

- 1N4565A-1 thru 1N4584A-1 AVAILABLE IN JAN, JANTX, JANTXV AND JANS  
PER MIL-PRF-19500/452
- 6.4 VOLT NOMINAL ZENER VOLTAGE  $\pm 5\%$
  - TEMPERATURE COMPENSATED ZENER REFERENCE DIODES
  - METALLURGICALLY BONDED

1N4565 thru 1N4584A  
and  
1N4565A-1 thru 1N4584A-1

#### 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

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

ELECTRICAL CHARACTERISTICS @ 25°C, unless otherwise specified.

| JEDEC<br>TYPE<br>NUMBER | ZENER<br>TEST<br>CURRENT | EFFECTIVE<br>TEMPERATURE<br>COEFFICIENT | VOLTAGE<br>TEMPERATURE<br>STABILITY<br>( $\Delta V_{ZT}$ MAX)<br>(Note 1) | TEMPERATURE<br>RANGE        | MAX. DYNAMIC<br>ZENER<br>IMPEDANCE<br>(Note 2) |
|-------------------------|--------------------------|-----------------------------------------|---------------------------------------------------------------------------|-----------------------------|------------------------------------------------|
|                         | mA                       | %/°C                                    | mV                                                                        | °C                          | OHMS                                           |
| 1N4565<br>1N4565A       | .5<br>.5                 | .01<br>.01                              | 48<br>100                                                                 | 0 to +75°C<br>-55 to +100°C | 200<br>200                                     |
| 1N4566<br>1N4566A       | .5<br>.5                 | .005<br>.005                            | 24<br>50                                                                  | 0 to +75°C<br>-55 to +100°C | 200<br>200                                     |
| 1N4567<br>1N4567A       | .5<br>.5                 | .002<br>.002                            | 10<br>20                                                                  | 0 to +75°C<br>-55 to +100°C | 200<br>200                                     |
| 1N4568<br>1N4568A       | .5<br>.5                 | .001<br>.001                            | 5<br>10                                                                   | 0 to +75°C<br>-55 to +100°C | 200<br>200                                     |
| 1N4569<br>1N4569A       | .5<br>.5                 | .0005<br>.0005                          | 2.5<br>5                                                                  | 0 to +75°C<br>-55 to +100°C | 200<br>200                                     |
| 1N4570<br>1N4570A       | 1.0<br>1.0               | .01<br>.01                              | 48<br>100                                                                 | 0 to +75°C<br>-55 to +100°C | 100<br>100                                     |
| 1N4571<br>1N4571A       | 1.0<br>1.0               | .005<br>.005                            | 24<br>50                                                                  | 0 to +75°C<br>-55 to +100°C | 100<br>100                                     |
| 1N4572<br>1N4572A       | 1.0<br>1.0               | .002<br>.002                            | 10<br>20                                                                  | 0 to +75°C<br>-55 to +100°C | 100<br>100                                     |
| 1N4573<br>1N4573A       | 1.0<br>1.0               | .001<br>.001                            | 5<br>10                                                                   | 0 to +75°C<br>-55 to +100°C | 100<br>100                                     |
| 1N4574<br>1N4574A       | 1.0<br>1.0               | .0005<br>.0005                          | 2.5<br>5                                                                  | 0 to +75°C<br>-55 to +100°C | 100<br>100                                     |
| 1N4575<br>1N4575A       | 2.0<br>2.0               | .01<br>.01                              | 48<br>100                                                                 | 0 to +75°C<br>-55 to +100°C | 50<br>50                                       |
| 1N4576<br>1N4576A       | 2.0<br>2.0               | .005<br>.005                            | 24<br>50                                                                  | 0 to +75°C<br>-55 to +100°C | 50<br>50                                       |
| 1N4577<br>1N4577A       | 2.0<br>2.0               | .002<br>.002                            | 10<br>20                                                                  | 0 to +75°C<br>-55 to +100°C | 50<br>50                                       |
| 1N4578<br>1N4578A       | 2.0<br>2.0               | .001<br>.001                            | 5<br>10                                                                   | 0 to +75°C<br>-55 to +100°C | 50<br>50                                       |
| 1N4579<br>1N4579A       | 2.0<br>2.0               | .0005<br>.0005                          | 2.5<br>5                                                                  | 0 to +75°C<br>-55 to +100°C | 50<br>50                                       |
| 1N4580<br>1N4580A       | 4.0<br>4.0               | .01<br>.01                              | 48<br>100                                                                 | 0 to +75°C<br>-55 to +100°C | 25<br>25                                       |
| 1N4581<br>1N4581A       | 4.0<br>4.0               | .005<br>.005                            | 24<br>50                                                                  | 0 to +75°C<br>-55 to +100°C | 25<br>25                                       |
| 1N4582<br>1N4582A       | 4.0<br>4.0               | .002<br>.002                            | 10<br>20                                                                  | 0 to +75°C<br>-55 to +100°C | 25<br>25                                       |
| 1N4583<br>1N4583A       | 4.0<br>4.0               | .001<br>.001                            | 5<br>10                                                                   | 0 to +75°C<br>-55 to +100°C | 25<br>25                                       |
| 1N4584<br>1N4584A       | 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  $I_{ZT}$  A 60Hz rms a.c. current equal to 10% of  $I_{ZT}$ .

