

- 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 $+175^{\circ}\text{C}$

Storage Temperature: -65°C to $+175^{\circ}\text{C}$

REVERSE LEAKAGE CURRENT

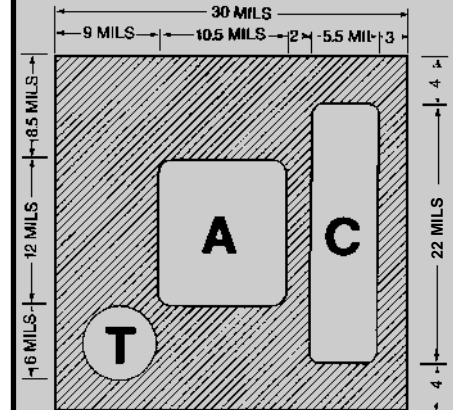
$I_R = 2 \mu\text{A}$ @ 25°C & $V_R = 3 \text{Vdc}$

ELECTRICAL CHARACTERISTICS @ 25°C , unless otherwise specified.

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



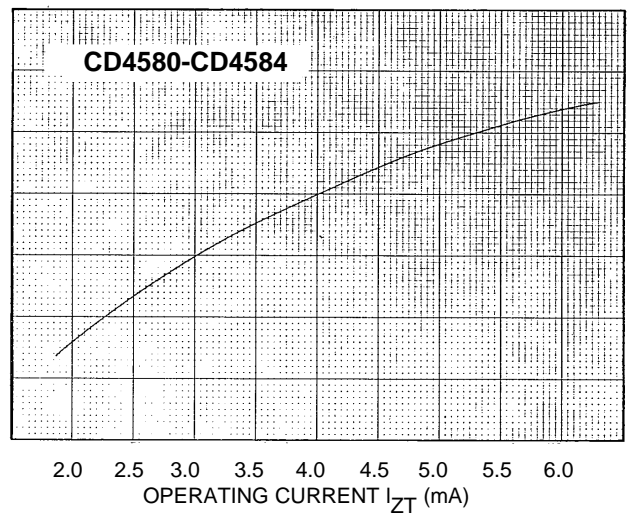
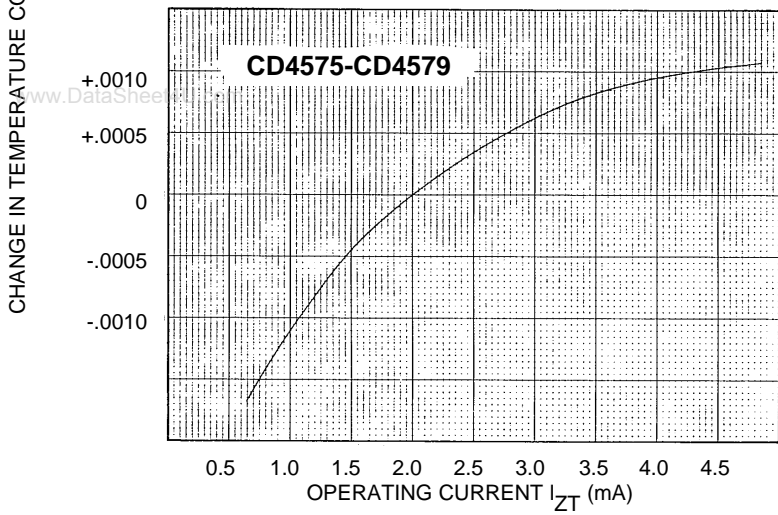
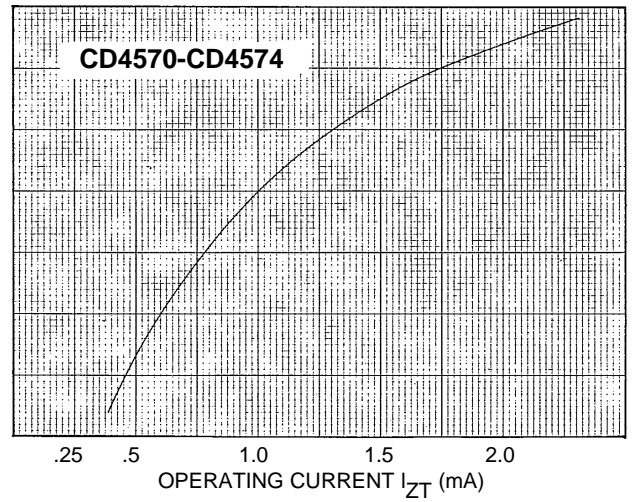
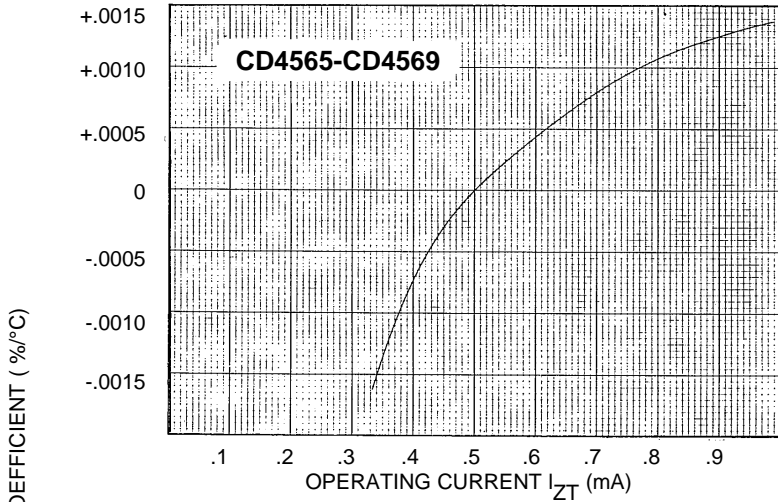
6 LAKE STREET, LAWRENCE, MASSACHUSETTS 01841

