### CIRCUIT LAYOUT DATA:

Backside must be electrically isolated.

**Backside is not cathode.**

For Zener operation cathode must be operated positive with respect to anode.

##### TOLERANCES: ALL

Dimensions  $\pm 2$  mils



**COMPENSATED DEVICES INCORPORATED**

22 COREY STREET, MELROSE, MASSACHUSETTS 02176

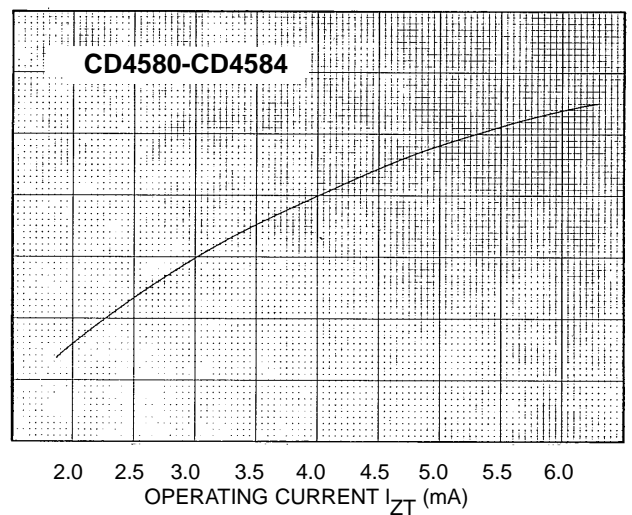
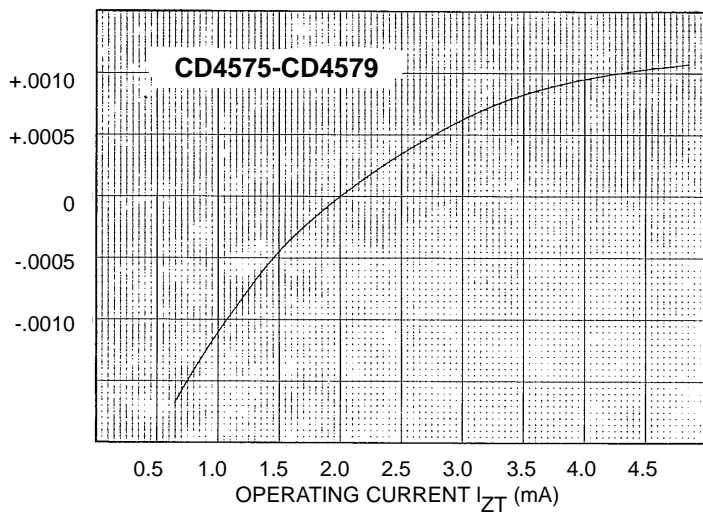
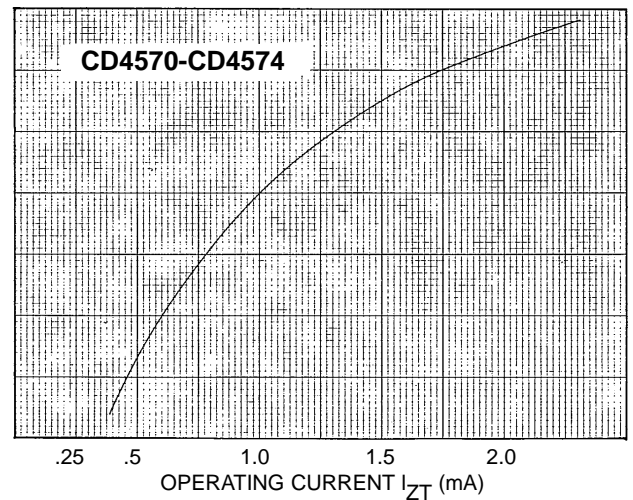
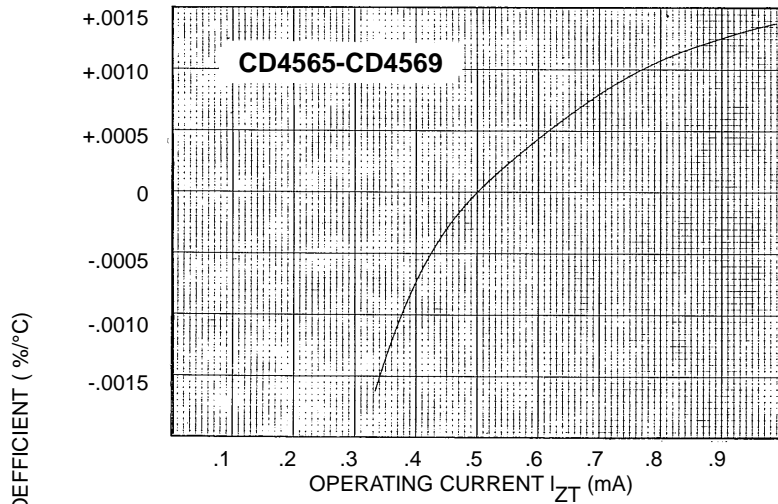
PHONE (781) 665-1071

