

# 1N4565UR-1 thru 1N4584UR-1 & 1N4565AUR-1 thru 1N4584AUR-1



## Temperature Compensated Zener Reference Diode Series

Rev. V2

### Features

- Available in JAN, JANTX, JANTXV and JANS per MIL-PRF-19500/452
- 6.4 V Nominal Zener Voltage  $\pm 5\%$
- 500 mW Power Handling
- Hermetically sealed MELF DO-213 package
- Also available in axial-leaded glass DO-35 style package.



### Electrical Specifications:

$I_R = 2 \mu A$  @  $+25^\circ C$  &  $V_R = 3 V_{dc}$ ,  $T_A = +25^\circ C$  (unless otherwise specified)

JEDEC Type #	Zener Test Current $I_{ZT}$	Effective Temperature Coefficient	Voltage Temperature Stability $\Delta V_{ZT} \text{ max.}^1$	Temperature Range	Maximum Dynamic Zener Impedance <sup>2</sup>
	mA	%/ $^\circ C$	mV	$^\circ C$	$\Omega$
1N4565UR-1 1N4565AUR-1	0.5	0.01	48 100	0 to +75 -55 to +100	200
1N4566UR-1 1N4566AUR-1	0.5	0.005	24 50	0 to +75 -55 to +100	200
1N4567UR-1 1N4567AUR-1	0.5	0.002	10 20	0 to +75 -55 to +100	200
1N4568UR-1 1N4568AUR-1	0.5	0.001	5 10	0 to +75 -55 to +100	200
1N4569UR-1 1N4569AUR-1	0.5	0.0005	2.5 5.0	0 to +75 -55 to +100	200
1N4570UR-1 1N4570AUR-1	1.0	0.01	48 100	0 to +75 -55 to +100	100
1N4571UR-1 1N4571AUR-1	1.0	0.005	24 50	0 to +75 -55 to +100	100
1N4572UR-1 1N4572AUR-1	1.0	0.002	10 20	0 to +75 -55 to +100	100
1N4573UR-1 1N4573AUR-1	1.0	0.001	5 10	0 to +75 -55 to +100	100
1N4574UR-1 1N4574AUR-1	1.0	0.0005	2.5 5.0	0 to +75 -55 to +100	100
1N4575UR-1 1N4575AUR-1	2.0	0.01	48 100	0 to +75 -55 to +100	50
1N4576UR-1 1N4576AUR-1	2.0	0.005	24 50	0 to +75 -55 to +100	50

(Continued next page)

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JEDEC Type #	Zener Test Current $I_{ZT}$	Effective Temperature Coefficient	Voltage Temperature Stability $\Delta V_{ZT} \text{ max.}^1$	Temperature Range	Maximum Dynamic Zener Impedance <sup>2</sup>
	mA	%/ $^\circ C$	mV	$^\circ C$	$\Omega$
1N4577UR-1 1N4577AUR-1	2.0	0.002	10 20	0 to $+75$ $-55$ to $+100$	50
1N4578UR-1 1N4578AUR-1	2.0	0.001	5 10	0 to $+75$ $-55$ to $+100$	50
1N4579UR-1 1N4579AUR-1	2.0	0.0005	2.5 5.0	0 to $+75$ $-55$ to $+100$	50
1N4580UR-1 1N4580AUR-1	4.0	0.01	48 100	0 to $+75$ $-55$ to $+100$	25
1N4581UR-1 1N4581AUR-1	4.0	0.005	24 50	0 to $+75$ $-55$ to $+100$	25
1N4582UR-1 1N4582AUR-1	4.0	0.002	10 20	0 to $+75$ $-55$ to $+100$	25
1N4583UR-1 1N4583AUR-1	4.0	0.001	5 10	0 to $+75$ $-55$ to $+100$	25
1N4584UR-1 1N4584AUR-1	4.0	0.0005	2.5 5.0	0 to $+75$ $-55$ to $+100$	25