PHONE (978) 620-2600

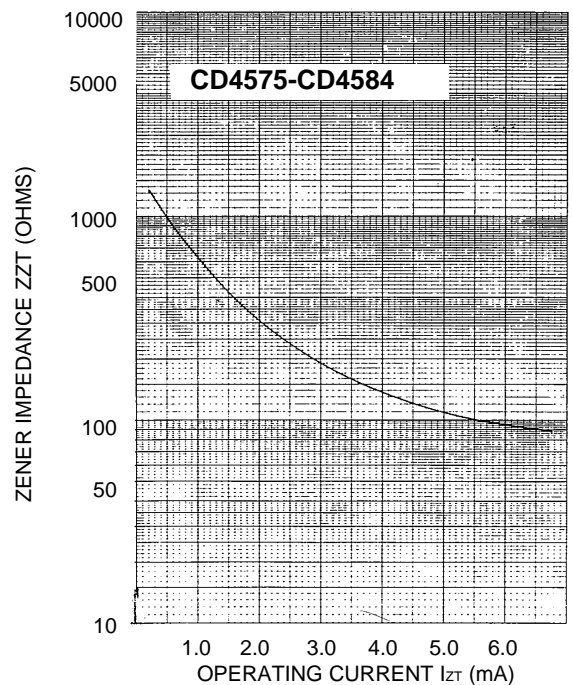
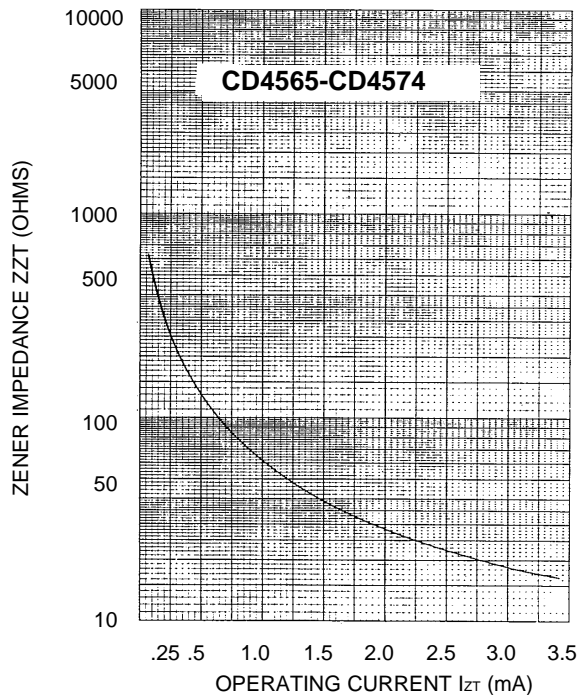
WEBSITE: <http://www.microsemi.com>

FAX (978) 689-6800

CD4565 thru CD4584A



TYPICAL CHANGE OF TEMPERATURE COEFFICIENT WITH CHANGE IN OPERATING CURRENT



ZENER IMPEDANCE VS. OPERATING CURRENT