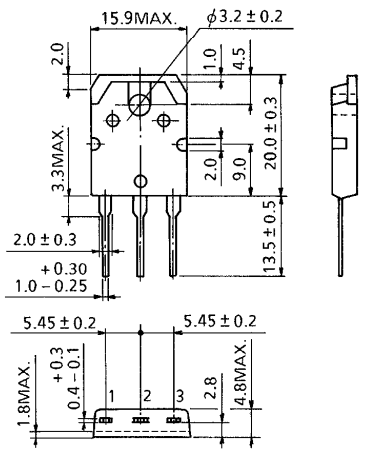
TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE

2SD1294

POWER REGULATOR FOR LINE OPERATED TV

Unit in mm



1. BASE
2. COLLECTOR (HEAT SINK)
3. EMITTER

JEDEC	—
EIAJ	—
TOSHIBA	2-16B1A

Weight : 4.6 g

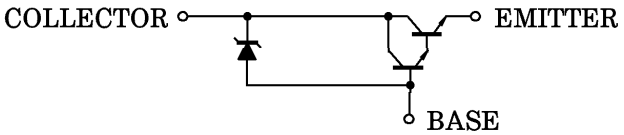
Mounting Kit No. AC73

- Excellent Wide Safe Operating Area (80 W·s at Tc = 25°C)
- Included Avalanche Diode : $V_Z = 60 \pm 15$ V
- High DC Current Gain : $h_{FE} = 2000 \sim 20000$
- Darlington Connected Type.

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	60 ± 15	V
Collector-Emitter Voltage		V_{CEO}	60 ± 15	V
Emitter-Base Voltage		V_{EBO}	6	V
Collector Current	DC	I_C	5	A
	Pulse	I_{CP}	20	A
Collector Power Dissipation (Tc = 25°C)		P_C	80	W
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_{stg}	−55~150	°C

EQUIVALENT CIRCUIT



ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 100$ mA, $I_E = 0$	45	60	75	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 100$ mA, $I_B = 0$	45	60	75	V
Collector Cut-off Current	I_{EBO}	$V_{EB} = 6$ V, $I_C = 0$	—	—	100	μA
DC Current Gain	h_{FE}	$V_{CE} = 5$ V, $I_C = 500$ mA	2000	—	20000	
Collector-Emitter Saturation Voltage	$V_{CE(sat)(1)}$	$I_C = 500$ mA, $I_B = 1$ mA	—	—	1.5	V
	$V_{CE(sat)(2)}$	$I_C = 1.0$ A, $I_B = 1$ mA	—	—	2.5	
Base-Emitter Voltage	V_{BE}	$V_{CE} = 5$ V, $I_C = 500$ mA	—	—	1.8	V
Allowable Energy	E_T	Application Circuit	80	—	—	W·s

961001EAA2

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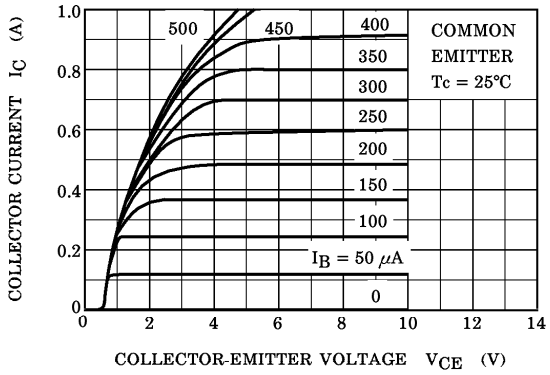
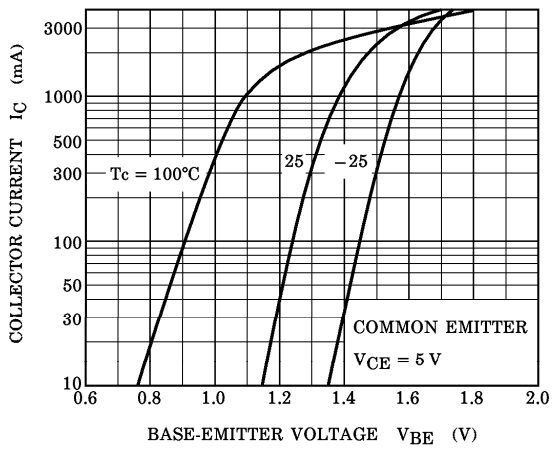
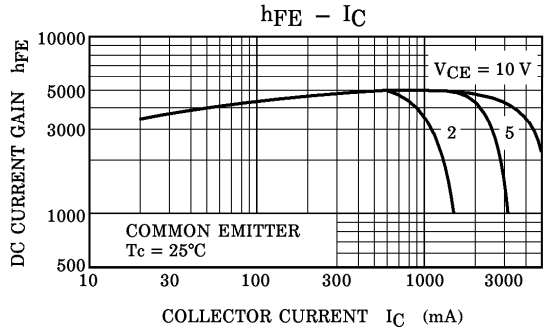
$I_C - V_{CE}$