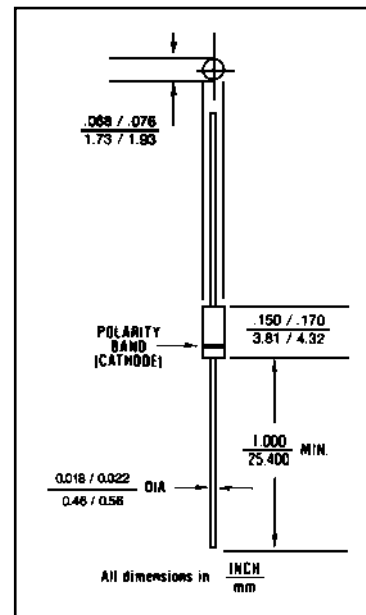


FIGURE 1

#### DESIGN DATA

**CASE:** Hermetically sealed glass case. DO – 35 outline.

**LEAD MATERIAL:** Copper clad steel.

**LEAD FINISH:** Tin / Lead

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

**MOUNTING POSITION:** ANY.



**COMPENSATED DEVICES INCORPORATED**

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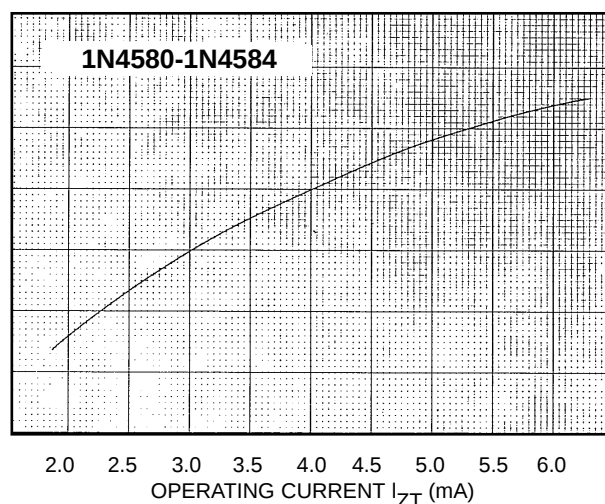
