

# Temperature Compensated Zener Reference Diode Series



1N4565UR thru 1N4584AUR, 1N4565AUR-1 thru 1N4584AUR-1

## Features

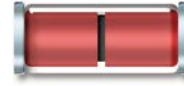
- Available in JAN, JANTX, JANTXV and JANS per MIL-PRF-19500/452
- 6.4 Volt Nominal Zener Voltage  $\pm 5\%$
- Metallurgically Bonded

## 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)

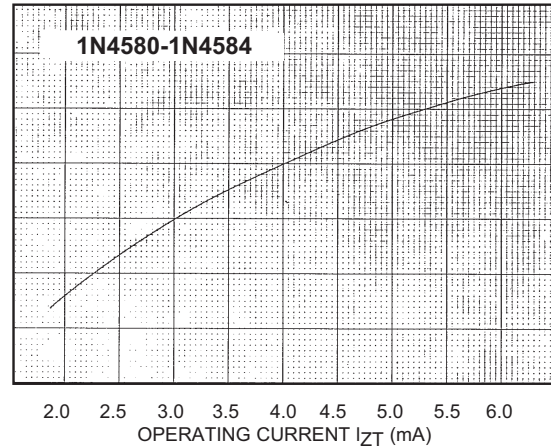
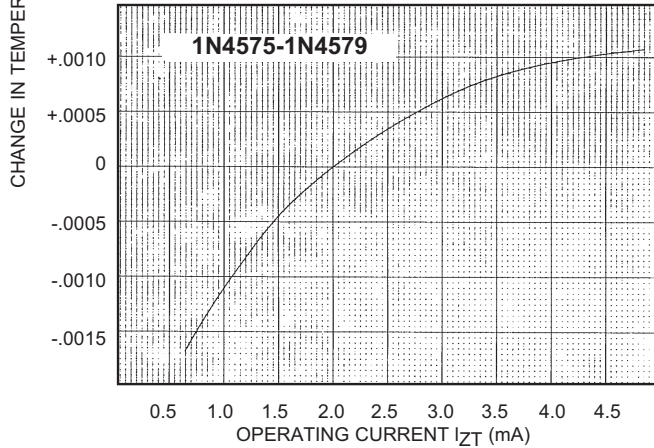
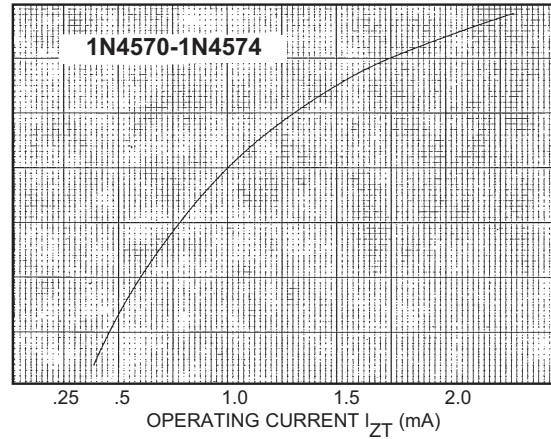
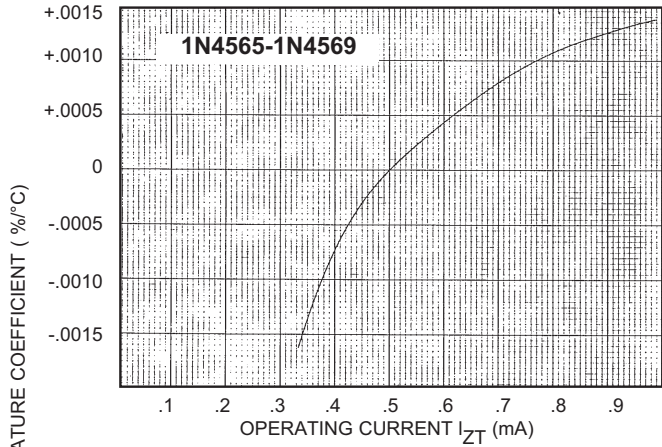
JEDEC Type Number	Zener Test Current	Effective Temperature Coefficient	Voltage Temperature Stability ( $^3V_{ZT}$ maximum) (Note 1)	Temperature Range	Maximum Dynamic Zener Impedance (Note 2)
	mA	%/ $^{\circ}\text{C}$	mV	$^{\circ}\text{C}$	Ohms
1N4565UR, -1	0.5	0.01	48	0 to $+75^{\circ}\text{C}$	200
1N4565AUR, -1	0.5	0.01	100	$-55$ to $+100^{\circ}\text{C}$	200
1N4566UR, -1	0.5	0.005	24	0 to $+75^{\circ}\text{C}$	200
1N4566AUR, -1	0.5	0.005	50	$-55$ to $+100^{\circ}\text{C}$	200
1N4567UR, -1	0.5	0.002	10	0 to $+75^{\circ}\text{C}$	200
1N4567AUR, -1	0.5	0.002	20	$-55$ to $+100^{\circ}\text{C}$	200
1N4568UR, -1	0.5	0.001	5	0 to $+75^{\circ}\text{C}$	200
1N4568AUR, -1	0.5	0.001	10	$-55$ to $+100^{\circ}\text{C}$	200
1N4569UR, -1	0.5	0.0005	2.5	0 to $+75^{\circ}\text{C}$	200
1N4569AUR, -1	0.5	0.0005	5	$-55$ to $+100^{\circ}\text{C}$	200
1N4570UR, -1	1.0	0.01	48	0 to $+75^{\circ}\text{C}$	100
1N4570AUR, -1	1.0	0.01	100	$-55$ to $+100^{\circ}\text{C}$	100
1N4571UR, -1	1.0	0.005	24	0 to $+75^{\circ}\text{C}$	100
