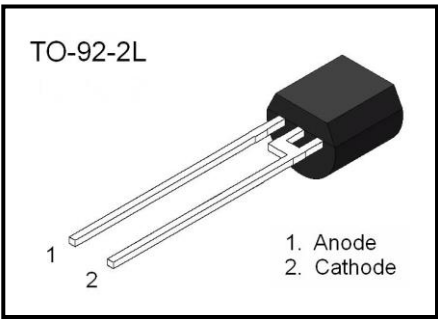


Description

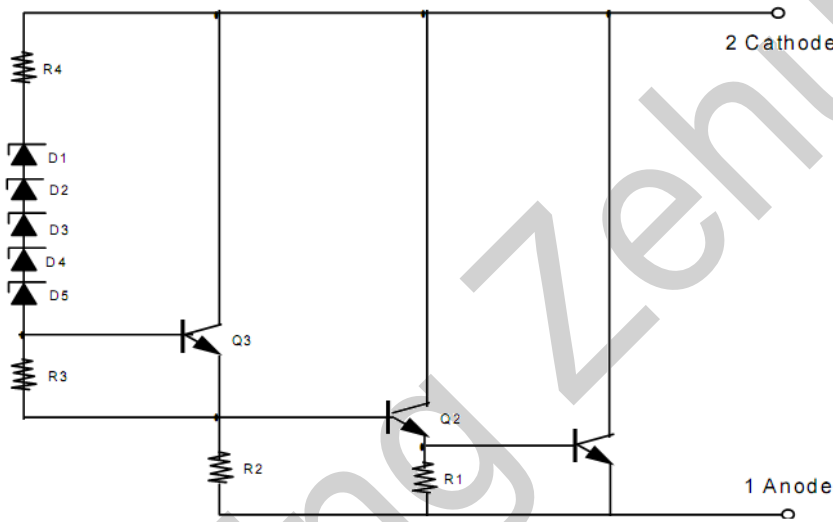
The KA33V is a monolithic integrated voltage stabilizer especially designed as voltage supplier for electronic tuners.

Features

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



Schematic Diagram



Absolute Maximum Ratings (Ta = 25°C ,unless otherwise specified)

Parameter	Symbol	Value	Unit
Zener current	I_Z	10	mA
Power dissipation (Ta=75°C)	P_D	200	mW
Operating ambient temperature range	T_{opr}	-20 ~ + 75	°C
Storage temperature Range	T_{stg}	-40 ~ + 125	°C

Electrical Characteristics (Ta = 25°C ,unless otherwise specified)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Stabilized voltage	V_Z	$I_Z = 5mA$	31		35	V
Stabilized voltage-temperature drift	$\Delta V_Z / \Delta T$	$I_Z = 5mA$, $T_a = -20 \sim + 75^\circ C$	-1	0	1	mV/°C
Dynamic resistance	R_Z	$I_Z = 5mA$, $f = 1kHz$		10	25	Ω

