

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE (PCT PROCESS)

# 2SC2230, 2SC2230A

HIGH VOLTAGE GENERAL AMPLIFIER APPLICATIONS.

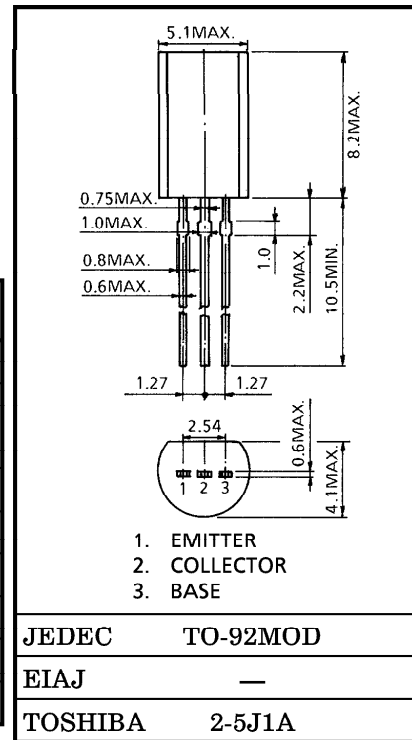
COLOR TV CLASS B SOUND OUTPUT APPLICATIONS.

Unit in mm

- High Voltage :  $V_{CEO} = 180V$  (2SC2230A)
- High DC Current Gain.

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	$V_{CBO}$	200	V
Collector-Emitter Voltage	$V_{CEO}$	160	V
		180	
Emitter-Base Voltage	$V_{EBO}$	5	V
Collector Current	$I_C$	100	mA
Base Current	$I_B$	50	mA
Collector Power Dissipation	$P_C$	800	mW
Junction Temperature	$T_j$	150	$^\circ C$
Storage Temperature Range	$T_{stg}$	-55~150	$^\circ C$



Weight : 0.36g

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

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	$I_{CBO}$	$V_{CB} = 200V, I_E = 0$	—	—	0.1	$\mu A$
Emitter Cut-off Current	$I_{EBO}$	$V_{EB} = 5V, I_C = 0$	—	—	0.1	$\mu A$
DC Current Gain	$h_{FE} (1)$ (Note)	$V_{CE} = 10V, I_C = 10mA$	120	—	400	
	$h_{FE} (2)$	$V_{CE} = 10V, I_C = 50mA$	80	—	—	
Collector-Emitter Saturation Voltage	$V_{CE} (sat)$	$I_C = 50mA, I_B = 5mA$	—	—	0.5	V
Base-Emitter Voltage	$V_{BE}$	$V_{CE} = 10V, I_C = 1mA$	0.50	0.60	0.70	V
Transition Frequency	$f_T$	$V_{CE} = 10V, I_C = 10mA$	50	—	—	MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB} = 10V, I_E = 0, f = 1MHz$	—	—	7.0	pF

Note :  $h_{FE} (1)$  Classification    Y : 120~240,    GR : 200~400

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