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

### Absolute Maximum Ratings

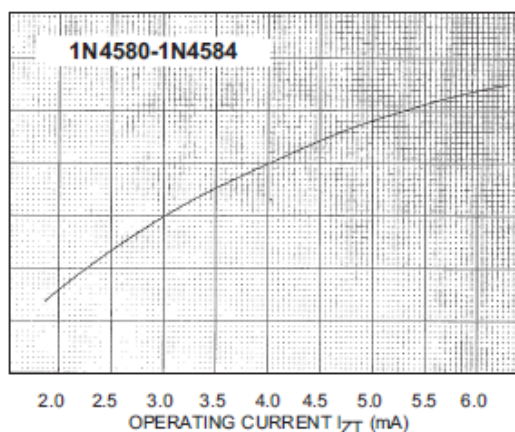
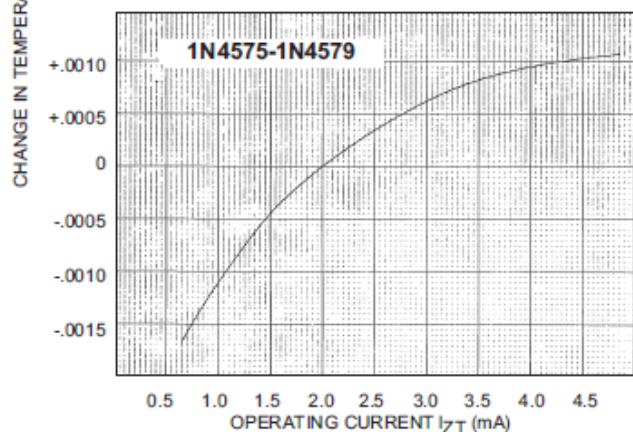
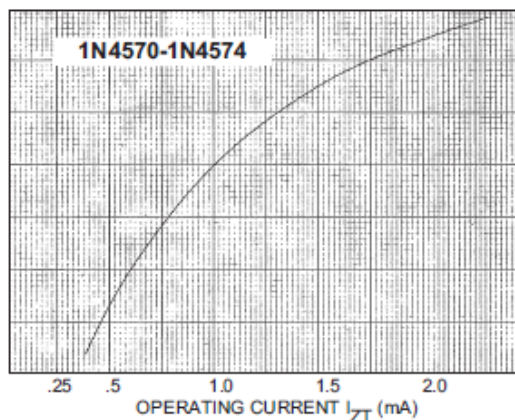
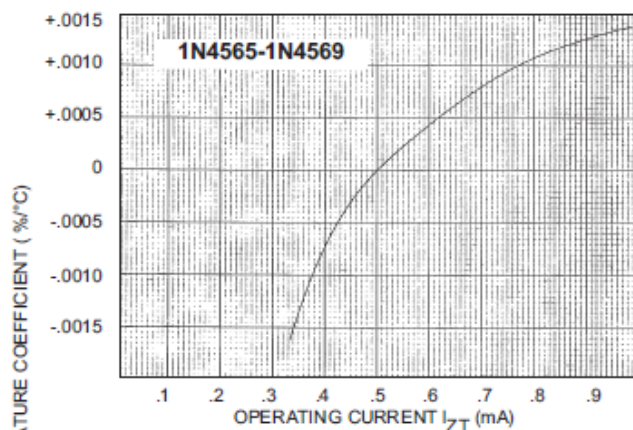
Parameter	Absolute Maximum
DC Power Dissipation	500 mW @ $+50^\circ C$
Power Derating	4 mW/ $^\circ C$ above $+50^\circ C$
Operating & Storage Temperature	$-55^\circ C$ to $+175^\circ C$