1N4571AUR, -1	1.0	0.005	50	$-55$ to $+100^{\circ}\text{C}$	100
1N4572UR, -1	1.0	0.002	10	0 to $+75^{\circ}\text{C}$	100
1N4572AUR, -1	1.0	0.002	20	$-55$ to $+100^{\circ}\text{C}$	100
1N4573UR, -1	1.0	0.001	5	0 to $+75^{\circ}\text{C}$	100
1N4573AUR, -1	1.0	0.001	10	$-55$ to $+100^{\circ}\text{C}$	100
1N4574UR, -1	1.0	0.0005	2.5	0 to $+75^{\circ}\text{C}$	100
1N4574AUR, -1	1.0	0.0005	5	$-55$ to $+100^{\circ}\text{C}$	100
1N4575UR, -1	2.0	0.01	48	0 to $+75^{\circ}\text{C}$	50
1N4575AUR, -1	2.0	0.01	100	$-55$ to $+100^{\circ}\text{C}$	50
1N4576UR, -1	2.0	0.005	24	0 to $+75^{\circ}\text{C}$	50
1N4576AUR, -1	2.0	0.005	50	$-55$ to $+100^{\circ}\text{C}$	50
1N4577UR, -1	2.0	0.002	10	0 to $+75^{\circ}\text{C}$	50
1N4577AUR, -1	2.0	0.002	20	$-55$ to $+100^{\circ}\text{C}$	50
1N4578UR, -1	2.0	0.001	5	0 to $+75^{\circ}\text{C}$	50
1N4578AUR, -1	2.0	0.001	10	$-55$ to $+100^{\circ}\text{C}$	50
1N4579UR, -1	2.0	0.0005	2.5	0 to $+75^{\circ}\text{C}$	50
1N4579AUR, -1	2.0	0.0005	5	$-55$ to $+100^{\circ}\text{C}$	50
1N4580UR, -1	4.0	0.01	48	0 to $+75^{\circ}\text{C}$	25
1N4580AUR, -1	4.0	0.01	100	$-55$ to $+100^{\circ}\text{C}$	25
1N4581UR, -1	4.0	0.005	24	0 to $+75^{\circ}\text{C}$	25
1N4581AUR, -1	4.0	0.005	50	$-55$ to $+100^{\circ}\text{C}$	25
1N4582UR, -1	4.0	0.002	10	0 to $+75^{\circ}\text{C}$	25
1N4582AUR, -1	4.0	0.002	20	$-55$ to $+100^{\circ}\text{C}$	25
1N4583UR, -1	4.0	0.001	5	0 to $+75^{\circ}\text{C}$	25
1N4583AUR, -1	4.0	0.001	10	$-55$ to $+100^{\circ}\text{C}$	25
1N4584UR, -1	4.0	0.0005	2.5	0 to $+75^{\circ}\text{C}$	25
1N4584AUR, -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.

