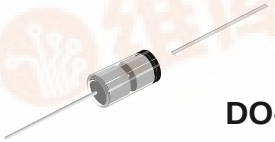
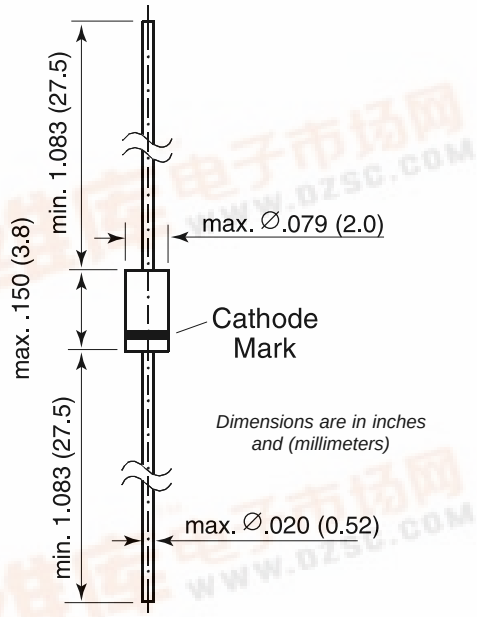
GENERAL SEMICONDUCTOR®

ZTK6.8 thru ZTK33

Voltage Stabilizers



DO-204AH (DO-35 Glass)



Features

- Temperature-Compensated Stabilizing Circuits
- Monolithic linear integrated circuits with extremely short thermal run-in time producing a constant temperature-compensated voltage. They are particularly suitable for stabilizing the tuning voltage in radio and TV tuners employing voltage-variable capacitance diodes.

Mechanical Data

Case: DO-35 Glass Case

Weight: approx. 0.13 g

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")			
Junction temperature	T_J	150	°C
Storage temperature range	T_S	–20 to +150	°C

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

Parameter	Symbol	Min.	Typ.	Max.	Unit
Temperature Coefficient of the operating voltage at I_Z = 5 mA ±0.5 in the range of T_{amb} = 20 to 60°C	α_{VZ}	–10	–2	+5(1)	10^{-5}/°C
Thermal Run-in-Time	t_{th}	–	–20(2)	–	s
Thermal resistance junction to ambient air	$R_{\theta JA}$	–	–	0.4	°C/W

Type	Operating Voltage at I_Z = 5mA(3) V_Z (V)	Dynamic resistance at I_Z = 5mA r_{zj} (Ω)	Permissable operating at T_{amb} = 25°C(4) I_Z max. (mA)
ZTK6.8	6.4 ... 7.1	10 (<25)	36
ZTK9	8 ... 10	10 (<25)	27
ZTK11	10 ... 12	10 (<25)	1
ZTK18	16 ... 20	11 (<25)	13
ZTK22	20 ... 24	11 (<25)	1
ZTK27	24 ... 30	12 (<25)	8
ZTK33A	30 ... 32	12 (<25)	7
ZTK33B	32 ... 34	12 (<25)	7
ZTK33C	34 ... 36	12 (<25)	7

Notes: (1) Valid provided that leads are kept at ambient temperature at a distance of 8 mm from case
(2) At the end of this time ΔV_Z has reached 90% of its final value $\Delta V_{Z\,max}$. $\Delta V_{Z\,max} = V_Z\,(a) - V_Z\,(0)$, where $V_Z\,(0) = V_Z$ in the instant of turn-on and $V_Z\,(a) = V_Z$ at thermal equilibrium
(3) Tested with pulses t_p = 5ms
(4) Valid provided that leads are kept at ambient temperature at a distance of 8mm from case

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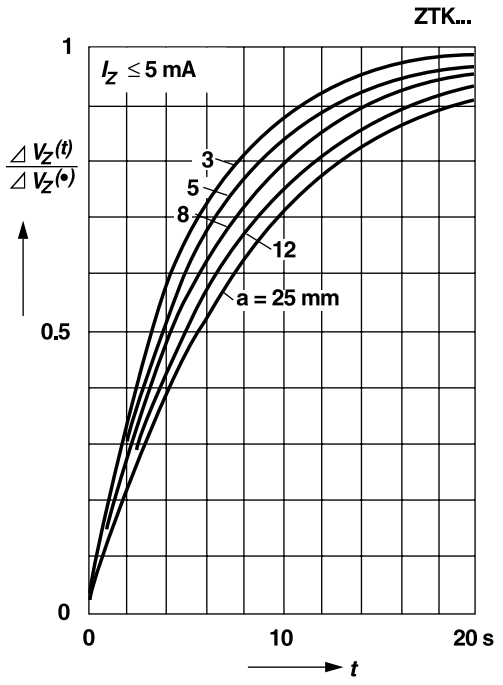
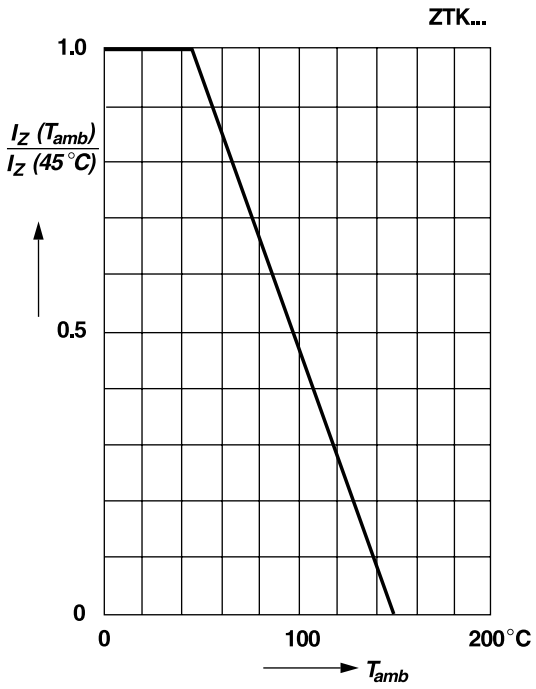
Ratings and Characteristic Curves T_A = 25°C unless otherwise noted.

Time dependence of ΔV_Z after turn-on for different distances between case and point of ambient temperature on the leads

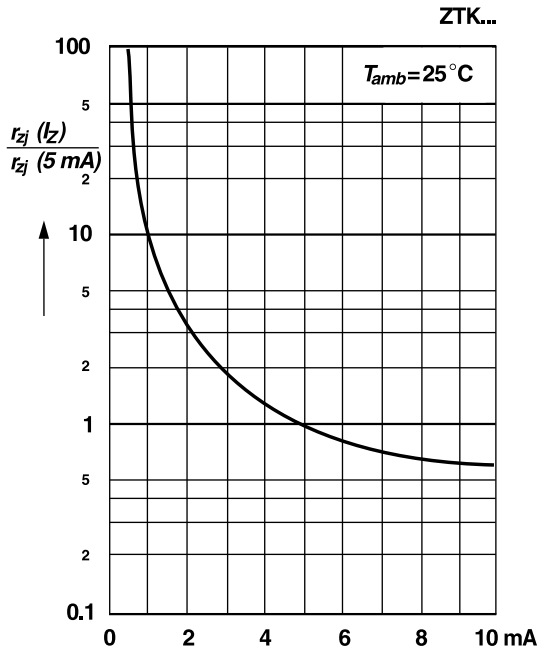


Permissible operating current versus ambient temperature

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



Dynamic resistance versus operating current



Change of temperature coefficient versus operating current