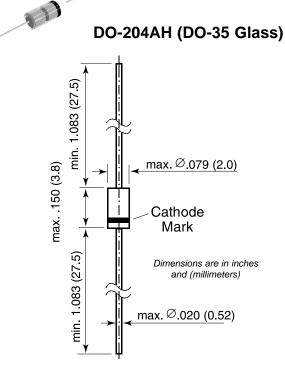
### GENERAL SEMICONDUCTOR®

# ZTK6.8 thru ZTK33

## **Voltage Stabilizers**



#### Maximum Ratings (TA = 25°C unless otherwise noted)

#### **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 voltagevariable 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

3 、	,		
Parameter	Symbol	Value	Unit
Operating Current (see Table "Characteristics")			
Junction temperature	TJ	150	°C
Storage temperature range	Ts	-20 to +150	°C

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

Parameter	Symbol	Min.	Тур.	Max.	Unit
Temperature Coefficient of the operating voltage at $I_Z = 5 \text{ mA } \pm 0.5$ in the range of $T_{amb} = 20$ to $60^{\circ}$ C	αvz	-10	-2	+5(1)	10⁻⁵/°C
Thermal Run-in-Time	t <sub>th</sub>	_	-20(2)	_	S
Thermal resistance junction to ambient air	Reja	_	_	0.4	°C/W

Туре	Operating Voltage at Iz = 5mA <sup>(3)</sup> Vz (V)	Dynamic resistance at Iz = 5mA rzj (Ω)	Permissable operating at T <sub>amb</sub> = 25°C <sup>(4)</sup> Iz 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 ΔVz has reached 90% of its final value ΔVz max. ΔVz max = Vz (a) - Vz (0), where Vz (0) = Vz in the instant of turn-on and Vz (a) = Vz at thermal equilibrium

(3) Tested with pulses t<sub>p</sub> = 5ms

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

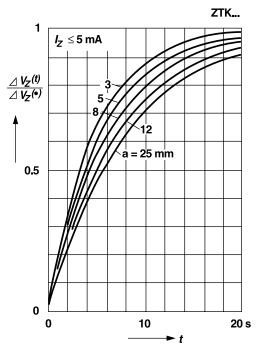


# ZTK6.8 thru ZTK33 Voltage Stabilizers

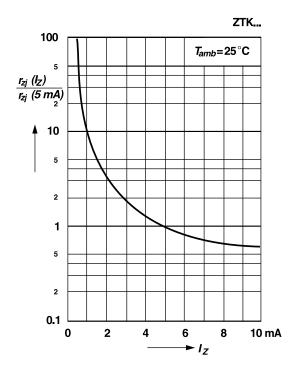
#### **Ratings and**

Characteristic Curves TA = 25°C unless otherwise noted.

Time dependence of  $\Delta V_Z$  after turn-on for different distances between case and point of ambient temperature on the leads

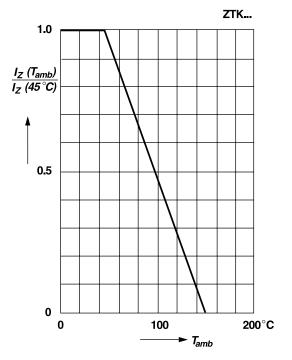


Dynamic resistance versus operating current



Permissible operating current versus ambient temperature

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



# Change of temperature coefficient versus operating current