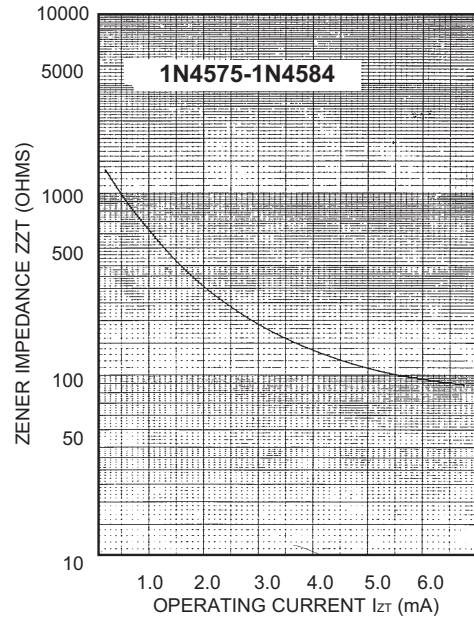
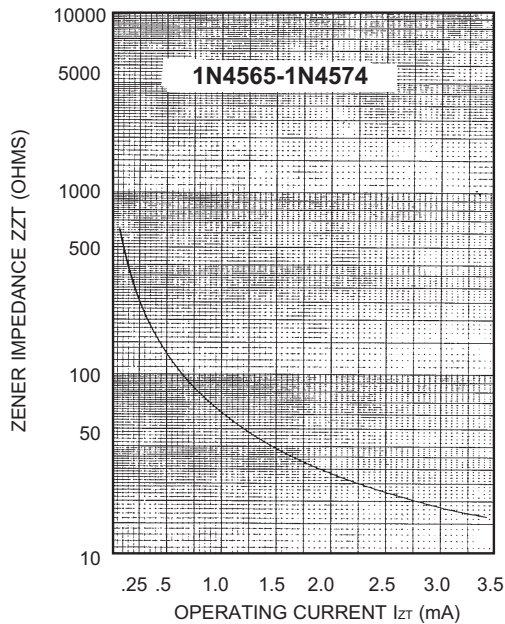
NOTE 2: Zener impedance is derived by superimposing on  $I_{ZT}$  A 60Hz rms a.c. current equal to 10% of  $I_{ZT}$ .



Graphs



TYPICAL CHANGE OF TEMPERATURE COEFFICIENT WITH CHANGE IN OPERATING CURRENT

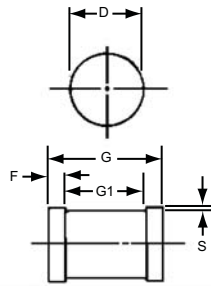


ZENER IMPEDANCE VS. OPERATING CURRENT

1N4565UR thru 1N4584AUR,  
1N4565UR- thru 1N4584AUR-1



Outline Drawing



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
D	1.60	1.70	0.063	0.067
F	0.41	0.55	0.016	0.022
G	3.30	3.70	.130	.146
G1	2.54 REF.		.100 REF.	
S	0.03 MIN.		.001 MIN.	

LEADED DESIGN DATA

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

LEAD FINISH: Tin / Lead

POLARITY: Cathode end is banded.

MOUNTING POSITION: Any.

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

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