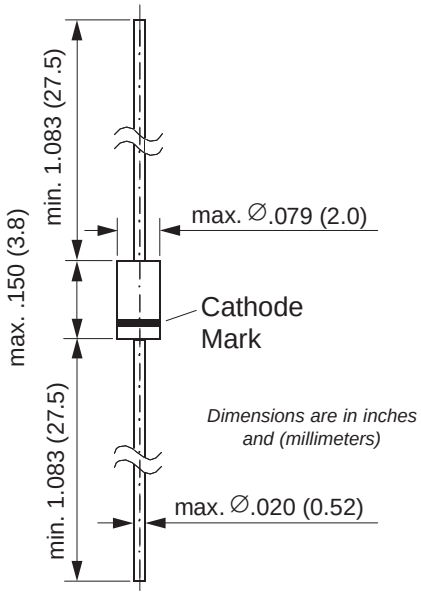
Voltage Stabilizers

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	ZTE1.5, ZTE2	α_{VZ}	–	–26	–	10^{-4}/°C
	ZTE2.4, ZTE5.1	α_{VZ}	–	–34	–	10^{-4}/°C
Thermal resistance junction to ambient air		$R_{\theta JA}$	–	–	400(1)	°C/W

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

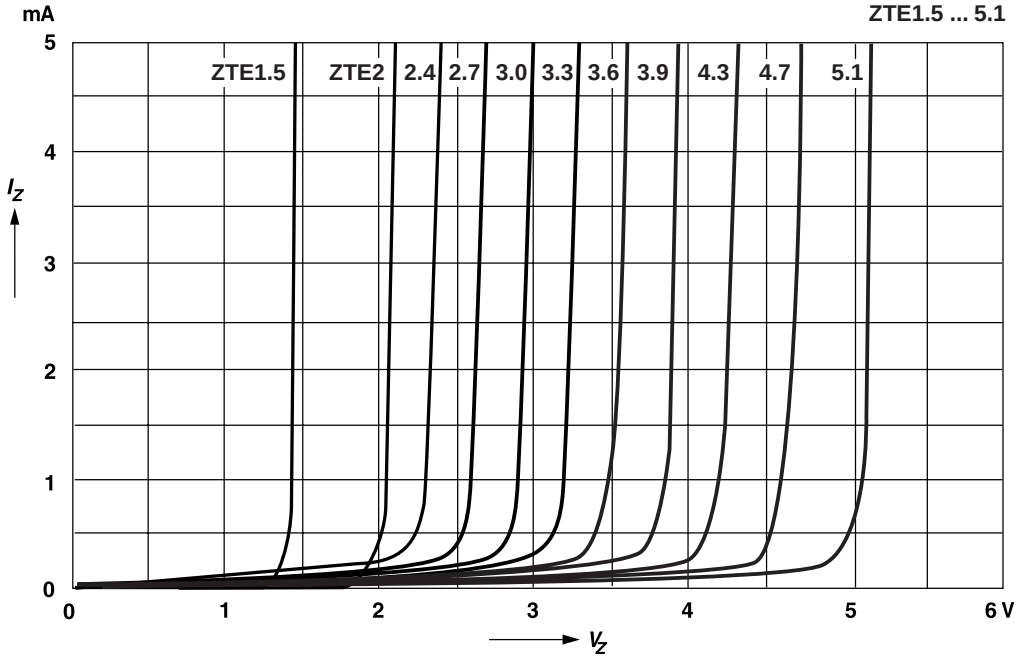
Type	Operating Voltage at I_Z = 5mA[2] V_Z (Ω)	Dynamic resistance at I_Z = 5mA r_{zj} (Ω)	Permissable operating current at T_{amb} = 25°C[1] I_Z max. (mA)
ZTE1.5	1.35 ... 1.55	13(<20)	120
ZTE2	2.0 ... 2.3	18(<30)	120
ZTE2.4	2.2 ... 2.56	14(<20)	120
ZTE2.7	2.5 ... 2.9	15(<20)	105
ZTE3	2.8 ... 3.2	15(<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

Ratings and Characteristic Curves (T_A = 25°C unless otherwise noted)

