

**TOSHIBA**

**2SD1092**

TOSHIBA TRANSISTOR SILICON NPN DOUBLE DIFFUSED TYPE (PCT PROCESS)

# 2SD1092

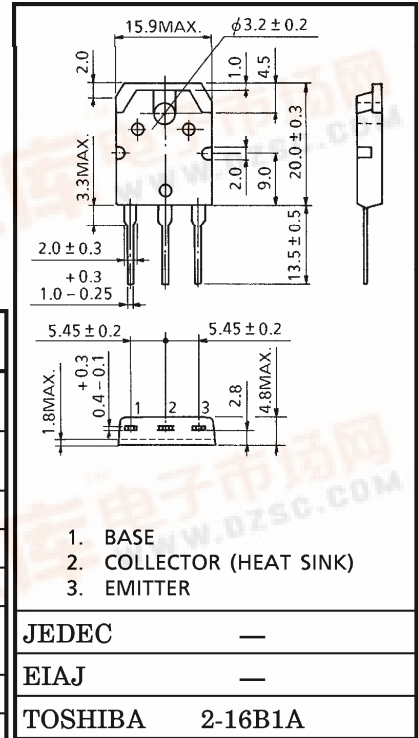
POWER REGULATOR FOR LINE OPERATED TV.

Unit in mm

- Excellent Wide Safe Operating Area. (80W·s at Tc=25°C)
- Included Avalanche Diode :  $V_Z = 55 \begin{smallmatrix} +15V \\ -10V \end{smallmatrix}$
- High DC Current Gain :  $h_{FE} = 500$  (Min.) (Tc=25°C)
- High Collector Power Dissipation Capability : 80W at 25°C Case Temperature

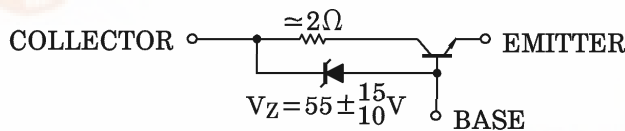
MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V <sub>CBO</sub>	55 $\begin{smallmatrix} +15 \\ -10 \end{smallmatrix}$	V
Collector-Emitter Voltage	V <sub>CEO</sub>	55 $\begin{smallmatrix} +15 \\ -10 \end{smallmatrix}$	V
Emitter-Base Voltage	V <sub>EBO</sub>	5	V
Collector Current	DC	I <sub>C</sub>	4 A
	Pulse	I <sub>CP</sub>	20 A
Collector Power Dissipation (Tc=25°C)	P <sub>C</sub>	80	W
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature Range	T <sub>stg</sub>	-55~150	°C



