SILICON MONOLITHIC BIPOLAR INTEGRATED CIRCUIT VOLTAGE STABILIZER FOR ELECTRONIC TUNER

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

TO-92

1: Anode 2: Cathode

FEATURES

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

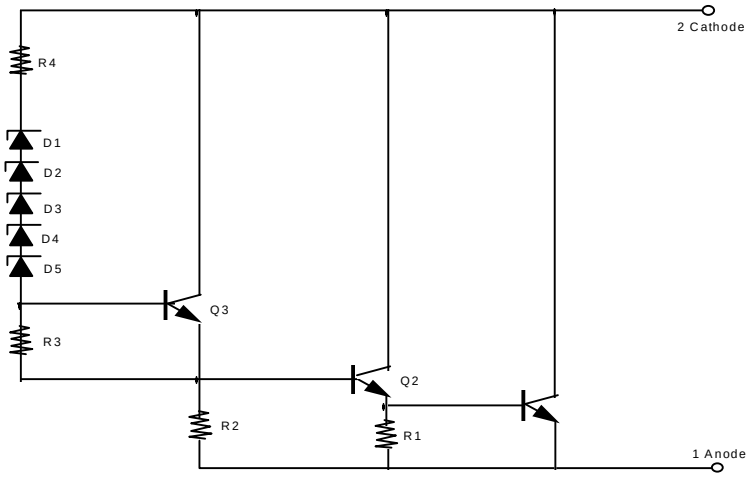
ABSOLUTE MAXIMUM RATINGS (T_A= 25℃)

Characteristic	Symbol	Value	Unit
Zener Current	I_Z	10	mA
Power Dissipation (T_A = 75℃)	P_D	200	mW
Operating Ambient Temperature-Range	T_{OPR}	-20 ~ 75	℃
Storage Temperature Range	T_{STG}	-40 ~ 125	℃

ELECTRICAL CHARACTERISTICS (T_A = 25℃)

Characteristic	Symbol	Test 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 to 75℃	-1	0	1	mV/℃
Dynamic Resistance	R_Z	I_Z = 5mA, f = 1KHz		10	25	

