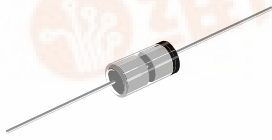




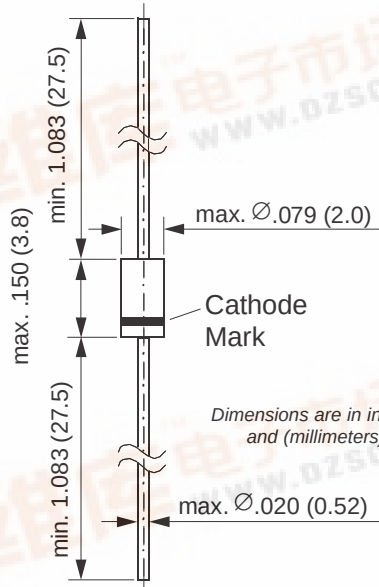
ZTE1.5 thru ZTE5.1

Vishay Semiconductors
formerly General Semiconductor

Voltage Stabilizers



DO-204AH (DO-35 Glass)



Features

- Silicon Stabilizer Diodes
- Monolithic integrated analog circuits designed for small power stabilizer and limitation circuits, providing low dynamic resistance and high-quality stabilization performance as well as low noise. In the reverse direction, these devices show the behavior of forward-biased silicon diodes.
- The end of the ZTE device marked with the cathode ring is to be connected: ZTE1.5 and ZTE2 to the negative pole of the supply voltage; ZTE2.4 thru ZTE5.1 to the positive pole of the supply voltage.
- These diodes are also available in MiniMELF case with the type designation LL1.5 ... LL 5.1.

Mechanical Data

Case: DO-35 Glass Case

Weight: approx. 0.13g

Packaging codes/options:

D7/10K per 13" reel (52mm tape), 20K/box

D8/10K per Ammo tape, (52mm tape), 20K/box

Maximum Ratings (T_A = 25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Operating Current (see Table "Characteristics")			
Inverse Current	I _F	100	mA
Power dissipation at T _{amb} = 25°C	P _{tot}	300 ⁽¹⁾	mW
Junction temperature	T _J	150	°C
Storage temperature range	T _S	-55 to +150	°C

Electrical and Thermal Characteristics (T_A = 25°C unless otherwise noted)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Forward Voltage at I _F = 10 mA	V _F	—	—	1.1	V
Temperature Coefficient of the stabilized voltage at I _Z = 5 mA	α _{VZ}	—	-26	—	10 ⁻⁴ /°C
	α _{VZ}	—	-34	—	10 ⁻⁴ /°C
Thermal resistance junction to ambient air	R _{θJA}	—	—	400 ⁽¹⁾	°C/W



ZTE1.5 thru ZTE5.1

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Electrical Characteristics (T_A = 25°C unless otherwise noted)

Type	Operating Voltage at I _Z = 5mA ⁽²⁾ V _Z (Ω)	Dynamic resistance at I _Z = 5mA r _{Zj} (Ω)	Permissible operating current at T _{amb} = 25°C ⁽¹⁾ I _Z max. (mA)
ZTE1.5	1.35 ... 1.55	13(<20)	120
ZTE2	2.0 ... 2.3	18(<30)	120
ZTE2.4	2.2 ... 2.56	14(<20)	120
ZTE2.7	2.5 ... 2.9	15(<20)	105
ZTE3	2.8 ... 3.2	15(<20)	95
ZTE3.3	3.1 ... 3.5	16(<20)	90
ZTE3.6	3.4 ... 3.8	16(<25)	80
ZTE3.9	3.7 ... 4.1	17(<25)	75
ZTE4.3	4.0 ... 4.6	17(<25)	65
ZTE4.7	4.4 ... 5.0	18(<25)	60
ZTE5.1	4.8 ... 5.4	18(<25)	55

Notes: (1) Valid provided that electrodes are kept at ambient temperature at a distance of 8mm from case

(2) Tested with pulses t_p = 5ms



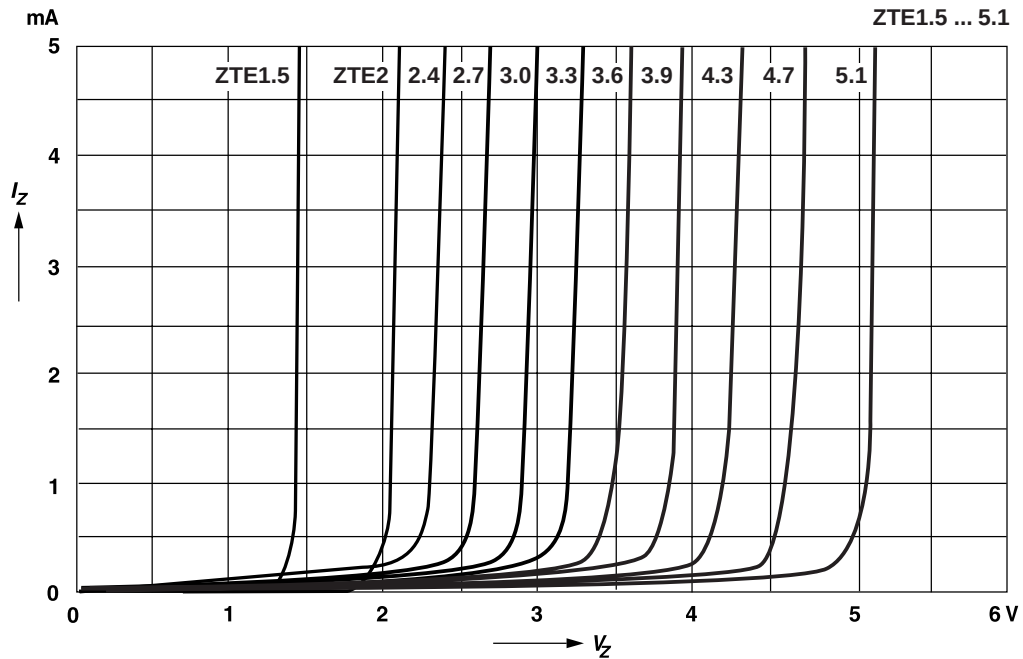
ZTE1.5 thru ZTE5.1

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Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