Weight : 4.6g

EQUIVALENT CIRCUIT



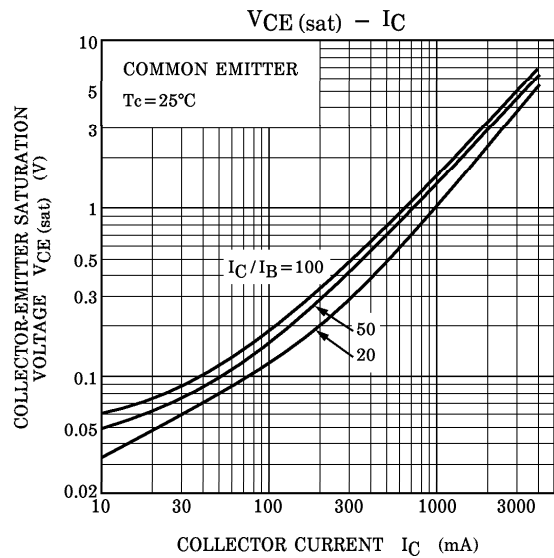
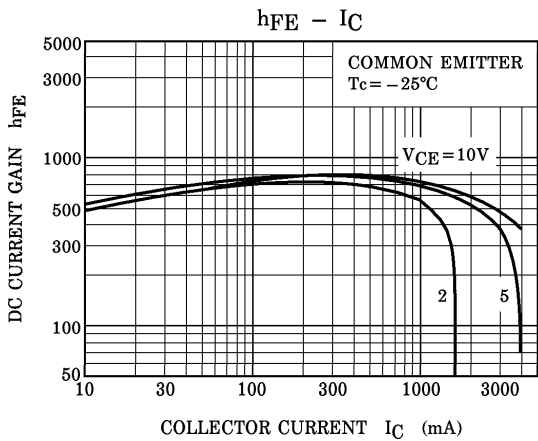
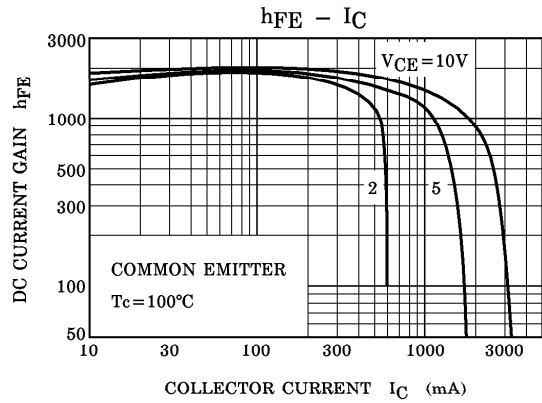
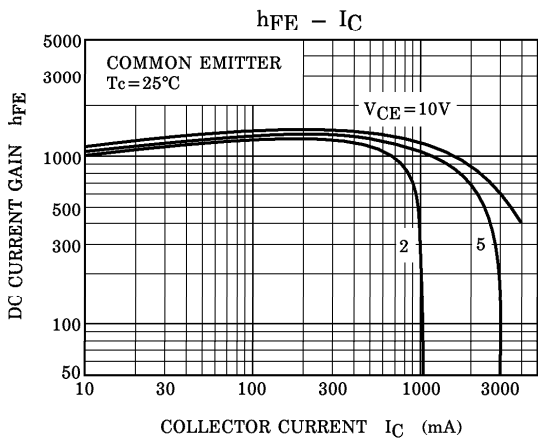
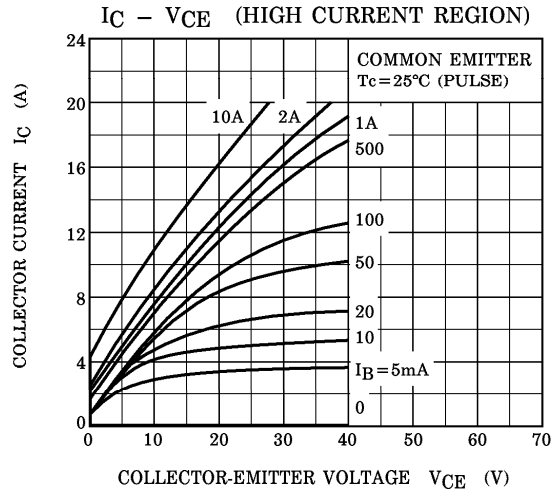
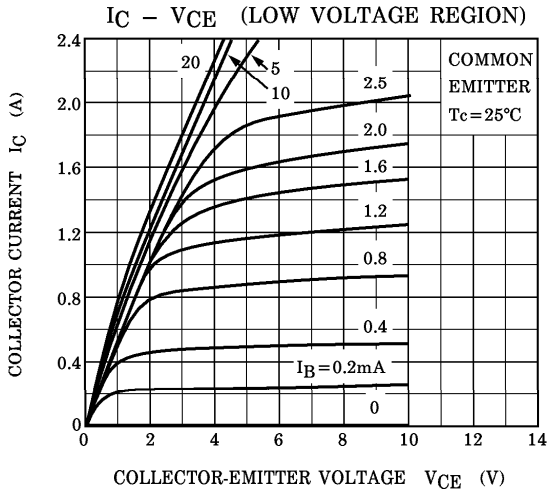
ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector-Base Breakdown Voltage	V(BR)CBO	I <sub>C</sub> = 10mA, I <sub>E</sub> = 0	45	55	70	V
Collector-Emitter Breakdown Voltage	V(BR)CEO	I <sub>C</sub> = 100mA, I <sub>B</sub> = 0	45	55	70	V
Emitter Cut-off Current	I <sub>EBO</sub>	V <sub>EB</sub> = 5V, I <sub>C</sub> = 0	—	—	10	μA
DC Current Gain	h <sub>FE</sub>	V <sub>CE</sub> = 5V, I <sub>C</sub> = 500mA	500	1000	2500	
Collector-Emitter Saturation Voltage	V <sub>CE</sub> (sat)(1)	I <sub>C</sub> = 500mA, I <sub>B</sub> = 2mA	—	—	2.0	V
Collector-Emitter Saturation Voltage	V <sub>CE</sub> (sat)(2)	I <sub>C</sub> = 1.0A, I <sub>B</sub> = 20mA	—	—	3.0	V
Base-Emitter Voltage	V <sub>BE</sub>	V <sub>CE</sub> = 5V, I <sub>C</sub> = 500mA	0.50	0.65	0.80	V
Allowable Energy (Tc=25°C)	E <sub>T</sub>	Application circuit	80	—	—	W·s