SCHEMATIC DIAGRAM



FAIRCHILD SEMICONDUCTOR™

MEASURING CIRCUITS

Fig. 1 Measuring Circuit for Stabilized Voltage V_Z

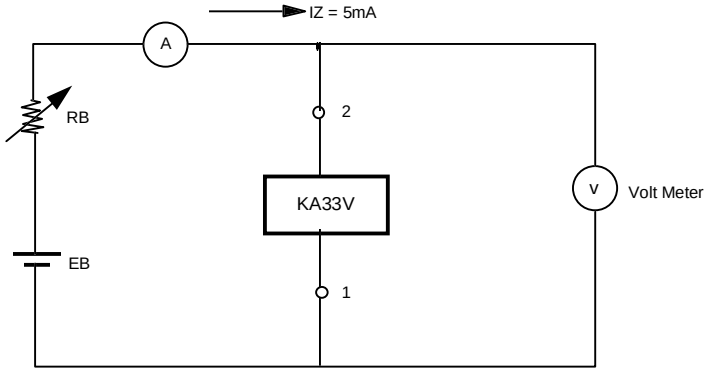


Fig. 2 Measuring Circuit for Dynamic Resistance

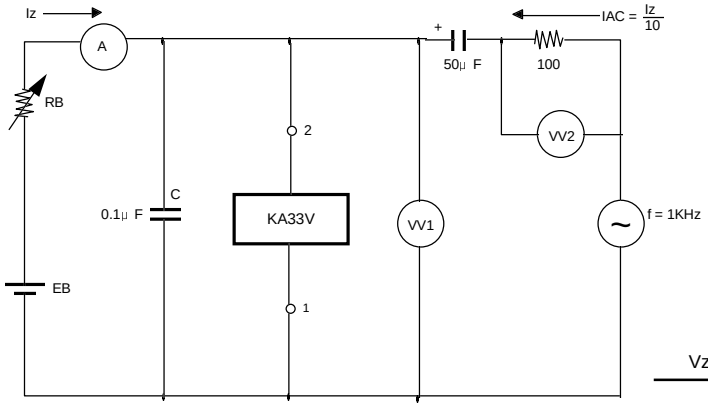
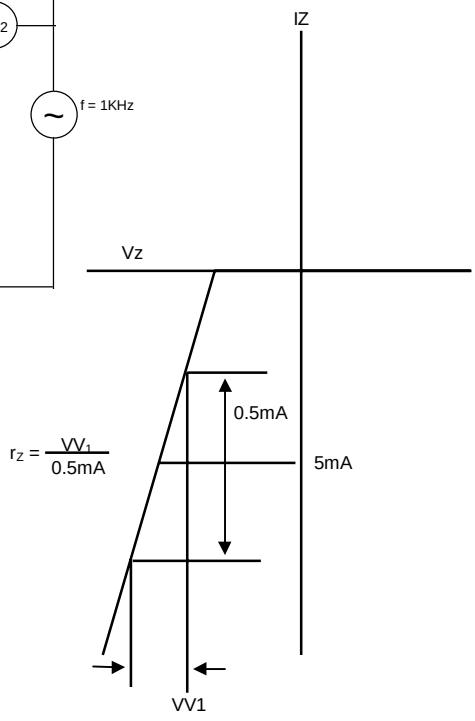
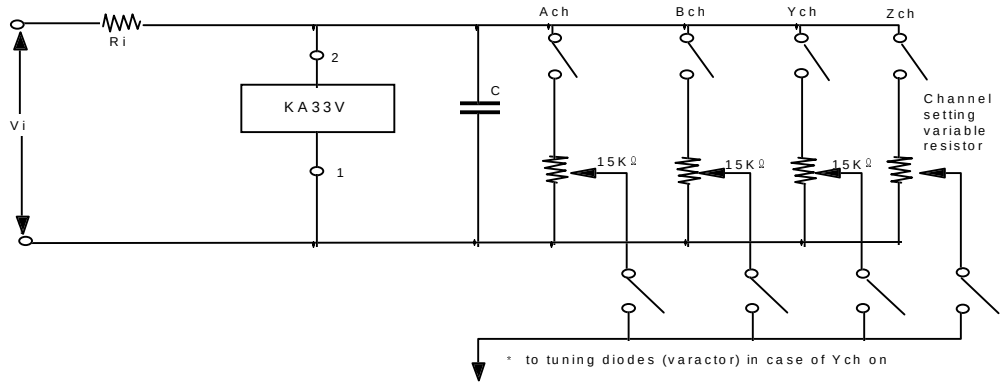