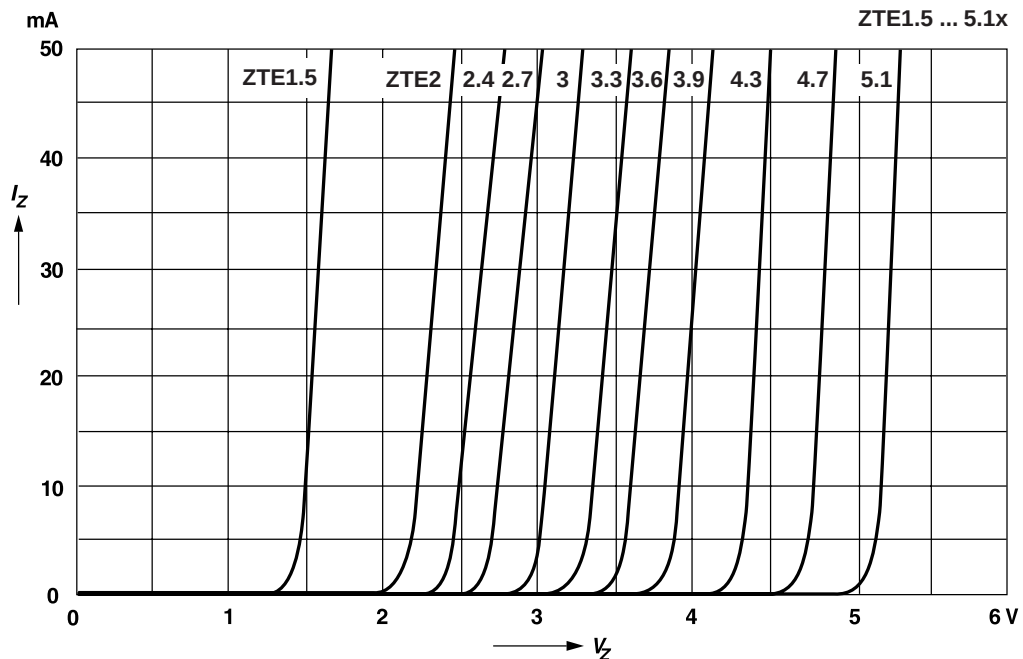
Breakdown characteristics

$T_j = \text{constant (pulsed)}$



Breakdown characteristics

$T_j = \text{constant (pulsed)}$



ZTE1.5 thru ZTE5.1

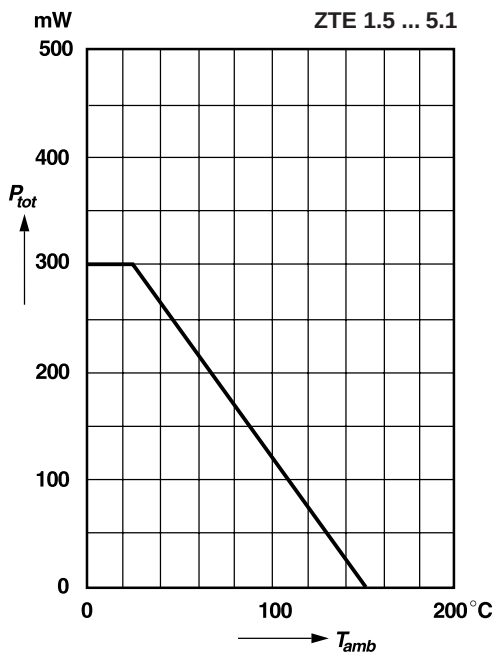
Vishay Semiconductors
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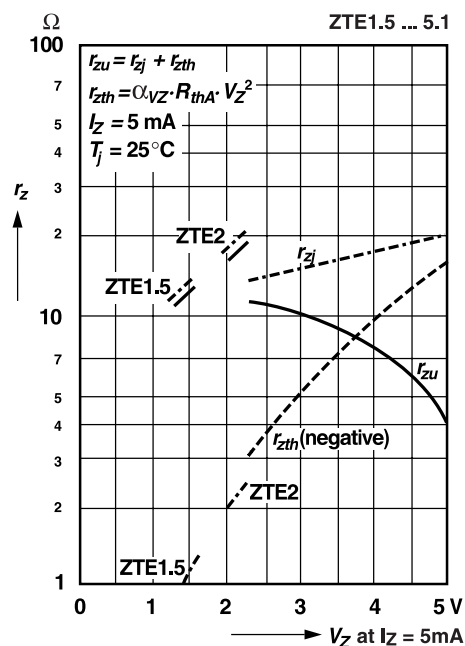
Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Admissible power dissipation versus ambient temperature

Valid provided that leads at a distance of 8 mm from case are kept at ambient temperature



Dynamic resistance versus operating voltage



Dynamic resistance versus operating current, normalized