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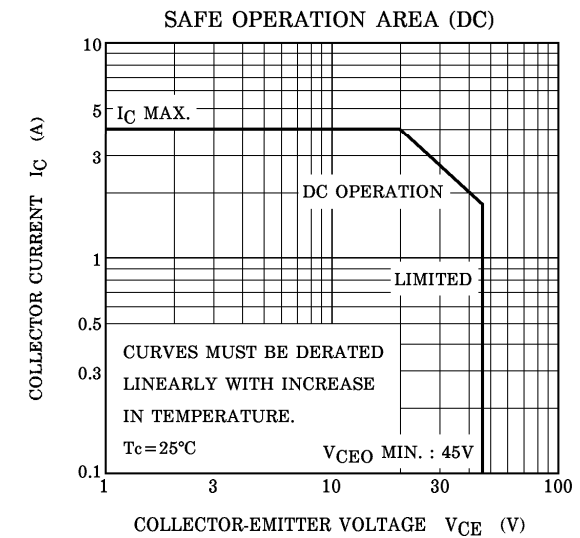
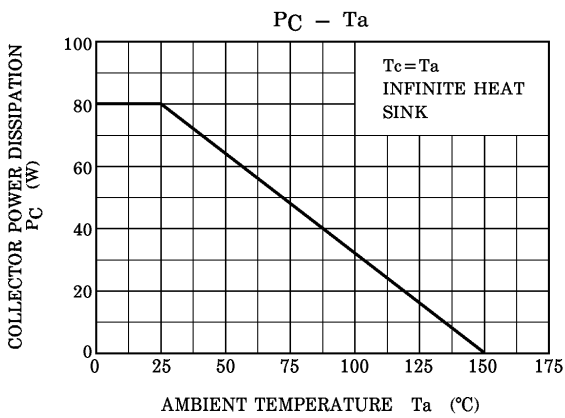
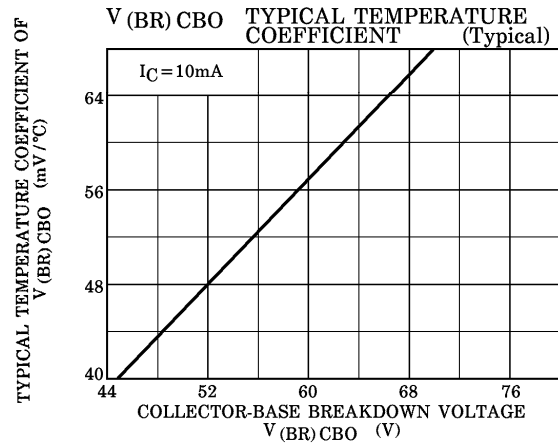
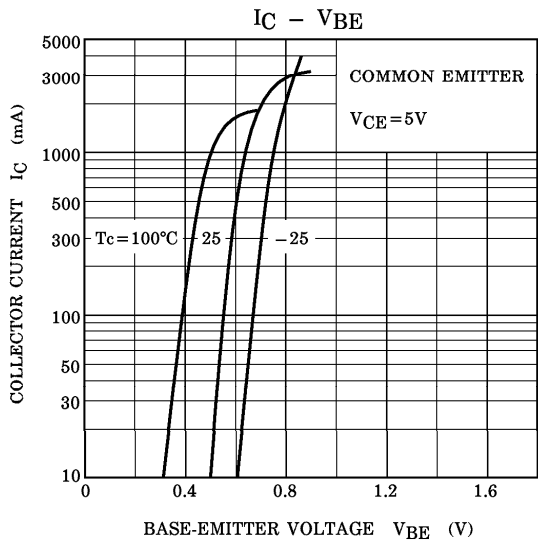
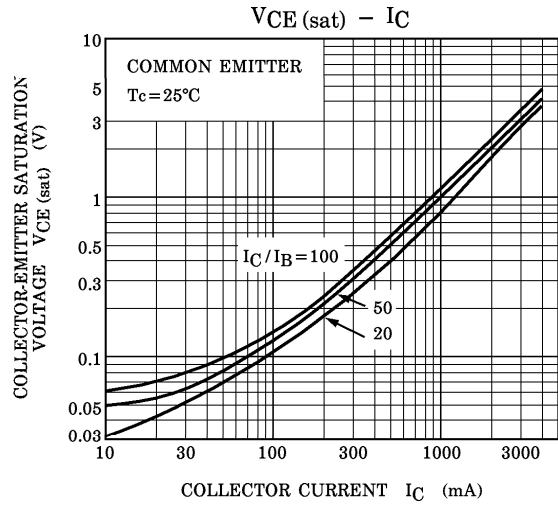
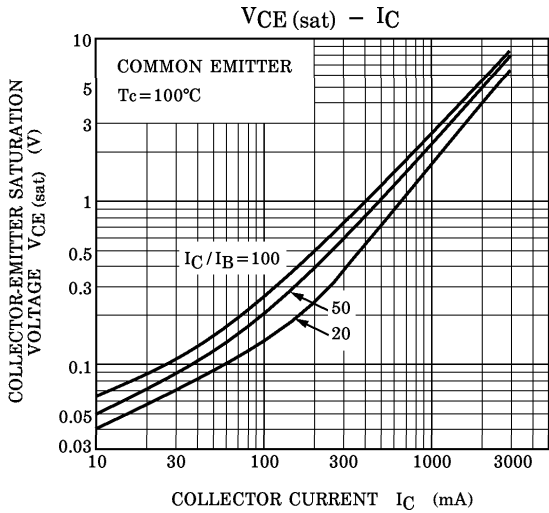




