

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 $T_c=25^\circ\text{C}$)
- Included Avalanche Diode : $V_Z=55^{+15}_{-10}\text{V}$
- High DC Current Gain : $h_{FE}=500$ (Min.) ($T_c=25^\circ\text{C}$)
- High Collector Power Dissipation Capability : 80W at 25°C Case Temperature

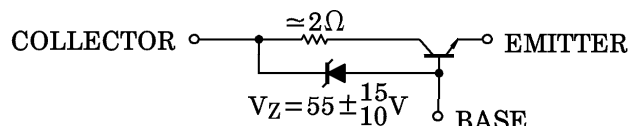
MAXIMUM RATINGS ($T_a=25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	55^{+15}_{-10}	V
Collector-Emitter Voltage	V_{CEO}	55^{+15}_{-10}	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	DC	I_C	A
	Pulse	I_{CP}	A
Collector Power Dissipation ($T_c=25^\circ\text{C}$)	P_C	80	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	$-55\sim 150$	$^\circ\text{C}$

JEDEC	—
EIAJ	—
TOSHIBA	2-16B1A

Weight : 4.6g

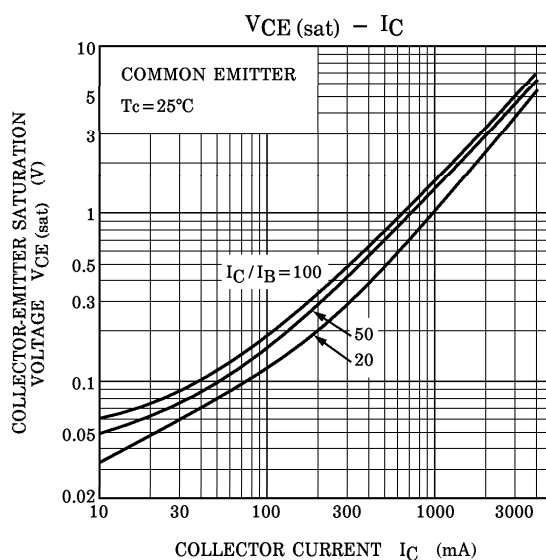
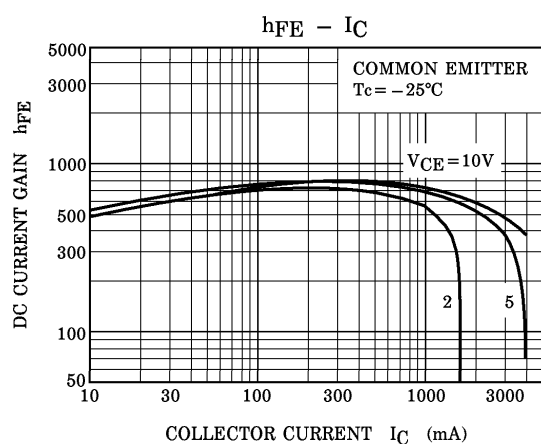
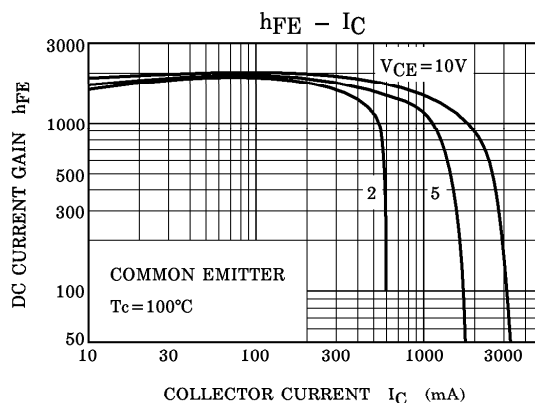
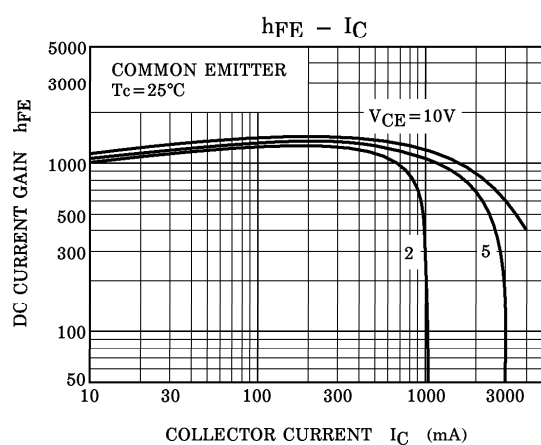
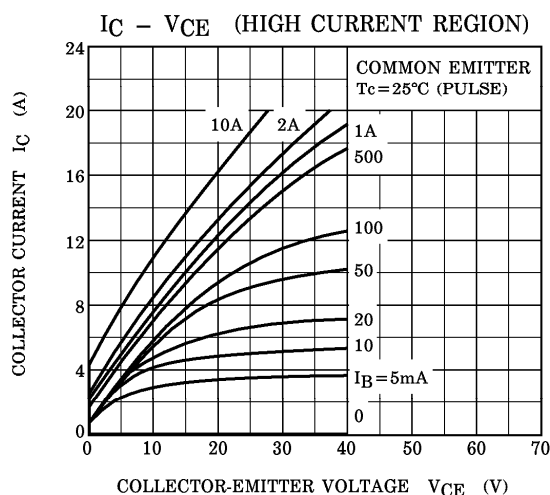
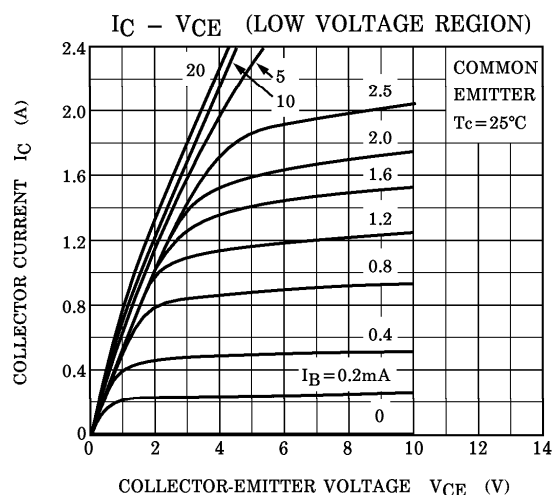
EQUIVALENT CIRCUIT

ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=10\text{mA}$, $I_E=0$	45	55	70	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=100\text{mA}$, $I_B=0$	45	55	70	V
Emitter Cut-off Current	I_{EBO}	$V_{EB}=5\text{V}$, $I_C=0$	—	—	10	μA
DC Current Gain	h_{FE}	$V_{CE}=5\text{V}$, $I_C=500\text{mA}$	500	1000	2500	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}(1)$	$I_C=500\text{mA}$, $I_B=2\text{mA}$	—	—	2.0	V
Collector-Emitter Saturation Voltage	$V_{CE(sat)}(2)$	$I_C=1.0\text{A}$, $I_B=20\text{mA}$	—	—	3.0	V
Base-Emitter Voltage	V_{BE}	$V_{CE}=5\text{V}$, $I_C=500\text{mA}$	0.50	0.65	0.80	V
Allowable Energy ($T_c=25^\circ\text{C}$)	E_T	Application circuit	80	—	—	W·s

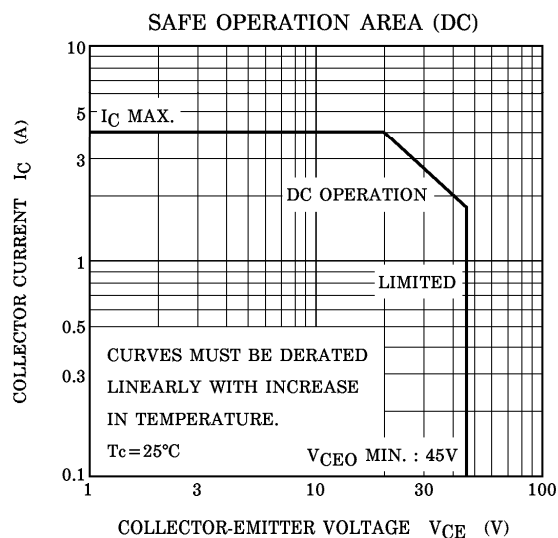
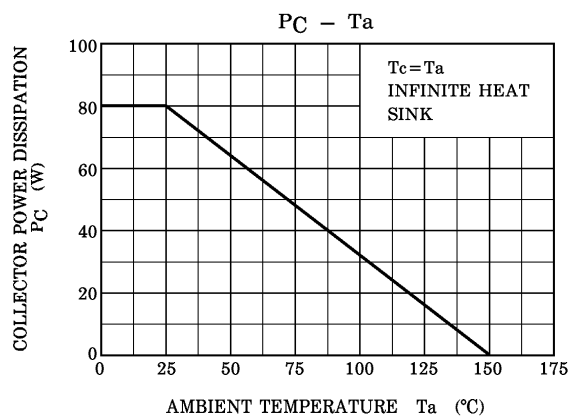
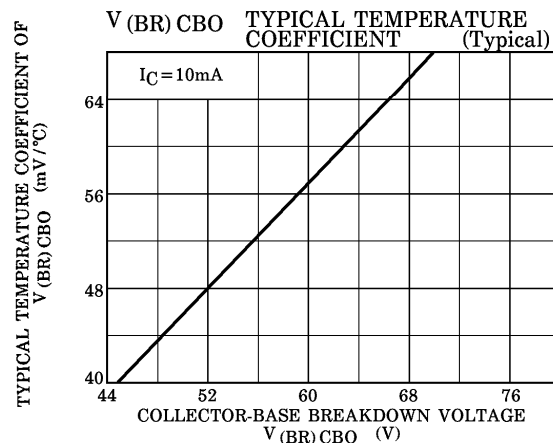
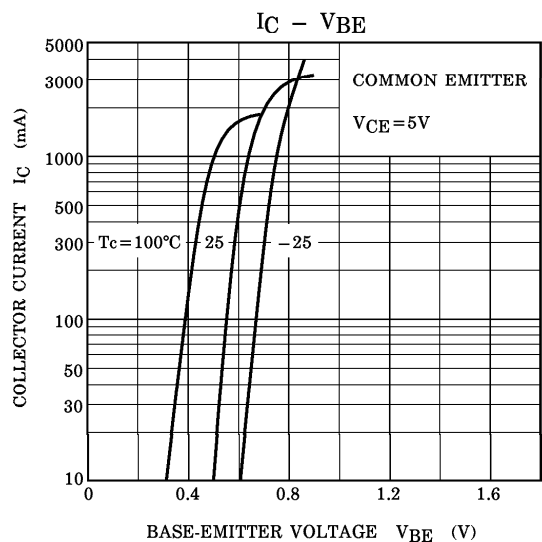
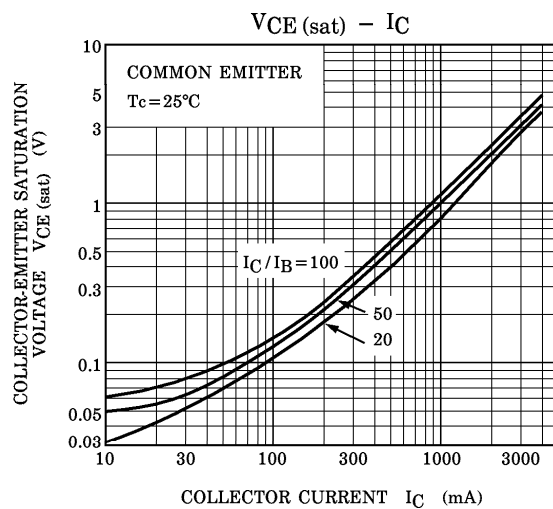
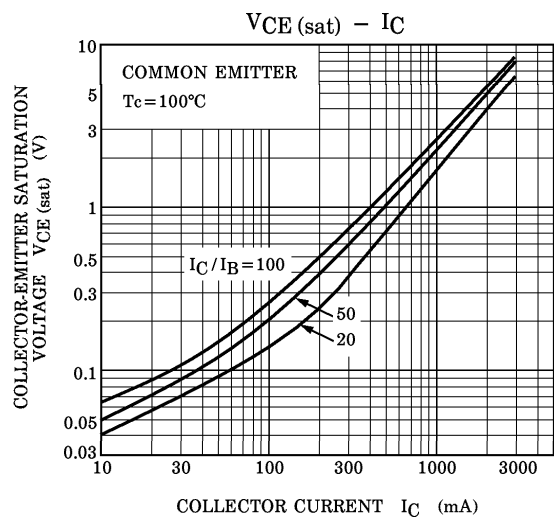
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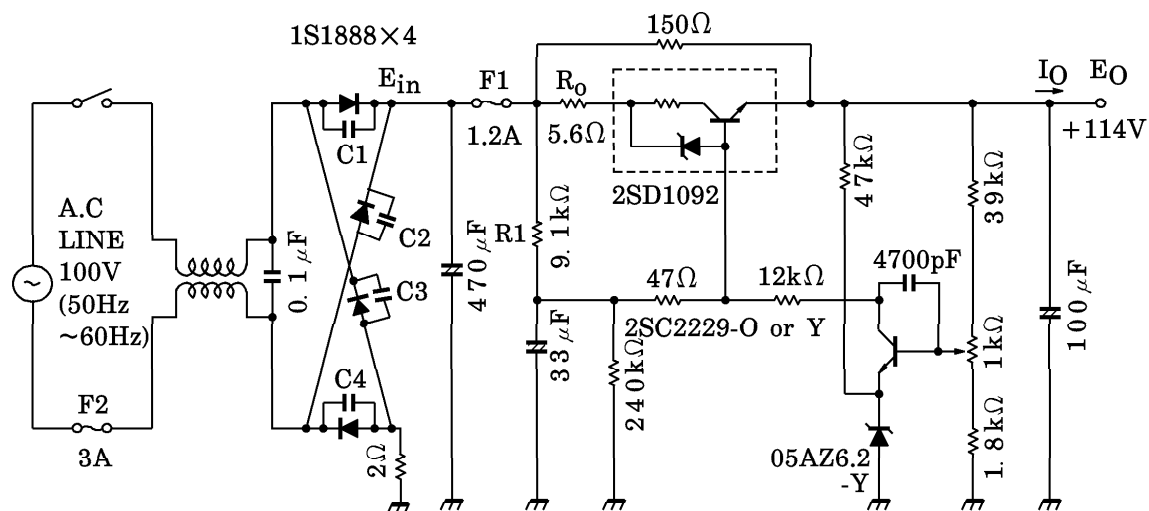


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APPLICATION CIRCUIT



C1, C2, C3, C4 : 0.0047 μ F

