

# KA33V

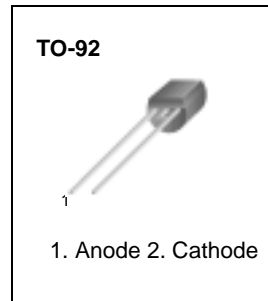
## Voltage Stabilizer

### Features

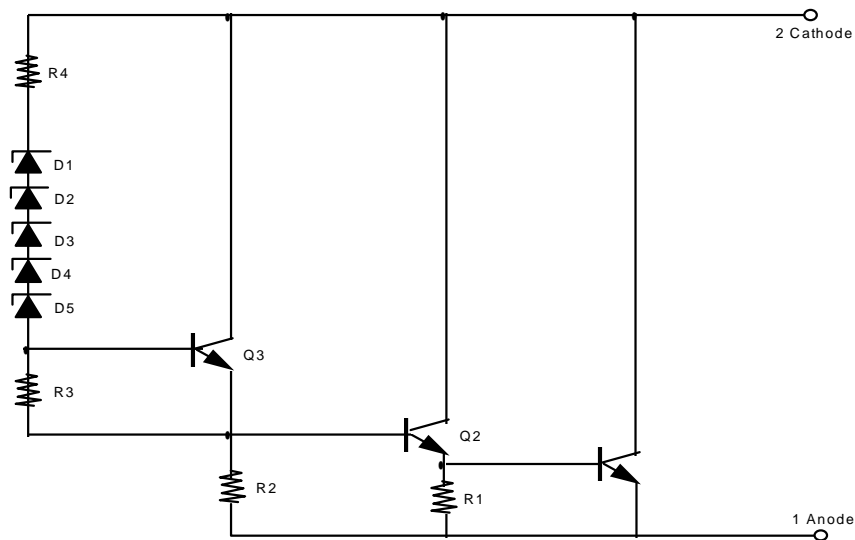
- Low Temperature Coefficient
- Low Dynamic Resistance
- Typical Reference Voltage of 33V

