

# KA33V

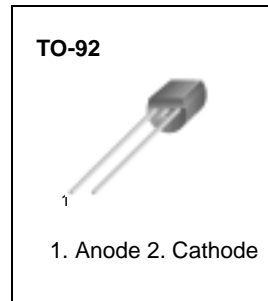
## Voltage Stabilizer

### Features

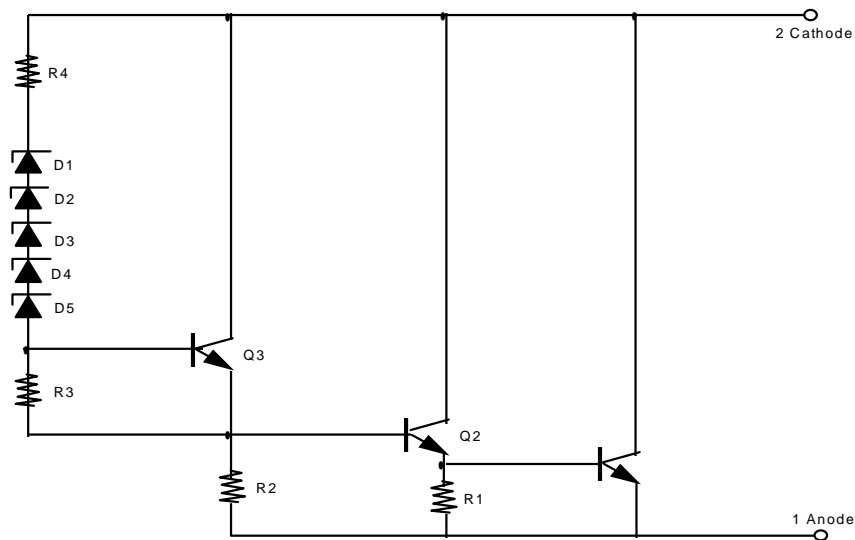
- Low Temperature Coefficient
- Low Dynamic Resistance
- Typical Reference Voltage of 33V

### Description

The KA33V is a monolithic integrated voltage stabilizer especially designed as voltage supplier for electronic tuners.



### Schematic Diagram



### Absolute Maximum Ratings (T<sub>A</sub> = 25°C)

Parameter	Symbol	Value	Unit
Zener Current	I <sub>Z</sub>	10	mA
Power Dissipation (T <sub>A</sub> = 75°C)	P <sub>D</sub>	200	mW
Operating Ambient Temperature Range	T <sub>OPR</sub>	-20 ~ 75	°C
Storage Temperature Range	T <sub>STG</sub>	-40 ~ 125	°C

### Electrical Characteristics (T<sub>A</sub> = 25°C)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Stabilized Voltage	V <sub>Z</sub>	I <sub>Z</sub> = 5mA	31		35	V
Stabilized Voltage-Temperature Drift	ΔV <sub>Z</sub> /ΔT	I <sub>Z</sub> = 5mA T <sub>A</sub> = -20 to 75°C	-1	0	1	mV/°C
Dynamic Resistance	R <sub>Z</sub>	I <sub>Z</sub> = 5mA, f = 1KHz	-	10	25	-

