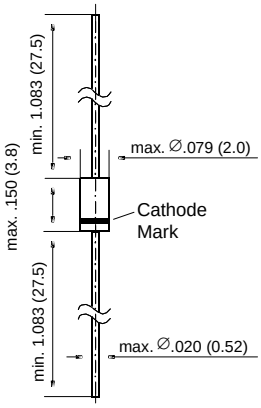
ZTK6.8 THRU ZTK33

VOLTAGE STABILIZERS

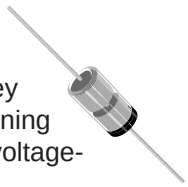
DO-35



Dimensions are in inches and (millimeters)

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

MAXIMUM RATINGS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOL	*VALUE*	*UNIT*
Operating Current (see Table “Characteristics”)			
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_S	– 20 to +150	°C

GENERAL SEMICONDUCTOR®

ZTK6.8 THRU ZTK33

ELECTRICAL AND THERMAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

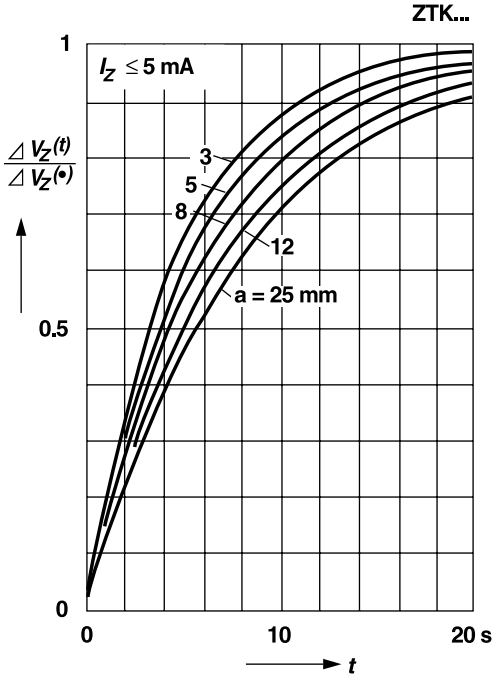
	SYMBOL	*MIN.*	*TYP.*	*MAX.*	*UNIT*
Temperature Coefficient of the Operating Voltage at I_Z = 5 mA ±0.5 mA in the range of T_{amb} = 20 to 60°C	α_{VZ}	–10	–2	+5[1)]	10^{-5}/K
Thermal Run-In-Time	t_{th}	–	20[2)]	–	s
Thermal Resistance Junction to Ambient Air	R_{thJA}	–	–	0.4	°C/W

NOTES:
(1) Valid provided that leads are kept at ambient temperature at a distance of 8mm 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.

Type	Operating voltage at I_Z = 5mA[(1)] V_Z(V)	Dynamic resistance at I_Z = 5mA $r_{zj}(\Omega)$	Permissable operating current at T_{amb} = 45°C[(2)] I_Z max. (mA)
ZTK6.8	6.4 ... 7.1	10 (<25)	36
ZTK9	8 ... 10	10 (<25)	27
ZTK11	10 ... 12	10 (<25)	19
ZTK18	16 ... 20	11 (<25)	13
ZTK22	20 ... 24	11 (<25)	10
ZTK27	24 ... 30	12 (<25)	8
ZTK33A	30 ... 32	12 (<25)	7
ZTK33B	32 ... 34	12 (<25)	7
ZTK33C	34 ... 36	12 (<25)	7

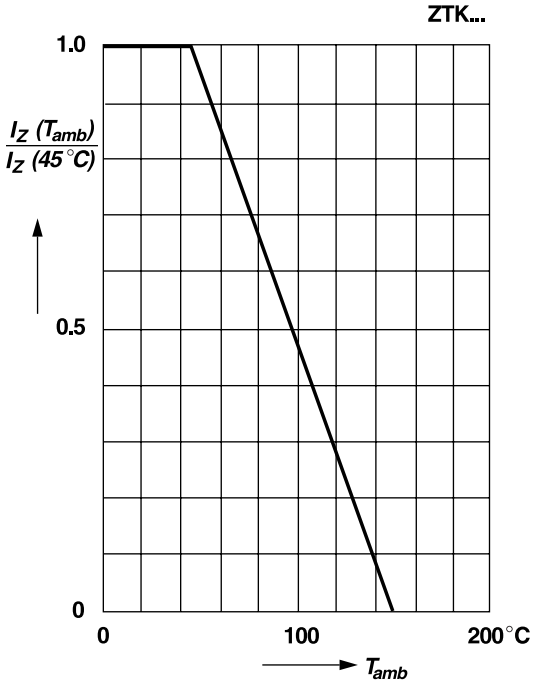
NOTES:
(1) Tested with pulses t_p=5ms
(2) Valid provided that leads are kept at ambient temperature at a distance of 8mm from case

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

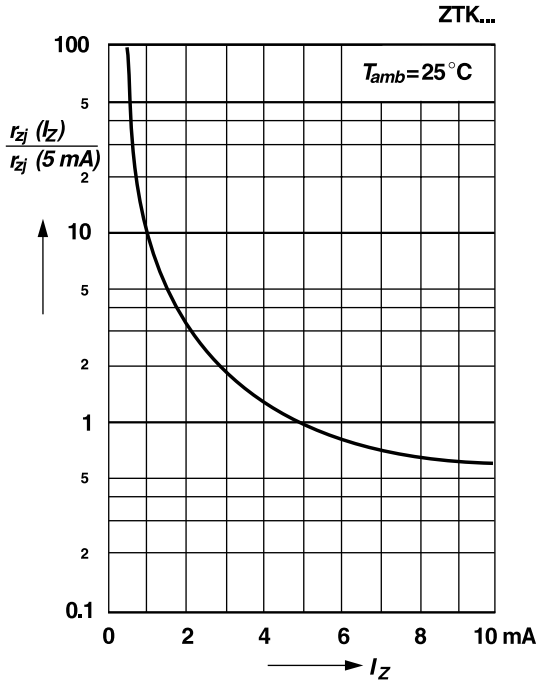


Permissible operating current versus ambient temperature

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