

# Temperature Compensated Zener Reference Diode Series



1N4565 thru 1N4584A, 1N4565A-1 thru 1N4584A-1

## Features

- Available in JAN, JANTX, JANTXV and JANS per MIL-PRF-19500/452
- 6.4 Volt Nominal Zener Voltage  $\pm 5\%$
- Metallurgically Bonded

## Maximum Ratings

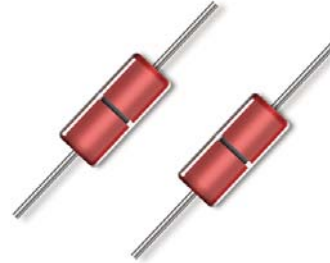
Operating & Storage Temperature:  $-65^{\circ}\text{C}$  to  $+175^{\circ}\text{C}$

DC Power Dissipation: 500mW @  $+50^{\circ}\text{C}$

Power Derating: 4 mW /  $^{\circ}\text{C}$  above  $+50^{\circ}\text{C}$

## REVERSE LEAKAGE CURRENT

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



## Electrical Specifications @ $+25^{\circ}\text{C}$ (Unless Otherwise Specified)

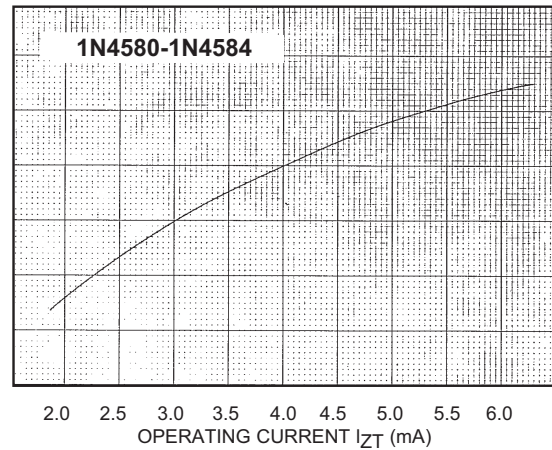
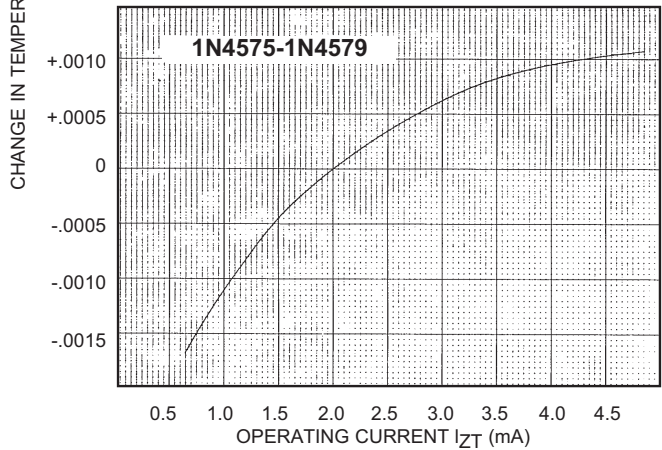
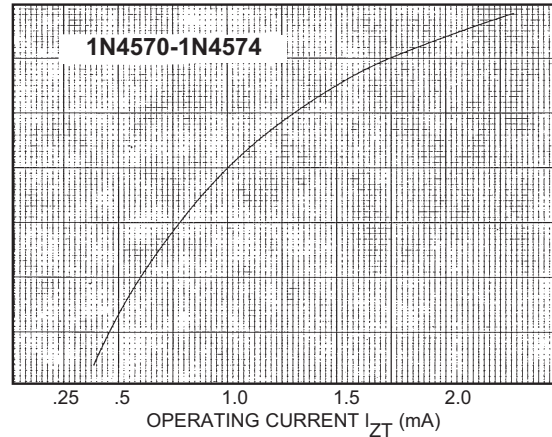
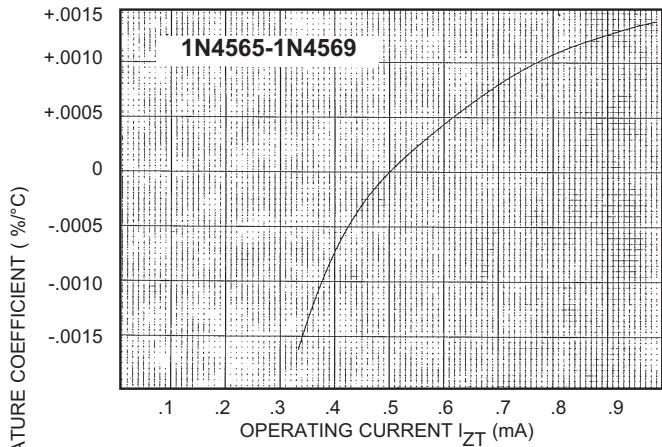
JEDEC Type Number	Zener Test Current	Effective Temperature Coefficient	Voltage Temperature Stability ( $^3V_{ZT}$ maximum) (Note 1)	Temperature Range	Maximum Dynamic Zener Impedance (Note 2)
	mA	%/ $^{\circ}\text{C}$	mV	$^{\circ}\text{C}$	Ohms
1N4565-1	0.5	0.01	48	0 to $+75^{\circ}\text{C}$	200
1N4565A-1	0.5	0.01	100	$-55$ to $+100^{\circ}\text{C}$	200
1N4566-1	0.5	0.005	24	0 to $+75^{\circ}\text{C}$	200
1N4566A-1	0.5	0.005	50	$-55$ to $+100^{\circ}\text{C}$	200
1N4567-1	0.5	0.002	10	0 to $+75^{\circ}\text{C}$	200
1N4567A-1	0.5	0.002	20	$-55$ to $+100^{\circ}\text{C}$	200
1N4568-1	0.5	0.001	5	0 to $+75^{\circ}\text{C}$	200
1N4568A-1	0.5	0.001	10	$-55$ to $+100^{\circ}\text{C}$	200
1N4569-1	0.5	0.0005	2.5	0 to $+75^{\circ}\text{C}$	200
1N4569A-1	0.5	0.0005	5	$-55$ to $+100^{\circ}\text{C}$	200