## Measuring Circuits

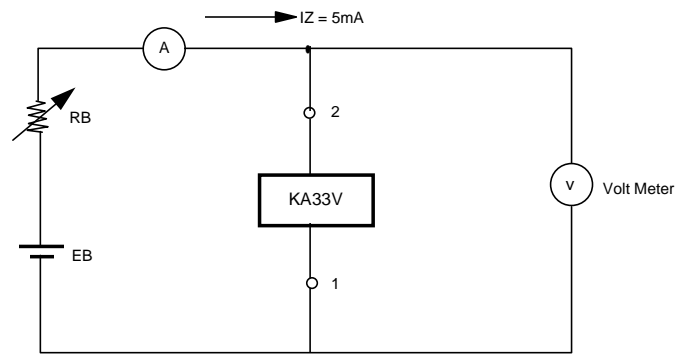


Figure 1. Measuring Circuit for Stabilized Voltage  $V_z$

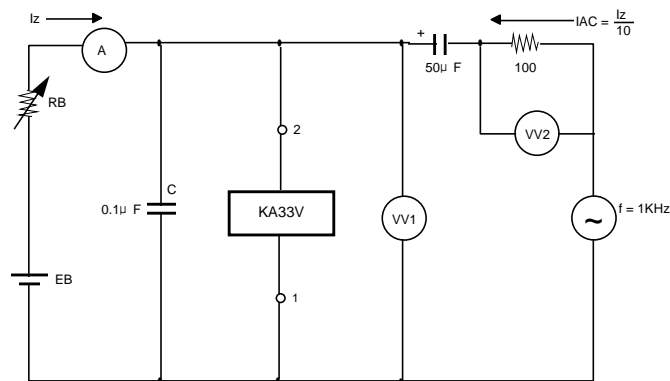


Fig. 3

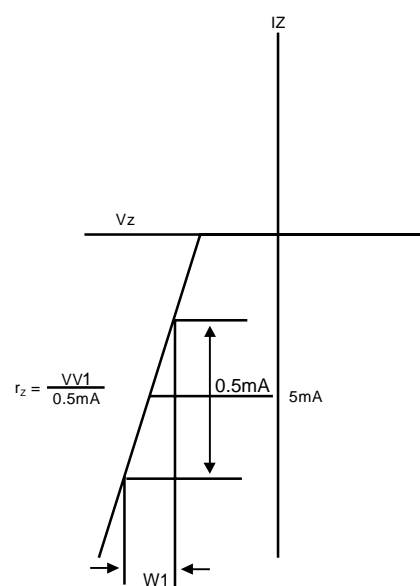
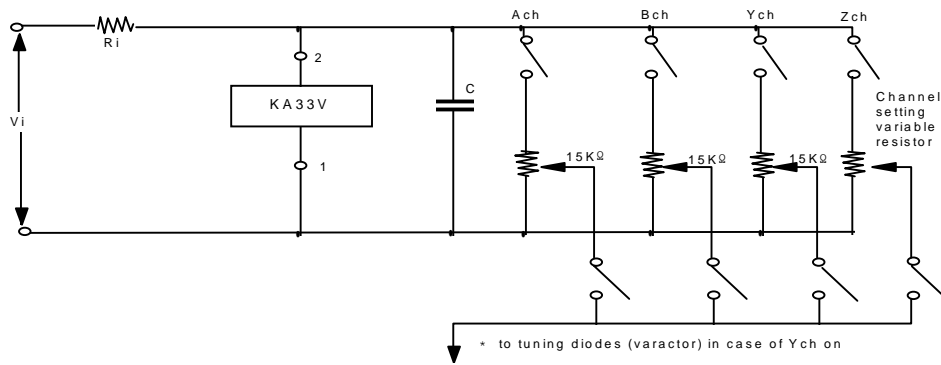
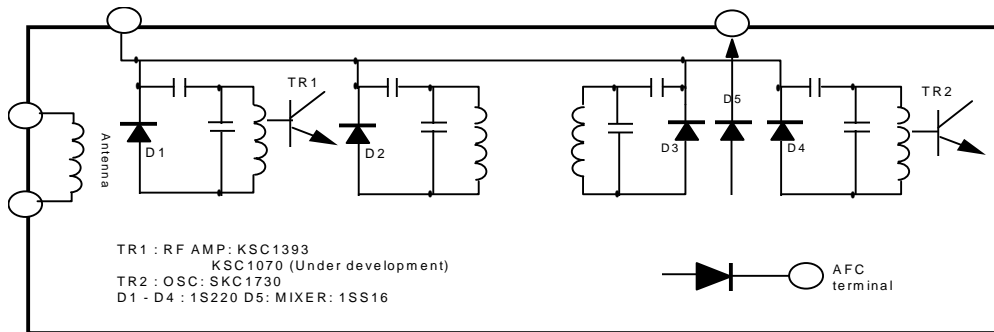