### 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

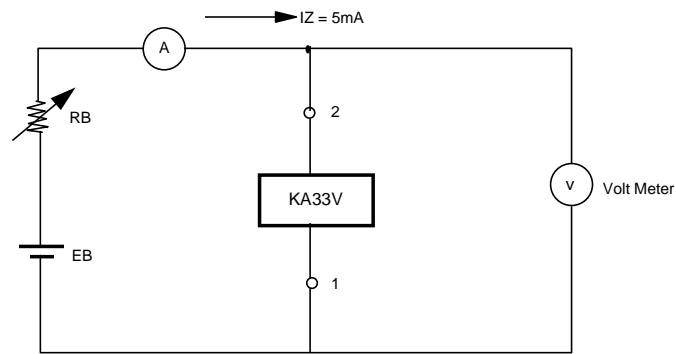


Figure 1. Measuring Circuit for Stabilized Voltage  $V_z$

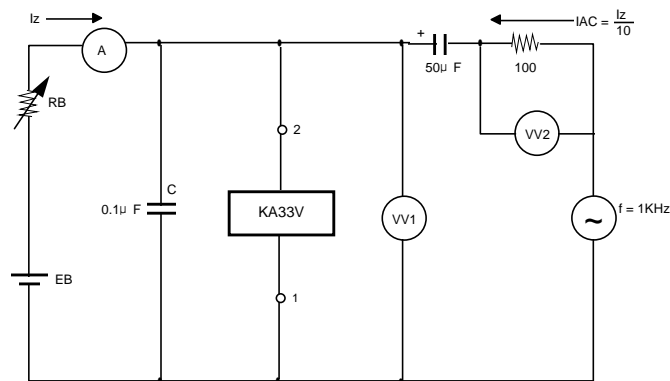


Fig. 3

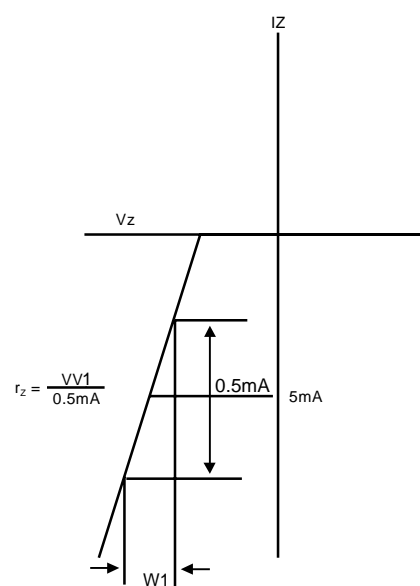
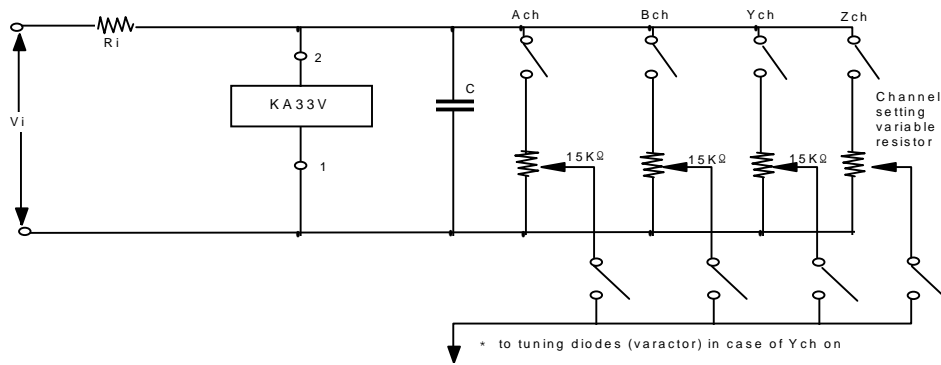
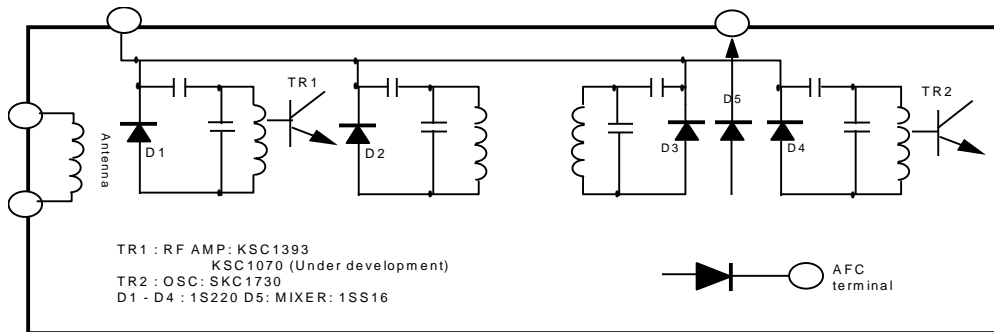


