

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE (PCT PROCESS)

2SD1090

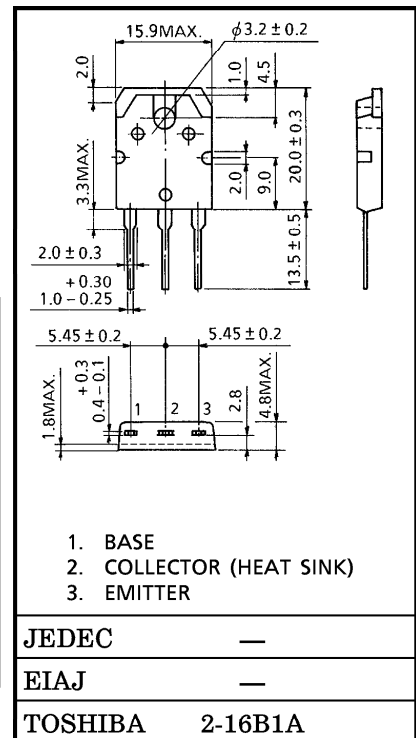
COLOR TV POWER REGULATOR APPLICATIONS

Unit in mm

- High Voltage : $V_{CB0} = 180\text{ V}$
- High DC Current Gain : $h_{FE} = 500$ (Min.)
- Large Collector Power Dissipation Capability : $P_C = 80\text{ W}$

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CB0}	200	V
Collector-Emitter Voltage	V_{CEO}	180	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	5	A
Base Current	I_B	2	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}	-55~150	$^\circ\text{C}$



Weight : 4.6 g

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

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB} = 200\text{ V}, I_E = 0$	—	—	100	μA
	I_{CEO}	$V_{CE} = 180\text{ V}, I_B = 0$	—	—	10	mA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = 5\text{ V}, I_C = 0$	—	—	100	μA
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 50\text{ mA}, I_B = 0$	180	—	—	V
DC Current Gain	h_{FE}	$V_{CE} = 5\text{ V}, I_C = 1\text{ A}$	500	—	2000	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 1\text{ A}, I_B = 20\text{ mA}$	—	—	1.0	V
Base-Emitter Voltage	V_{BE}	$V_{CE} = 5\text{ V}, I_C = 1\text{ A}$	0.60	0.70	0.80	V

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