Figure 2. Measuring Circuit for Dynamic Resistance

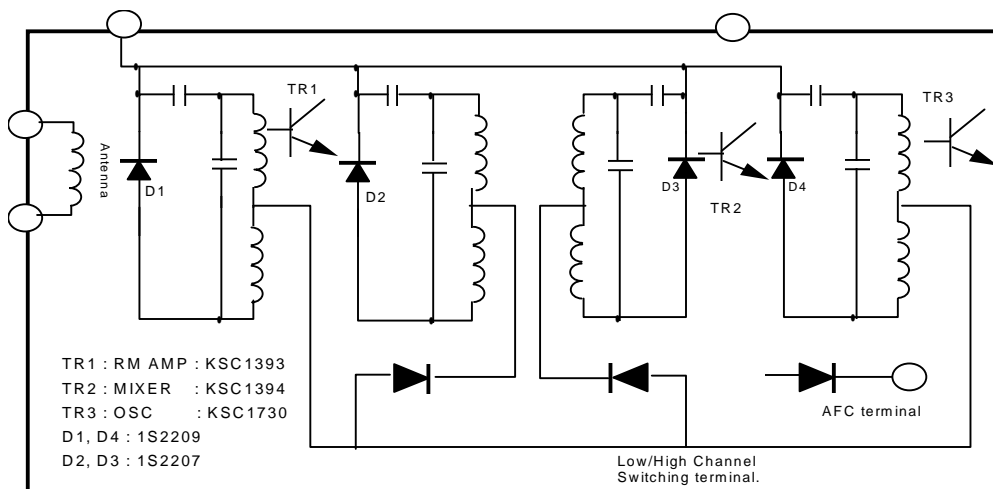
## Typical Application



### 1) UHF Tuner



### 2) VHF Tuner



# Power-temperature Derating Curve Typical Characteristic Curves

( $T_A = 25^\circ\text{C}$ )