1N4570-1	1.0	0.01	48	0 to $+75^{\circ}\text{C}$	100
1N4570A-1	1.0	0.01	100	$-55$ to $+100^{\circ}\text{C}$	100
1N4571-1	1.0	0.005	24	0 to $+75^{\circ}\text{C}$	100
1N4571A-1	1.0	0.005	50	$-55$ to $+100^{\circ}\text{C}$	100
1N4572-1	1.0	0.002	10	0 to $+75^{\circ}\text{C}$	100
1N4572A-1	1.0	0.002	20	$-55$ to $+100^{\circ}\text{C}$	100
1N4573, -1	1.0	0.001	5	0 to $+75^{\circ}\text{C}$	100
1N4573A, -1	1.0	0.001	10	$-55$ to $+100^{\circ}\text{C}$	100
1N4574-1	1.0	0.0005	2.5	0 to $+75^{\circ}\text{C}$	100
1N4574A-1	1.0	0.0005	5	$-55$ to $+100^{\circ}\text{C}$	100
1N4575-1	2.0	0.01	48	0 to $+75^{\circ}\text{C}$	50
1N4575A-1	2.0	0.01	100	$-55$ to $+100^{\circ}\text{C}$	50
1N4576-1	2.0	0.005	24	0 to $+75^{\circ}\text{C}$	50
1N4576A-1	2.0	0.005	50	$-55$ to $+100^{\circ}\text{C}$	50
1N4577-1	2.0	0.002	10	0 to $+75^{\circ}\text{C}$	50
1N4577A-1	2.0	0.002	20	$-55$ to $+100^{\circ}\text{C}$	50
1N4578-1	2.0	0.001	5	0 to $+75^{\circ}\text{C}$	50
1N4578A-1	2.0	0.001	10	$-55$ to $+100^{\circ}\text{C}$	50
1N4579-1	2.0	0.0005	2.5	0 to $+75^{\circ}\text{C}$	50
1N4579A-1	2.0	0.0005	5	$-55$ to $+100^{\circ}\text{C}$	50
1N4580-1	4.0	0.01	48	0 to $+75^{\circ}\text{C}$	25
1N4580A-1	4.0	0.01	100	$-55$ to $+100^{\circ}\text{C}$	25
1N4581-1	4.0	0.005	24	0 to $+75^{\circ}\text{C}$	25
1N4581A-1	4.0	0.005	50	$-55$ to $+100^{\circ}\text{C}$	25
1N4582-1	4.0	0.002	10	0 to $+75^{\circ}\text{C}$	25
1N4582A-1	4.0	0.002	20	$-55$ to $+100^{\circ}\text{C}$	25
1N4583-1	4.0	0.001	5	0 to $+75^{\circ}\text{C}$	25
1N4583A-1	4.0	0.001	10	$-55$ to $+100^{\circ}\text{C}$	25
1N4584-1	4.0	0.0005	2.5	0 to $+75^{\circ}\text{C}$	25
1N4584A-1	4.0	0.0005	5	$-55$ to $+100^{\circ}\text{C}$	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.

