

S1854 IS A REGULATOR DRIVER FOR LINE OPERATED TV, WHICH ARE BUILT UP OF ERROR AMPLIFIER TRANSISTOR, STANDARD VOLTAGE ZENER DIODE AND POLY-SILICON RESISTORS ON MONOLITHIC CHIP.

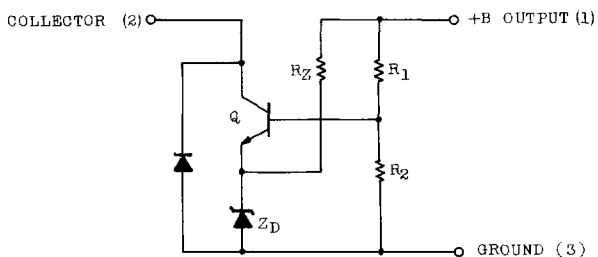
FEATURES:

- . Possible to Eliminate the Output Voltage Adjustment of Regulator Stage In Line Operated TV, Combined with the Usual Power Transistors.
- . High Voltage ($V_{CGO} \geq 150V$)
- . Excellent Temperature Characteristics of Regulated Output Voltage.

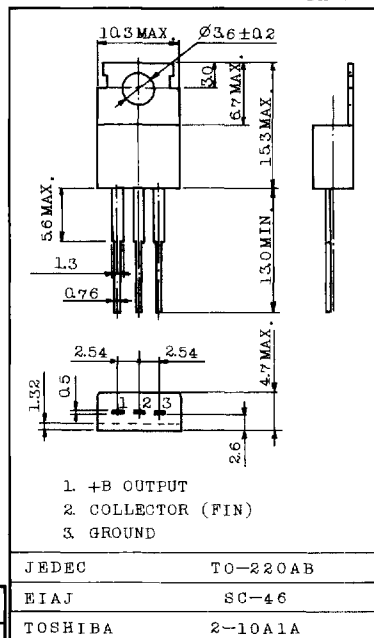
MAXIMUM RATINGS ($T_a=25^\circ C$)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector to Ground Voltage	V_{CGO}	150	V
Collector to +B Output Voltage	V_{CBO}	150	V
+B Output to Ground Voltage	V_{BGO}	120	V
Collector Current	I_C	50	mA
Power Dissipation	P_D	1.5	W
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature	T_{stg}	-55 ~ 150	$^\circ C$
Operating Temperature Range	T_{opr}	-25 ~ 75	$^\circ C$

EQUIVALENT CIRCUIT



Unit in mm

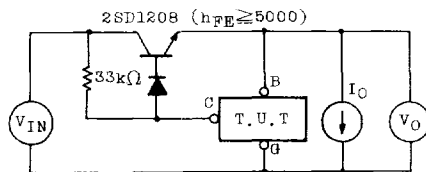


Weight : 1.9g

ELECTRICAL CHARACTERISTICS (Unless otherwise specified, $T_c=25^{\circ}\text{C}$)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector to Ground Breakdown Voltage	$V(\text{BR})_{\text{CGO}}$	$I_C=1\text{mA}, I_B=0$	150	-	-	V
Collector Cut-off Current	I_{CGO}	$V_{\text{CG}}=120\text{V}, V_{\text{BG}}=0$	-	-	1.0	μA
Regulated Output Voltage	V_0	$V_{\text{IN}}=150\text{V}$ $I_0=10\text{mA}$, (Note 1)	112.5	-	117.5	V
Temperature Coefficient of Regulated Output Voltage	rV_0	$V_{\text{IN}}=120\text{V}, I_0=10\text{mA}$ $T_c=25^{\circ}\text{C}, 75^{\circ}\text{C}$ (Note 2)	-	-	± 100	$\text{PPM}/^{\circ}\text{C}$
Regulation	ΔV_0	$V_{\text{IN}}=120\text{V}, 150\text{V}$ $I_0=10\text{mA}$ (Note 3)	-	-	1.5	V
Zener Voltage (Reference Inly)	V_Z	$I_Z=1\text{mA}$	-	6.0	-	V
Resistance of R_1 (Reference Only)	R_1	$I_{R1}=1\text{mA}$	-	36	-	$\text{k}\Omega$
Resistance of R_2 (Reference Only)	R_2	$I_{R2}=1\text{mA}$	-	2.2	-	$\text{k}\Omega$
Resistance of R_Z (Reference Only)	R_Z	$I_{RZ}=1\text{mA}$	-	40	-	$\text{k}\Omega$
DC Current Gain of Q (Reference Only)	h_{FE}	$V_{\text{CE}}=80\text{V}, I_C=2\text{mA}$	-	200	-	-
Transition Frequency of Q	f_T	$V_{\text{CE}}=10\text{V}, I_C=10\text{mA}$	-	120	-	MHz

Note 1 : TEST METHOD



Note 2 : $rV_0 = \frac{V_0(75^{\circ}\text{C}) - V_0(25^{\circ}\text{C})}{V_0(25^{\circ}\text{C}) \times 50} \times 10^6$ (PPM/ $^{\circ}\text{C}$) where $V_0(75^{\circ}\text{C})$; V_0 at $T_c=75^{\circ}\text{C}$
 $V_0(25^{\circ}\text{C})$; V_0 at $T_c=25^{\circ}\text{C}$

Note 3 : $\Delta V_0(150\text{V}) - V_0(120\text{V})$ where $V_0(120\text{V})$; V_0 at $V_{\text{IN}}=120\text{V}$
 $V_0(150\text{V})$; V_0 at $V_{\text{IN}}=150\text{V}$

APPLICATION CIRCUIT