WEBSITE: <http://www.cdi-diodes.com>

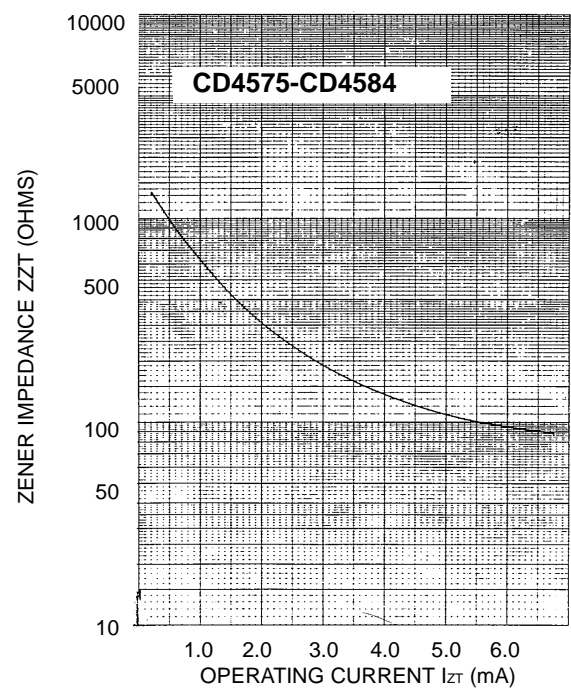
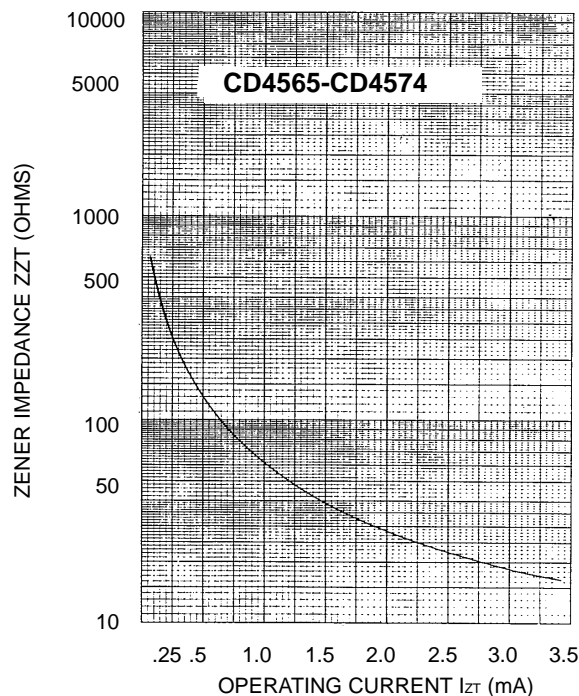
FAX (781) 665-7379

E-mail: [mail@cdi-diodes.com](mailto:mail@cdi-diodes.com)

# CD4565 thru CD4584A



**TYPICAL CHANGE OF TEMPERATURE COEFFICIENT WITH CHANGE IN OPERATING CURRENT**



**ZENER IMPEDANCE VS. OPERATING CURRENT**