

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

RN5006

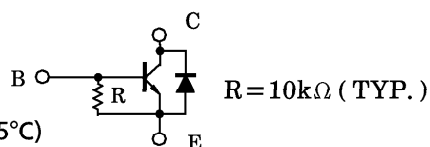
MOTOR DRIVE CIRCUIT APPLICATIONS.

POWER AMPLIFIER APPLICATIONS.

POWER SWITCHING APPLICATIONS.

- With Built-in Bias Resistors
- Simplify Circuit Design
- Reduce a Quantity of Parts and Manufacturing Process
- Small Flat Package
- $P_C = 1 \sim 2W$ (Mounted on Ceramic substrate)
- Complementary to RN6006

EQUIVALENT CIRCUIT

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	10	V
Collector-Emitter Voltage	V_{CES}	10	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current	DC	I_C	A
	Pulse (Note1)	I_{CP}	
Base Current	I_B	0.4	A
Collector Power Dissipation	P_C	500	mW
Collector Power Dissipation	P_{C^*}	1000	mW
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature Range	T_{stg}	$-55 \sim 150$	$^\circ C$

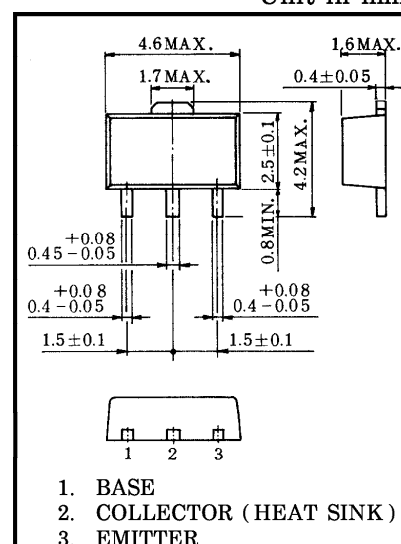
Note : Pulse Width $\leq 10ms$, Duty Cycle $\leq 30\%$ * : Mounted on ceramic substrate ($250mm^2 \times 0.8t$)ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ C$)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB} = 10V, I_E = 0$	—	—	0.1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = 6V, I_C = 0$	0.462	0.60	0.857	mA
Collector-Emitter Breakdown Voltage	$V_{(BR)CES}$	$I_C = 1mA$	10	—	—	V
DC Current Gain	$h_{FE(1)}$	$V_{CE} = 1V, I_C = 0.5A$	160	—	600	
	$h_{FE(2)}$	$V_{CE} = 1V, I_C = 4.0A$	60	—	—	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 2A, I_B = 0.05A$	—	—	0.5	V
Transition Frequency	f_T	$V_{CE} = 1V, I_C = 0.5A$	—	140	—	MHz
Collector Output Capacitance	C_{ob}	$V_{CB} = 10V, I_E = 0, f = 1MHz$	—	30	—	pF
Resistor	R		7	10	13	k Ω

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Unit in mm



PW-MINI

JEDEC —

EIAJ SC-62

TOSHIBA 2-5K1A

Weight : 0.05g

MARKING