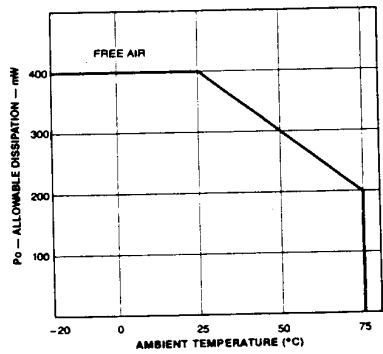


Figure 7. Allowable Dissipation vs. Ambient Temperature

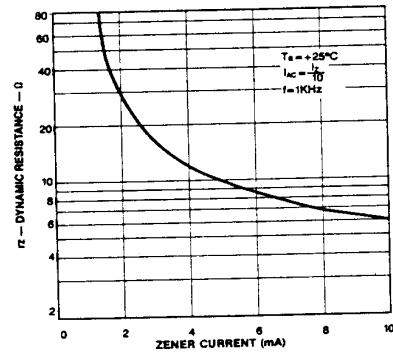


Figure 8. Dynamic Resistance vs. Zener Current

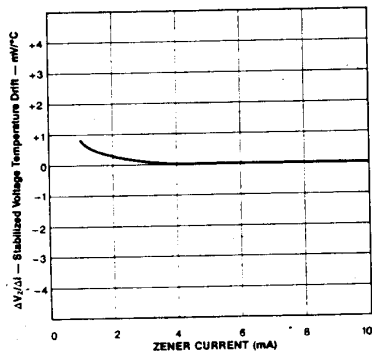


Figure 9. Stabilized Voltage Temperature Drift vs. Zener Current

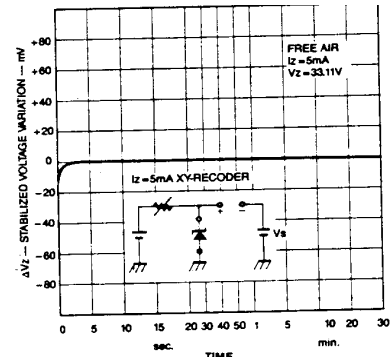


Figure 10. Stabilized Voltage Variation vs. Time

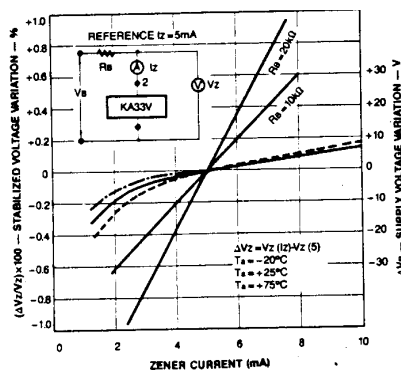


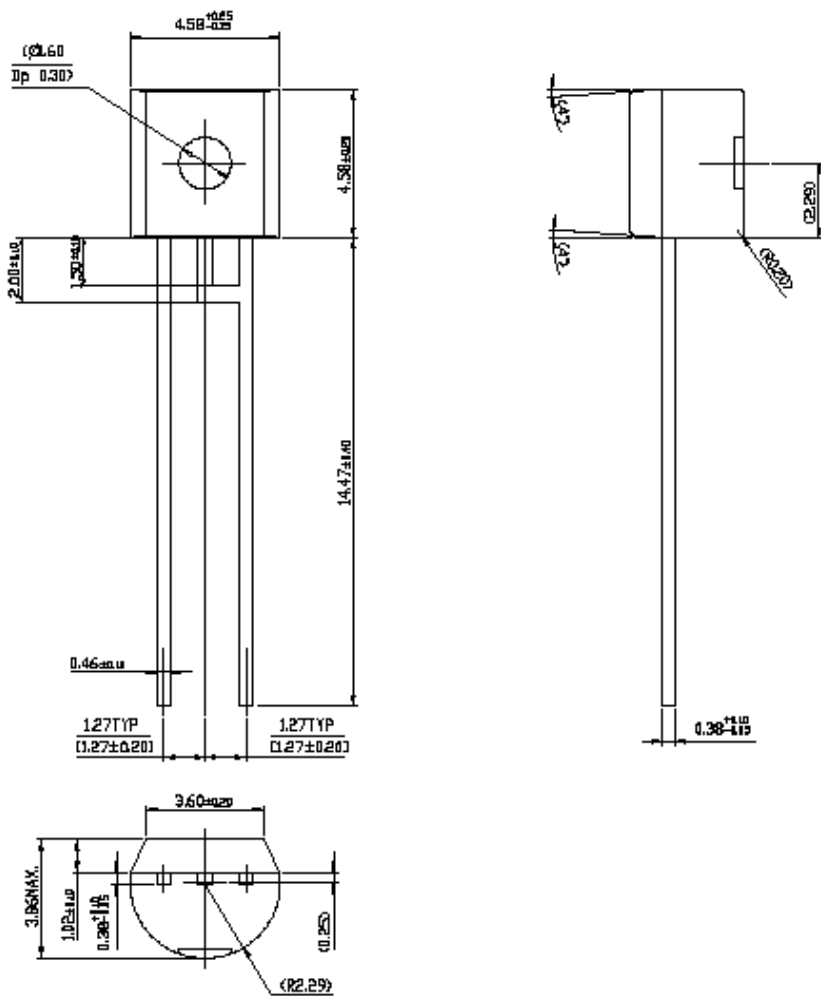
Figure 11. Stabilized Voltage Variation & Supply Voltage Variation vs. Zener Current

# Mechanical Dimensions

## Package

Dimensions in millimeters

### TO-92



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## Ordering Information

Product Number	Package	Operating Temperature
KA33V	TO-92	

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## KA33V

Voltage Stabilizer

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### General description

The KA33V is a monolithic integrated voltage stabilizer especially designed as voltage supplier for electronic tuners.

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### Features

- Low Temperature Coefficient
- Low Dynamic Resistance
- Typical Reference Voltage of 33V

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### Product status/pricing/packaging

**BUY**

Product	Product status	Pb-free Status	Pricing*	Package type	Leads	Packing method
KA33VTA	Full Production	 Full Production	\$0.158	<a href="#">TO-92</a>	3	AMMO

\* Fairchild 1,000 piece Budgetary Pricing

\*\* A sample button will appear if the part is available through Fairchild's on-line samples program. If there is no sample button, please contact a [Fairchild distributor](#) to obtain samples



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