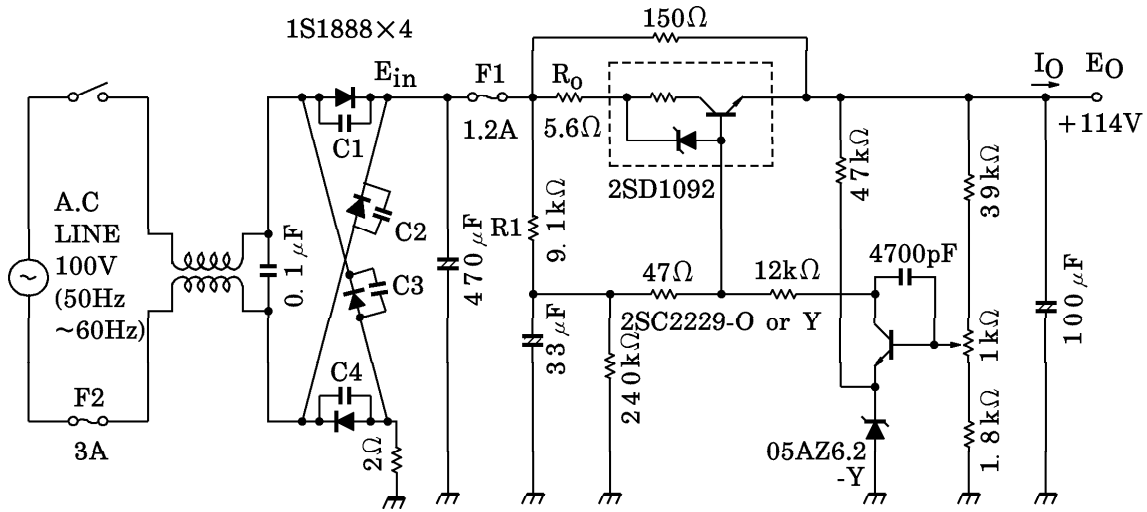
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APPLICATION CIRCUIT



C1, C2, C3, C4 : 0.0047 $\mu$ F