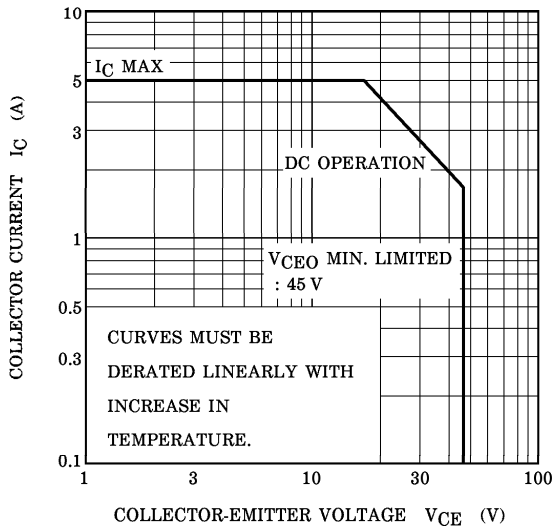
$I_C - V_{BE}$



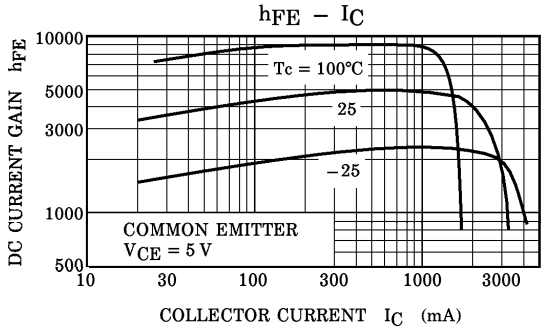
$h_{FE} - I_C$



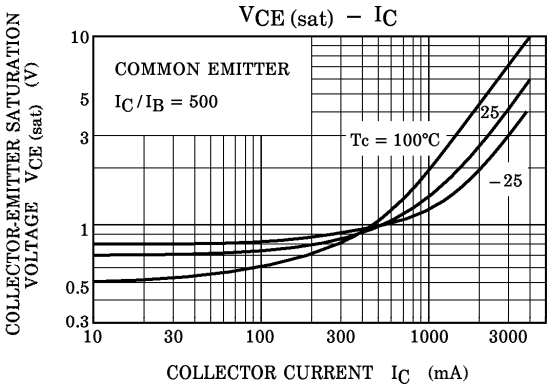
SAFE OPERATING AREA



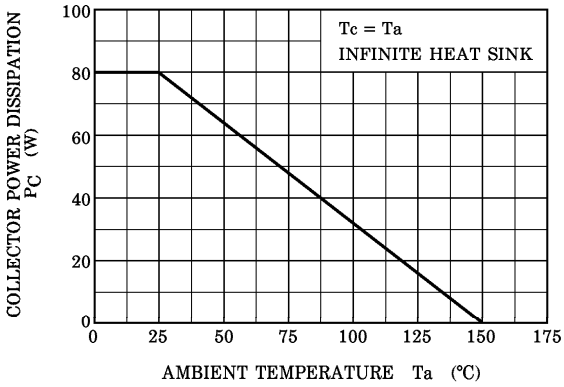