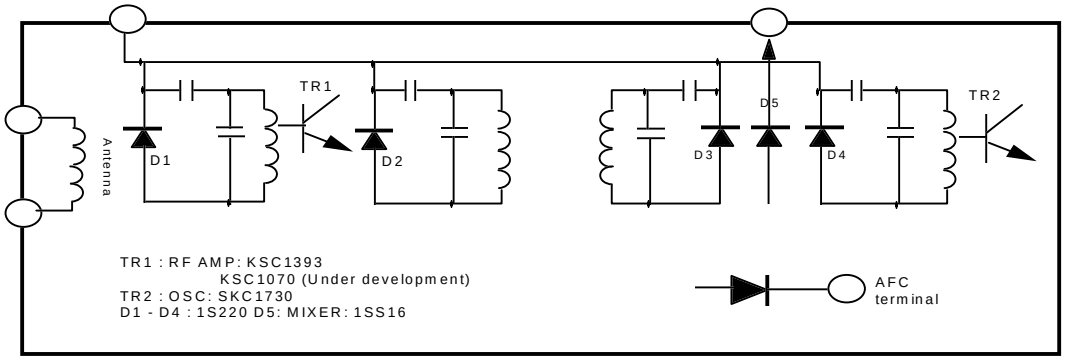
Fig. 3



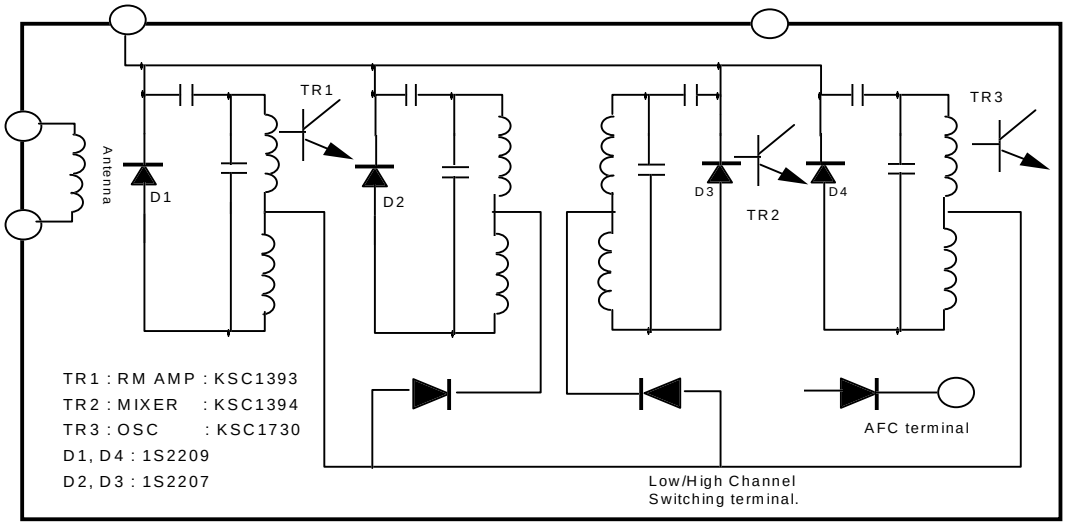
TYPICAL APPLICATION



1) UHF TUNER

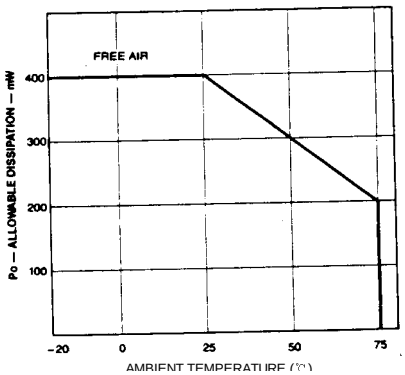


2) VHF TUNER



POWER-TEMPERATURE DERATING DURVE

Fig. 7 ALLOWABLE DISSIPATION vs. AMBIENT TEMPERATURE



TYPICAL CHARACTERISTIC CURVES (T_A = 25℃)

Fig. 8 DYNAMIC RESISTANCE vs. ZENER CURRENT

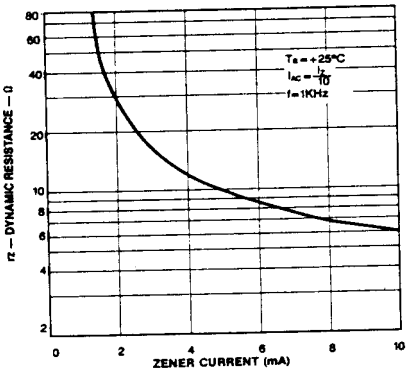


fig. 9 STABILIZED VOLTAGE TEMPERATURE DRIFT vs. ZENER CURRENT

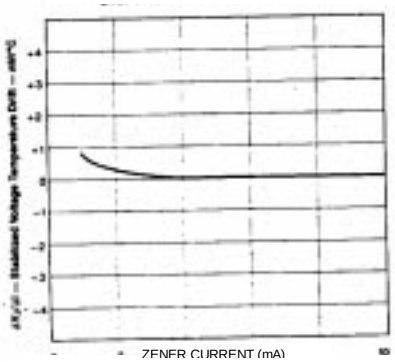


Fig. 10 STABILIZED VOLTAGE VARIATION vs. TIME

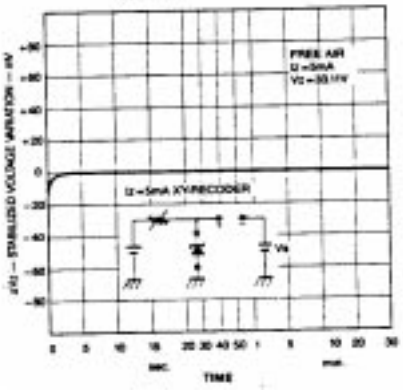
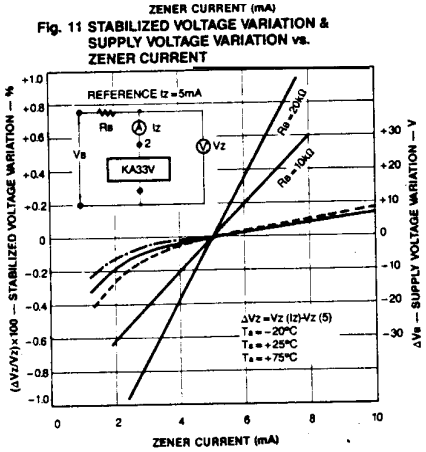


Fig. 11 STABILIZED VOLTAGE VARIATION & SUPPLY VOLTAGE VARIATION vs. ZENER CURRENT



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