Figure 2. Measuring Circuit for Dynamic Resistance

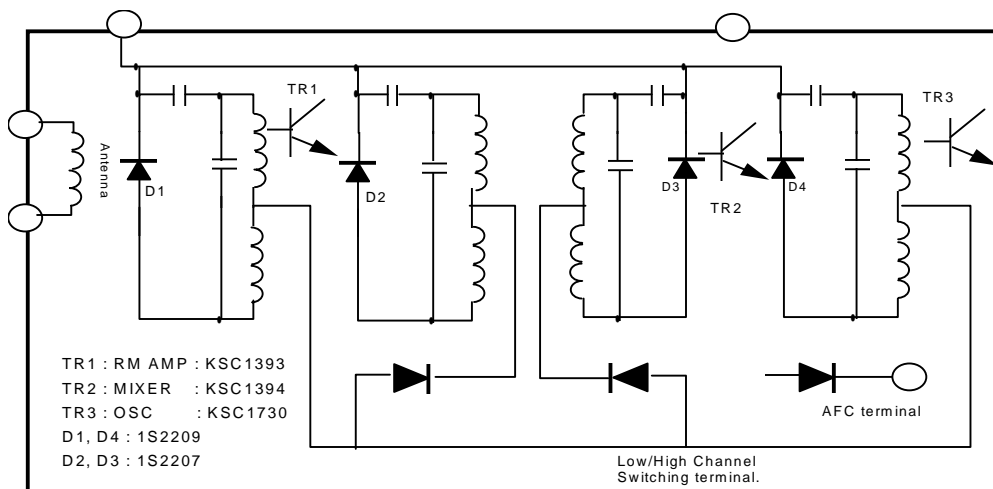
## Typical Application



### 1) UHF Tuner



### 2) VHF Tuner



# Power-temperature Derating Curve Typical Characteristic Curves

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

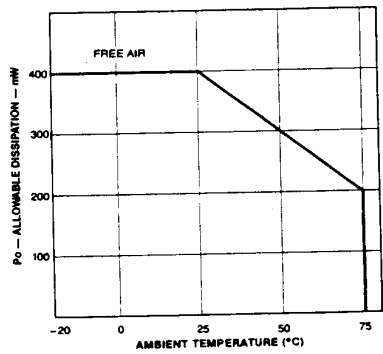


Figure7. Allowable Dissipation vs. Ambient Temperature

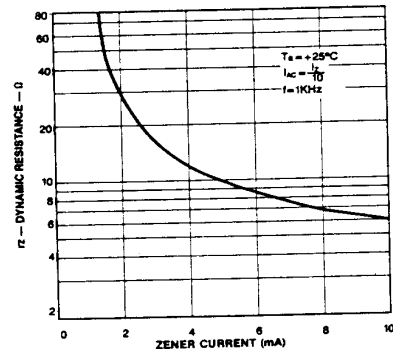


Figure8. Dynamic Resistance vs. Zener Current

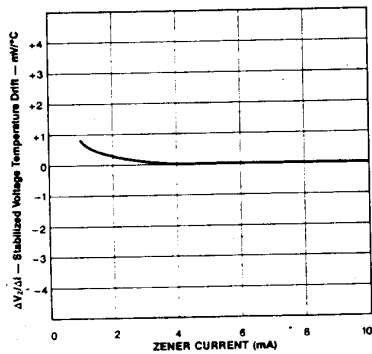


Figure9. Stabilized Voltage Temperature Drift vs. Zener Current

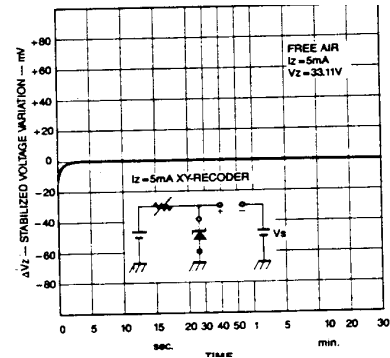


Figure10. Stabilized Voltage Variation vs. Time

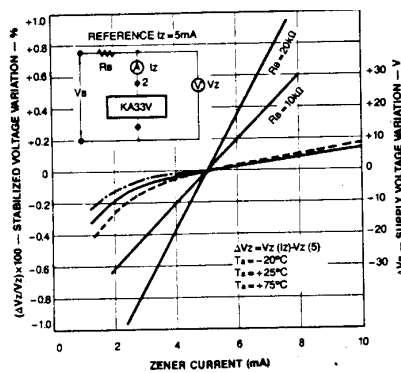


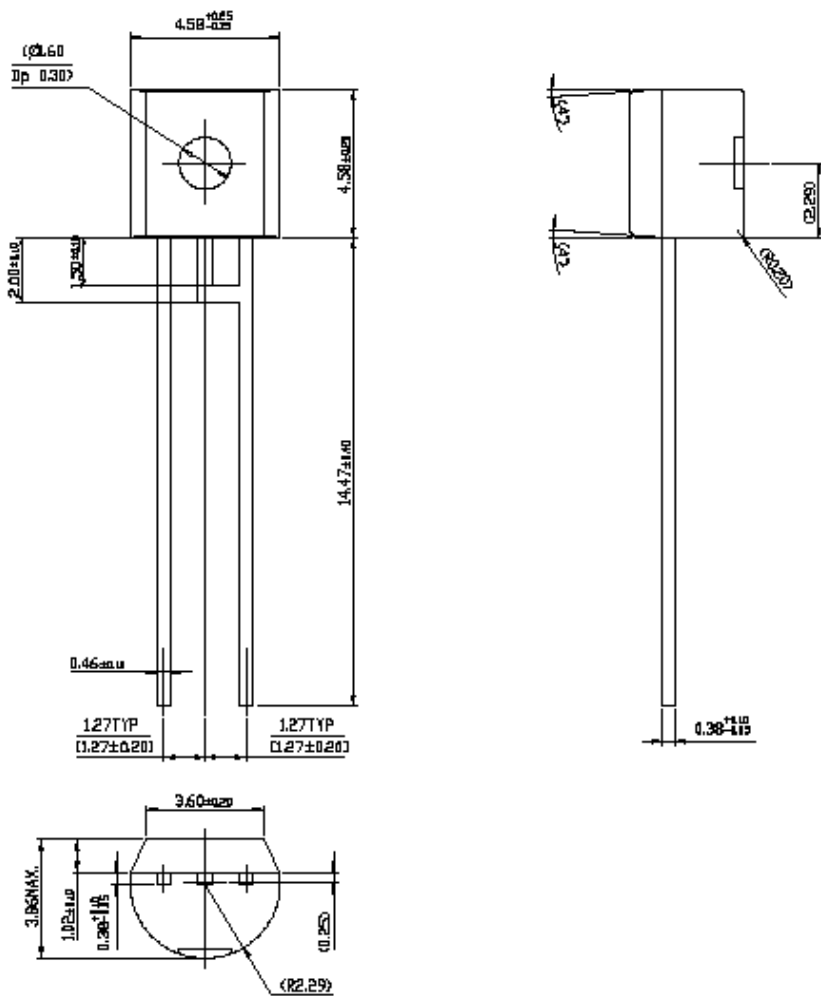
Figure11. Stabilized Voltage Variation & Supply Voltage Variation vs. Zener Current

# Mechanical Dimensions

## Package

Dimensions in millimeters

### TO-92



**Ordering Information**

<b>Product Number</b>	<b>Package</b>	<b>Operating Temperature</b>
KA33V	TO-92	

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