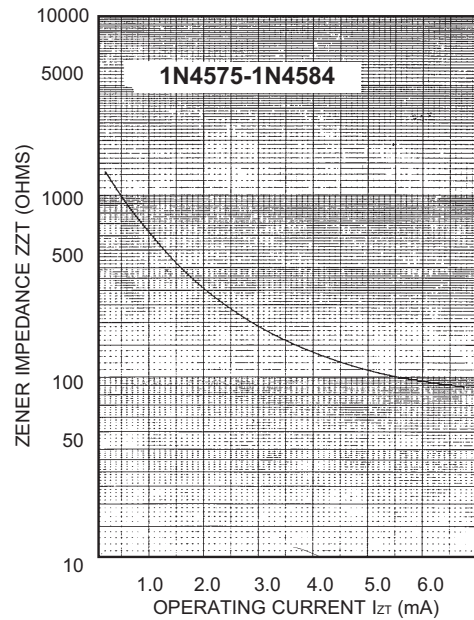
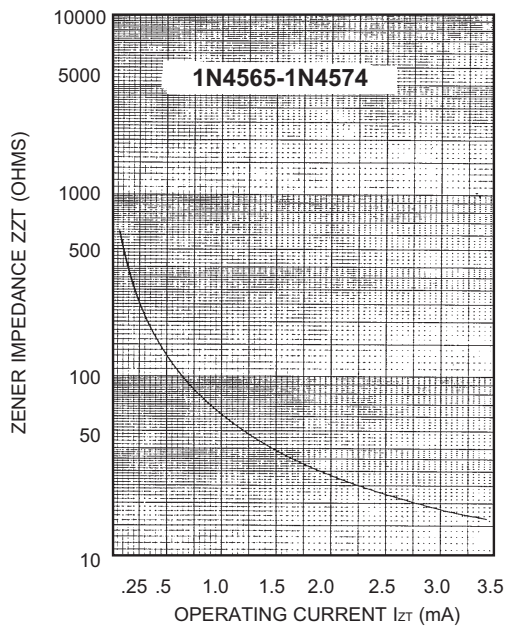
NOTE 2: Zener impedance is derived by superimposing on  $I_{ZT}$  A 60Hz rms a.c. current equal to 10% of  $I_{ZT}$ .



Graphs

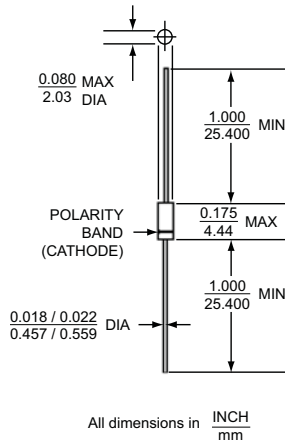


TYPICAL CHANGE OF TEMPERATURE COEFFICIENT WITH CHANGE IN OPERATING CURRENT



ZENER IMPEDANCE VS. OPERATING CURRENT

## Outline Drawing



### LEADED DESIGN DATA

**CASE:** Hermetically sealed, DO – 35

**LEAD MATERIAL:** Copper clad steel

**LEAD FINISH:** Tin / Lead

**POLARITY:** Cathode end is banded.

**MOUNTING POSITION:** Any

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