# 1N4565UR-1 thru 1N4584UR-1 & 1N4565AUR-1 thru 1N4584AUR-1

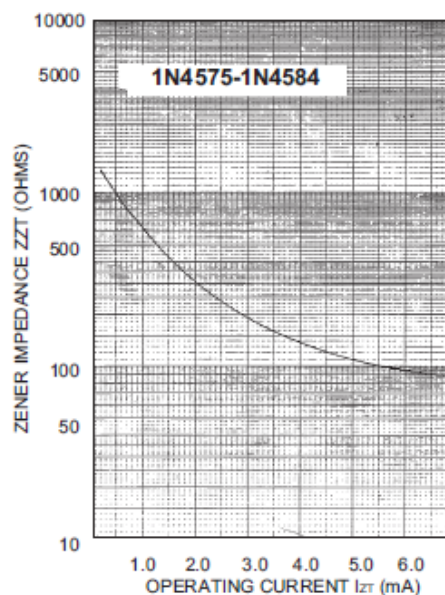
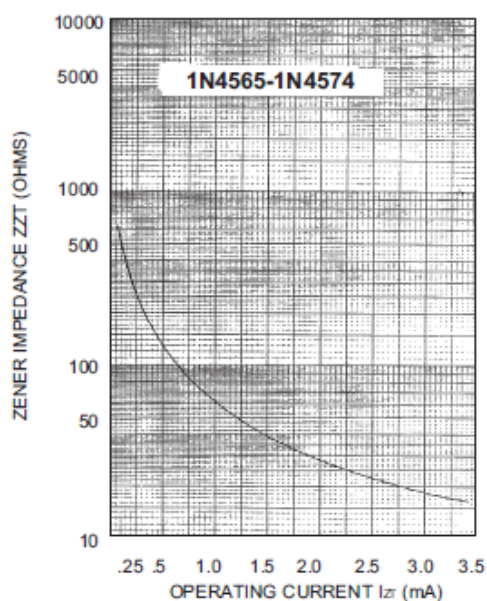


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### TYPICAL CHANGE OF TEMPERATURE COEFFICIENT WITH CHANGE IN OPERATING CURRENT



### ZENER IMPEDANCE VS. OPERATING CURRENT

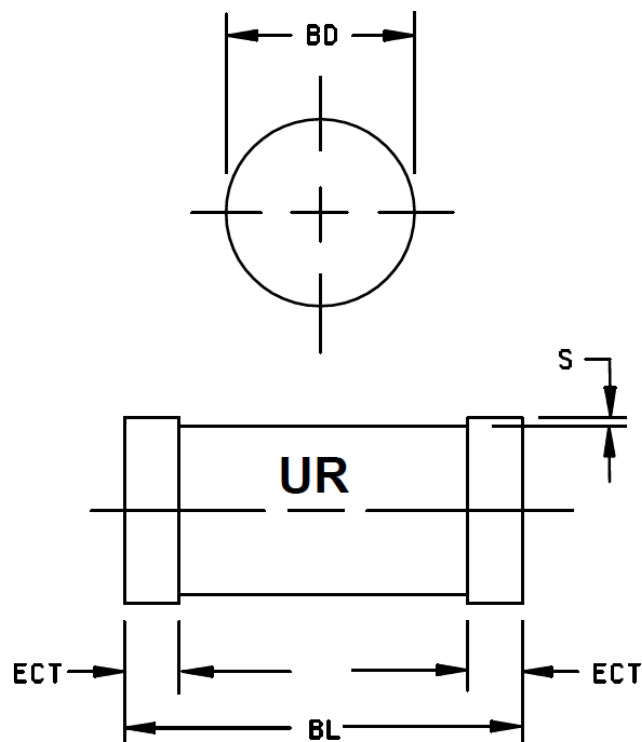
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## Outline



## Outline Dimensions

Symbol	Dimensions			
	Inches		Millimeters	
	Min	Max	Min	Max
BD	.063	.067	1.60	1.70
ECT	.016	.022	0.41	0.56
BL	.130	.146	3.30	3.71
S	.001 Min		0.03 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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