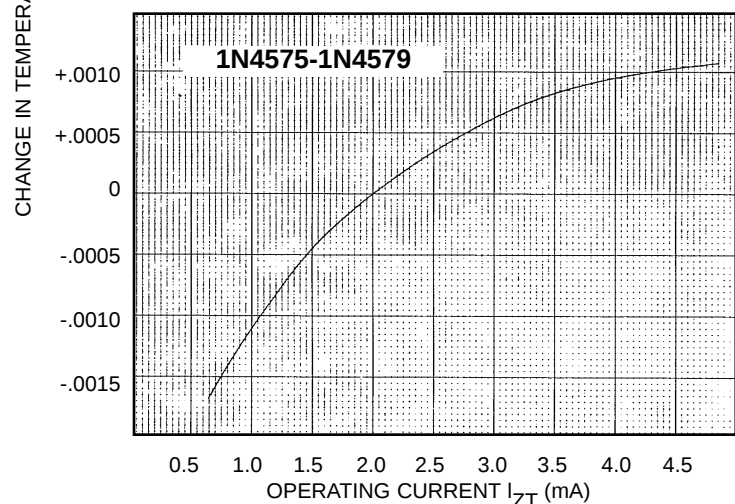
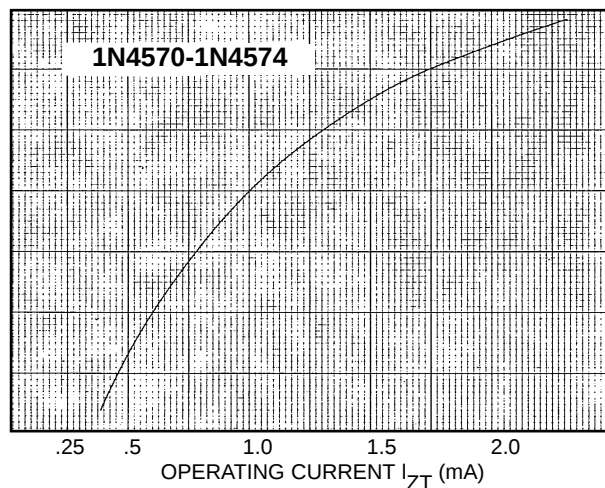
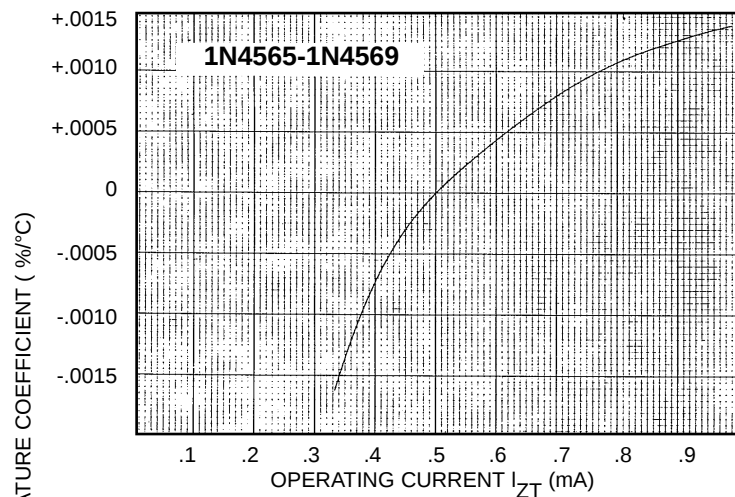
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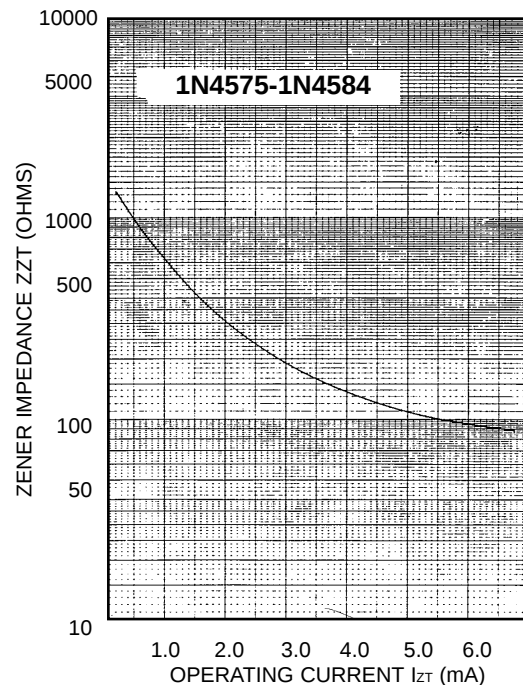
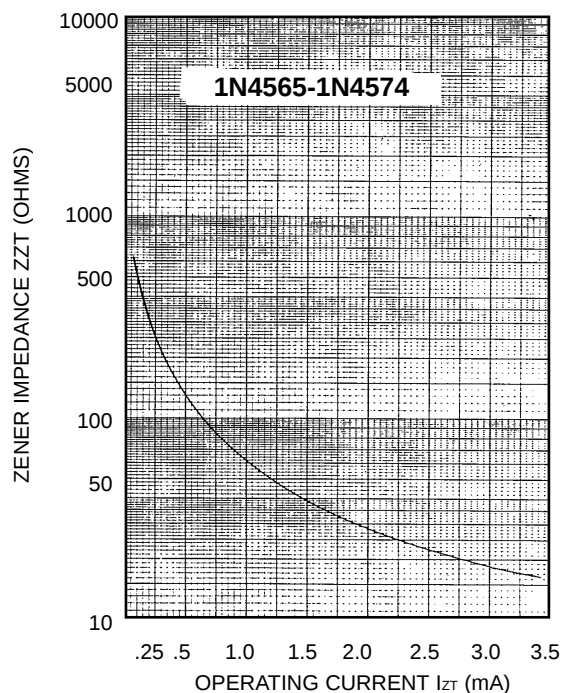
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# 1N4565 thru 1N4584A INCLUDING -1 VERSIONS



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



**ZENER IMPEDANCE VS. OPERATING CURRENT**