

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

# 2SC3666

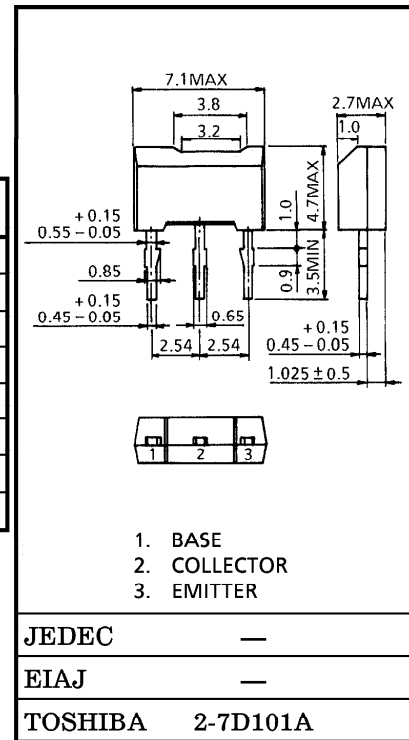
AUDIO POWER AMPLIFIER APPLICATIONS

Unit in mm

- High DC Current Gain :  $h_{FE(1)} = 100 \sim 320$

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	$V_{CB0}$	30	V
Collector-Emitter Voltage	$V_{CE0}$	30	V
Emitter-Base Voltage	$V_{EB0}$	5	V
Collector Current	$I_C$	1	A
Base Current	$I_B$	0.1	A
Collector Power Dissipation	$P_C$	1000	mW
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	$-55 \sim 150$	$^\circ\text{C}$



Weight : 0.2g (Typ.)

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

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	$I_{CB0}$	$V_{CB} = 30\text{V}, I_E = 0$	—	—	100	nA
Emitter Cut-off Current	$I_{EB0}$	$V_{EB} = 5\text{V}, I_C = 0$	—	—	100	nA
Collector-Emitter Breakdown Voltage	$V_{(BR)CE0}$	$I_C = 10\text{mA}, I_B = 0$	30	—	—	V
DC Current Gain	$h_{FE(1)}$ (Note)	$V_{CE} = 2\text{V}, I_C = 100\text{mA}$	100	—	320	
	$h_{FE(2)}$	$V_{CE} = 2\text{V}, I_C = 800\text{mA}$	40	—	—	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 800\text{mA}, I_B = 80\text{mA}$	—	—	0.5	V
Base-Emitter Voltage	$V_{BE}$	$V_{CE} = 2\text{V}, I_C = 800\text{mA}$	—	0.9	1.5	V
Transition Frequency	$f_T$	$V_{CE} = 2\text{V}, I_C = 100\text{mA}$	—	150	—	MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB} = 10\text{V}, f = 1\text{MHz}$	—	13	—	pF

Note :  $h_{FE}$  Classification    O : 100~200,    Y : 160~320

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