Measuring Circuits

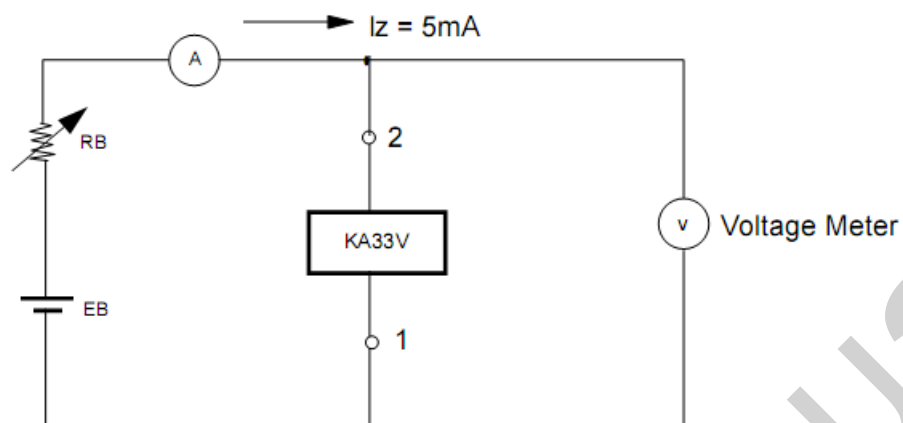
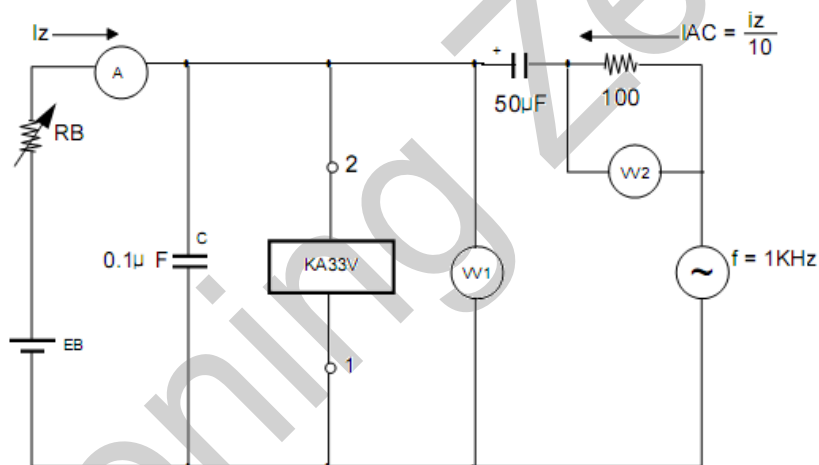
Figure 1.Measuring Circuit for Stabilized Voltage V_Z 

Figure 2. Measuring Circuit for Dynamic Resistance

The diagram shows a channel selector circuit. A 33V KA battery is connected to a resistor R_i . The circuit includes a capacitor C and four channel setting variable resistors (15KΩ) labeled Ach, Bch, Ych, and Zch. A common terminal for these resistors is connected to tuning diodes (varactor) in case of Ych on.

Antenna

D1

TR1

D2

D3

D5

D4

TR2

AFC terminal

TR1 : RF AMP: KSC1393
KSC1070 (Under development)
TR2 : OSC: SKC1730
D1 - D4 : 1S220 D5: MIXER: 1SS16

TR1 : RM AMP : KSC1393
 TR2 : MIXER : KSC1394
 TR3 : OSC : KSC1730
 D1, D4 : 1S2209
 D2, D3 : 1S2207

Low/High Channel Switching terminal.

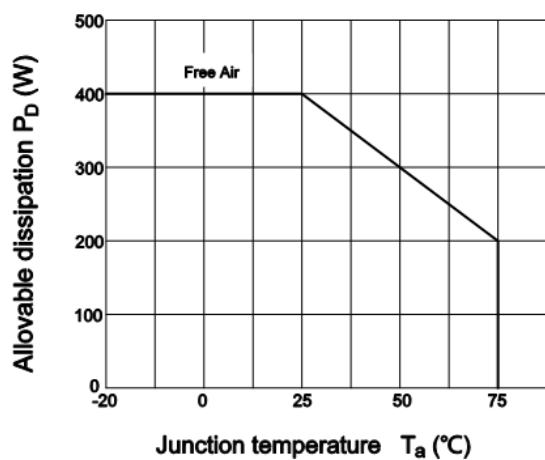
Typical Characteristics ($T_a = 25^\circ\text{C}$)