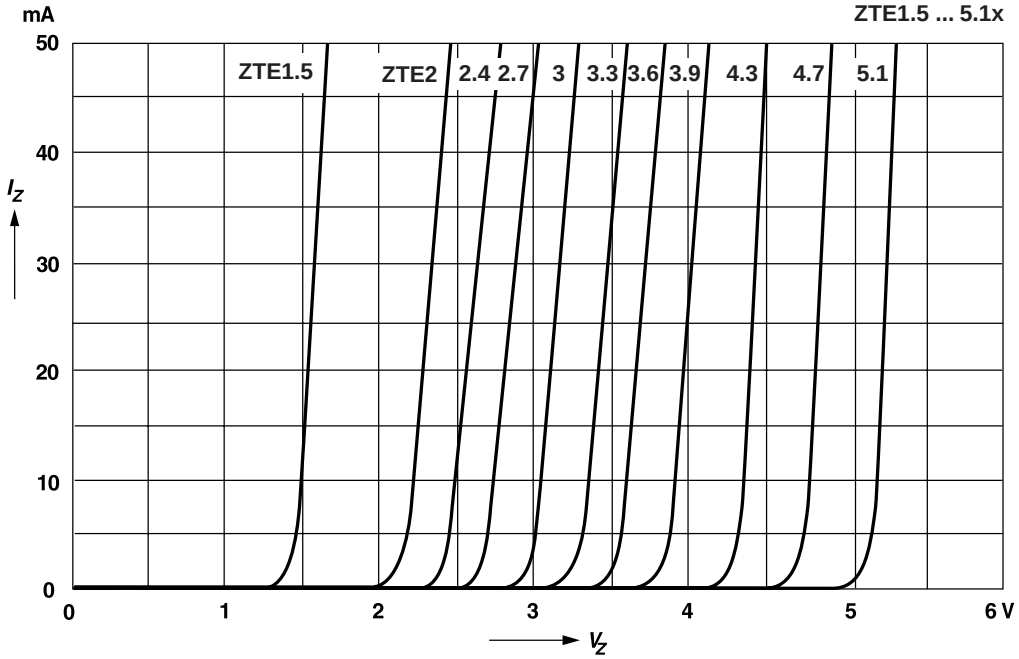
Breakdown characteristics

T_j = constant (pulsed)



Breakdown characteristics

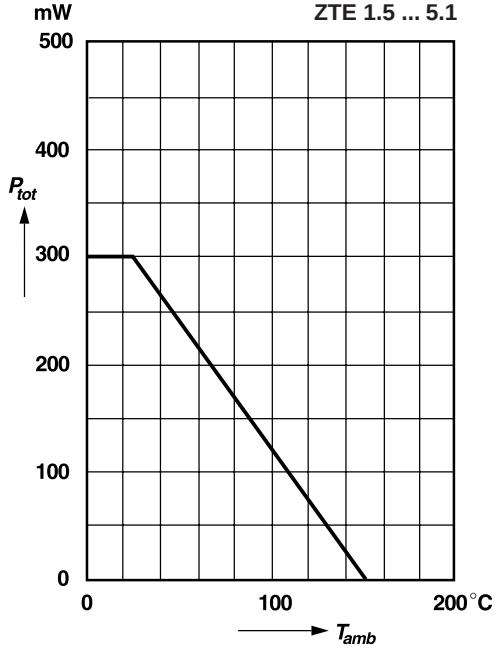
T_j = constant (pulsed)



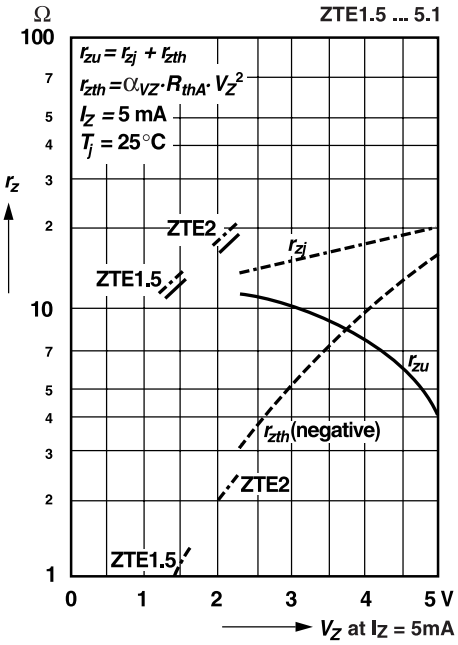
Ratings and Characteristic Curves (TA = 25°C unless otherwise noted)

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