

TOSHIBA TRANSISTOR SILICON PNP EPITAXIAL TYPE (PCT PROCESS)

2SA1314

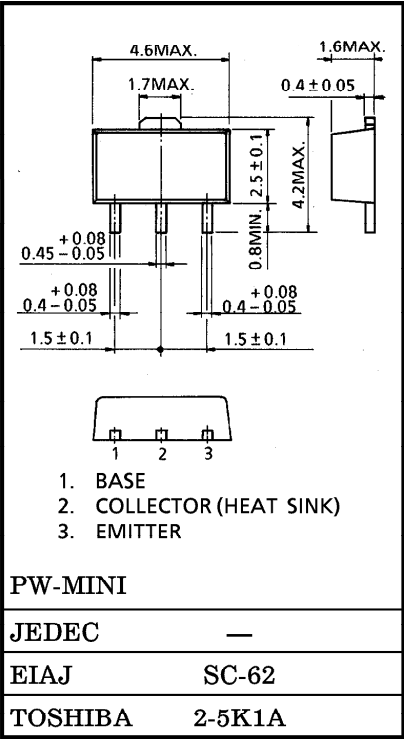
STROBE FLASH APPLICATIONS
AUDIO POWER APPLICATIONS

- High DC Current Gain and Excellent Linearity
 - : $h_{FE}(1) = 140 \sim 600$ ($V_{CE} = -1V$, $I_C = -0.5A$)
 - : $h_{FE}(2) = 60$ (Min.), 120 (Typ.), ($V_{CE} = -1V$, $I_C = -4A$)
- Low Saturation Voltage
 - : $V_{CE(sat)} = -0.5V$ (Max.) ($I_C = -2A$, $I_B = -50mA$)
- Small Package

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	-20	V
Collector-Emitter Voltage		V_{CEO}	-10	V
Emitter-Base Voltage		V_{EBO}	-6	V
Collector Current	DC	I_C	-2	A
	Pulsed (Note 1)	I_{CP}	-4	A
Base Current		I_B	-2	A
Collector Power Dissipation	—	P_C	500	mW
	(Note 2)	P_C	1000	mW
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_{stg}	-55~150	°C

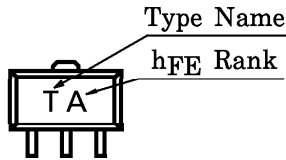
Note 1 : Pulse Test : Pulse Width = 10ms (Max.),
Duty Cycle = 30% (Max.)
Note 2 : Mounted on Ceramic Substrate (250mm² × 0.8mm^t)

Unit in mm



Weight : 0.05g

Marking



961001EAA2

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

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB} = -20\text{V}, I_E = 0$	—	—	-0.1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = -6\text{V}, I_C = 0$	—	—	-0.1	μA
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -10\text{mA}, I_B = 0$	-10	—	—	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = -1\text{mA}, I_C = 0$	-6	—	—	V
DC Current Gain (Note 3)	$h_{FE(1)}$	$V_{CE} = -1\text{V}, I_C = -0.5\text{A}$	140	—	600	
	$h_{FE(2)}$	$V_{CE} = -1\text{V}, I_C = -4\text{A}$	60	120	—	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -2\text{A}, I_B = -50\text{mA}$	—	-0.2	-0.5	V
Base-Emitter Voltage	V_{BE}	$V_{CE} = -1\text{V}, I_C = -2\text{A}$	—	-0.83	-1.5	V
Transition Frequency	f_T	$V_{CE} = -1\text{V}, I_C = -0.5\text{A}$	—	140	—	MHz
Collector Output Capacitance	C_{ob}	$V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$	—	50	—	pF

Note 3 : $h_{FE(1)}$ Classification A : 140~280, B : 200~400, C : 300~600