Figure 7. Figure7. Allowable Dissipation vs. Ambient Temperature

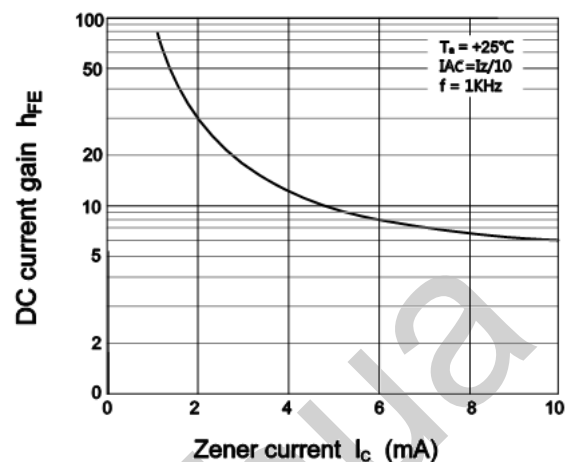


Figure 8. Dynamic Resistance vs. Zener Current

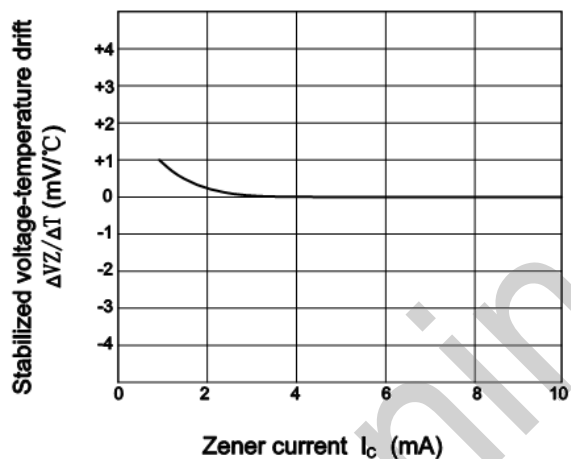


Figure 9. Stabilized Voltage Temperature Drift vs. Zener Current

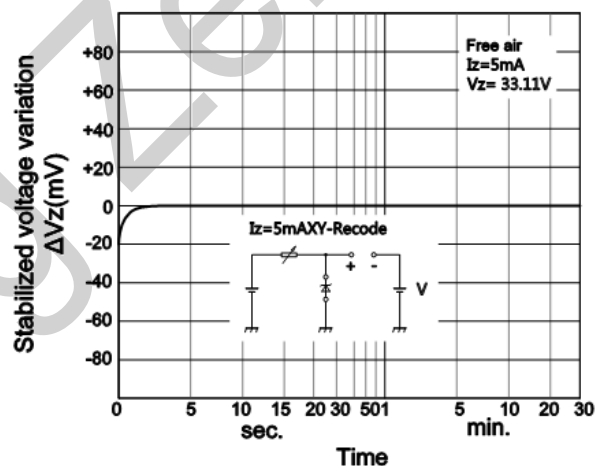


Figure10. Stabilized Voltage Variation vs. Time

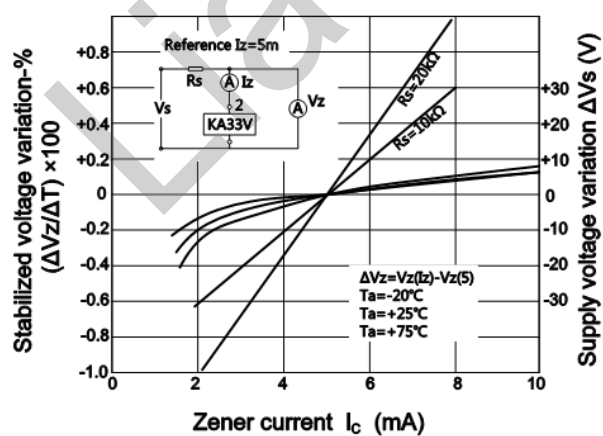


Figure11. Stabilized Voltage Variation & Supply Voltage Variation vs. Zener Current

Package Dimensions

Dim	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	3.30	3.70	0.130	0.146
A1	2.30	2.70	0.091	0.106
b	0.40	0.50	0.016	0.020
b1	0.50	0.70	0.020	0.028
c	0.35	0.45	0.014	0.018
D	4.45	4.70	0.175	0.185
E	4.40	4.65	0.173	0.183
e	1.17	1.37	0.046	0.054
e1	2.34	2.64	0.092	0.104
L	13.50	14.50	0.531	0.571
L1	1.80	2.20	0.071	0.087