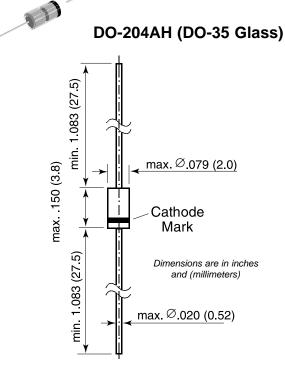
GENERAL SEMICONDUCTOR®

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° C | αvz | -10 | -2 | +5(1) | 10⁻⁵/°C |
| Thermal Run-in-Time | t _{th} | _ | -20(2) | _ | S |
| Thermal resistance junction to ambient air | Reja | _ | _ | 0.4 | °C/W |

| Туре | Operating Voltage at Iz = 5mA ⁽³⁾ Vz (V) | Dynamic resistance at Iz = 5mA rzj (Ω) | Permissable operating at T _{amb} = 25°C ⁽⁴⁾ 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_p = 5ms

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

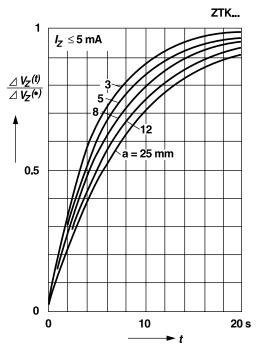


ZTK6.8 thru ZTK33 Voltage Stabilizers

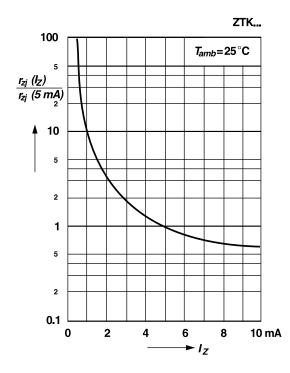
Ratings and

Characteristic Curves TA = 25°C unless otherwise noted.

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

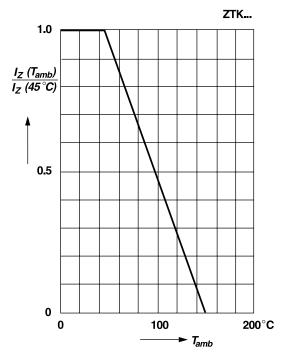


Dynamic resistance versus operating current



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

