

KA33V

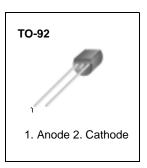
Voltage Stabilizer

Features

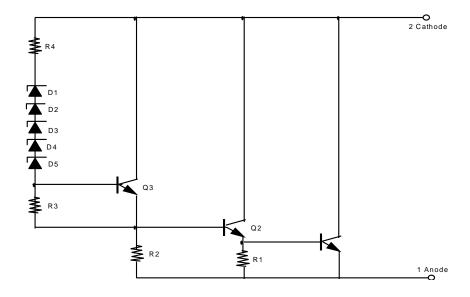
- Low Temperature Coefficient
- Low Dynamic Resistance
- Typical Reference Voltage of 33V

Description

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



Schematic Diagram



Absolute Maximum Ratings (T_{A= 25°C)}

Parameter	Symbol	Value	Unit
Zener Current	Iz	10	mA
Power Dissipation (T _A = 75°C)	PD	200	mW
Operating Ambient Temperature Range	Topr	-20 ~ 75	°C
Storage Temperature Range	TSTG	-40 ~ 125	°C

Electrical Characteristics (T_A = 25°C)

Parameter	Symbol	Conditions	Min.	Тур.	Max.	Unit
Stabilized Voltage	Vz	$I_Z = 5mA$	31		35	V
Stabilized Voltage-Temperature Drift	ΔV <u>Z</u> /ΔΤ	Iz = 5mA T _A = -20 to 75°C	-1	0	1	mV/°C
Dynamic Resistance	Rz	Iz = 5mA, $f = 1KHz$	-	10	25	-

Measuring Circuits

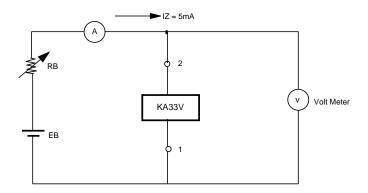
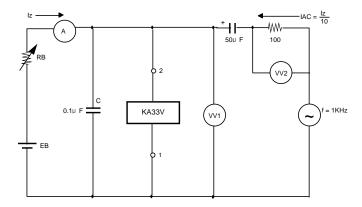


Figure 1. Measuring Circuit for Stabilized Voltage Vz



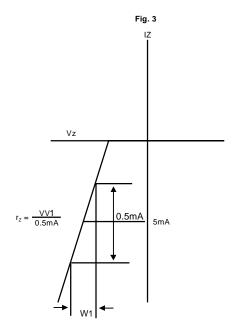
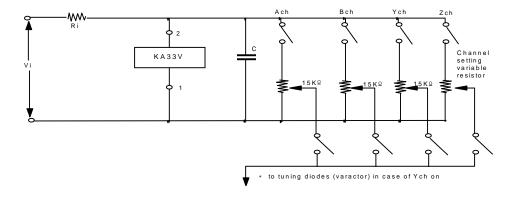
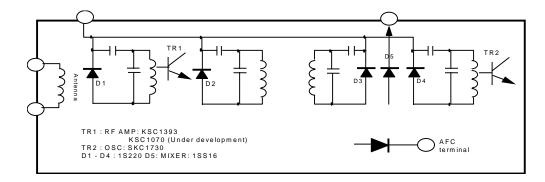


Figure 2. Measuring Circuit for Dynamic Resistance

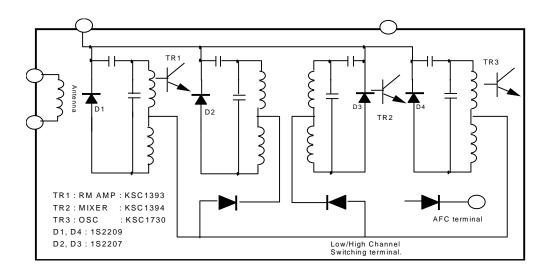
Typical Application



1) UHF Tuner



2) VHF Tuner



Power-temperature Derating Durve Typical Characteristic Curves

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

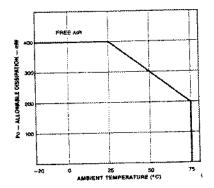


Figure 7. Allowable Dissipation vs.

Amblent Temperature

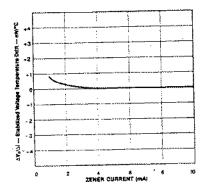


Figure 9. Stabilized Voltage Temperature Drift vs. Zener Current

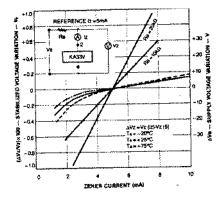


Figure 11. Stabilized Voltage Variation & Supply Voltage Variation vs. Zener Current

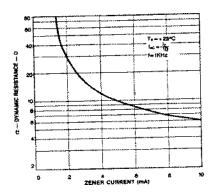


Figure8. Dynamic Resistance vs. Zener Current

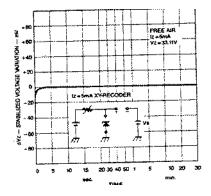


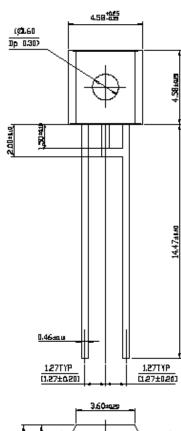
Figure 10. Stabilized Voliage Variation vs. Time

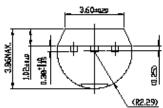
Mechanical Dimensions

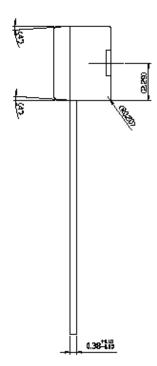
Package

Dimensions in millimeters

TO-92







.

Ordering Information

Product Number	Package	Operating Temperature
KA33V	TO-92	

DISCLAIMER

FAIRCHILD SEMICONDUCTOR RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE TO ANY PRODUCTS HEREIN TO IMPROVE RELIABILITY, FUNCTION OR DESIGN. FAIRCHILD DOES NOT ASSUME ANY LIABILITY ARISING OUT OF THE APPLICATION OR USE OF ANY PRODUCT OR CIRCUIT DESCRIBED HEREIN; NEITHER DOES IT CONVEY ANY LICENSE UNDER ITS PATENT RIGHTS, NOR THE RIGHTS OF OTHERS.

LIFE SUPPORT POLICY

FAIRCHILD'S PRODUCTS ARE NOT AUTHORIZED FOR USE AS CRITICAL COMPONENTS IN LIFE SUPPORT DEVICES OR SYSTEMS WITHOUT THE EXPRESS WRITTEN APPROVAL OF THE PRESIDENT OF FAIRCHILD SEMICONDUCTOR CORPORATION. As used herein:

- Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, and (c) whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in a significant injury of the user.
- A critical component in any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

www.fairchildsemi.com