$h_{FE} - I_C$



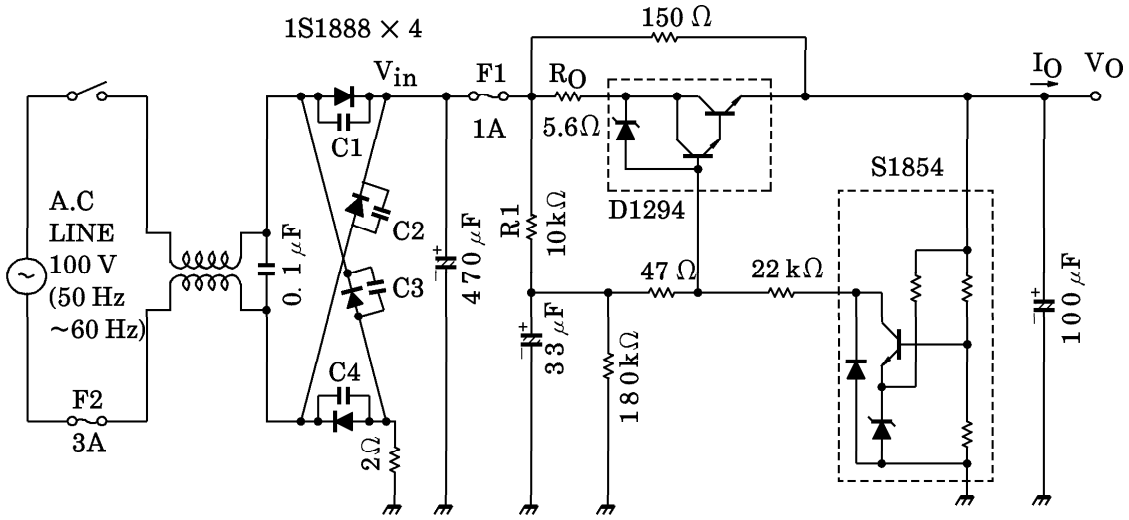
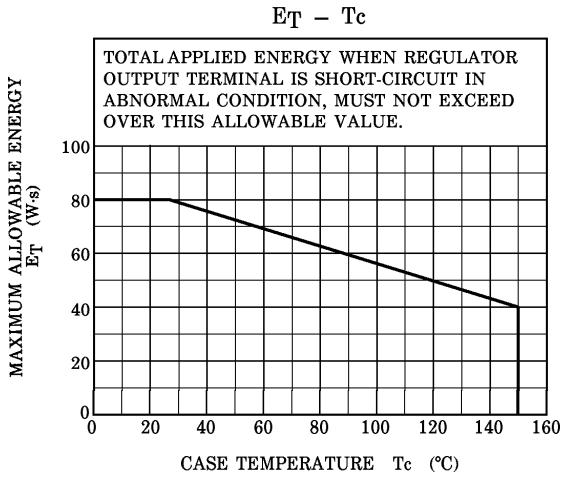
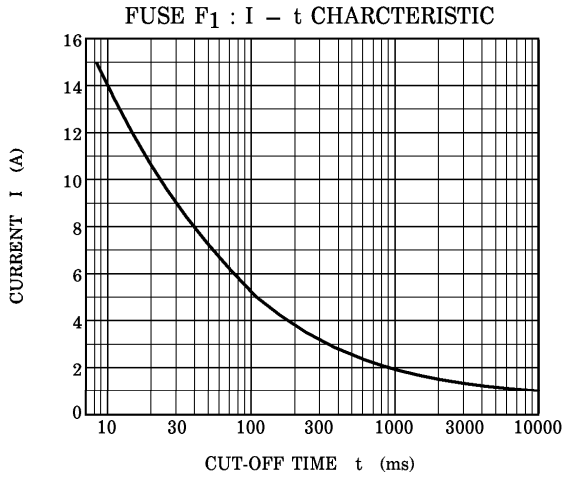
$V_{CE(sat)} - I_C$



$P_C - T_a$



APPLICATION CIRCUIT



C1, C2, C3, C4 : 0.0047 μF