Unit: mm

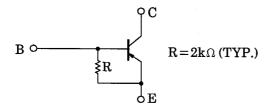
TOSHIBA Transistor Silicon NPN Epitaxial Type (PCT Process)

RN6001

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
- Pc = 1~2W (mounted on ceramic substrate)
- Complementary to RN5001

Equivalent Circuit



1. BASE 2. COLLECTOR (HEAT SINK) 3. EMITTER PW-MINI JEDEC JEITA SC-62 TOSHIBA 1.7MAX. 0.4±0.05 0.4±0.05 0.4±0.05 0.4±0.08 0.4

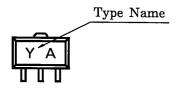
Weight: 0.05g (typ.)

Maximum Ratings (Ta = 25°C)

Characteristic	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	-30	٧
Collector-emitter voltage	V _{CEO}	-30	V
Emitter-base voltage	V _{EBO}	-5	V
Collector current	I _C	-2	Α
Base current	Ι _Β	-0.4	Α
Collector power dissipation	PC	500	mW
Collector power dissipation	P _C *	1000	mW
Junction temperature	Tj	150	°C
Storage temperature range	T _{stg}	-55~150	°C

^{* :} Mounterd on ceramic substrate (250mm $^2 \times 0.8t$)

Marking



Electrical Characteristics (Ta = 25°C)

Characteristic	Symbol	Test Circuit	Test Condition	Min	Тур.	Max	Unit
Collector cut-offcurrent	I _{CBO}	_	$V_{CB} = -30V, I_{E} = 0$	_	_	-0.1	μΑ
Emitter cut-off current	I _{EBO}	_	V _{EB} = -5V, I _C = 0	-1.92	-2.5	-3.57	mA
Collector-emitter breakdown voltage	V _{(BR)CES}	_	I _C = −10mA	-30	_	-	V
DC current gain	h _{FE (1)}	_	V _{CE} = -2V, I _C = -0.5A	100	_	320	_
	h _{FE (2)}		V _{CE} = -2V, I _C = -2.0A	50	_	_	
Collector-emitter saturation voltage	V _{CE (sat)}	_	$I_C = -1A$, $I_B = -0.05A$	_	_	-0.5	٧
Base-emitter saturation voltage	V _{BE} (sat)	_	I _C = -1A, I _B = -0.05A	_	_	-1.2	V
Transition frequency	f _T	_	V _{CE} = -2V, I _C = -0.5A	_	120	_	MHz
Collector output capacitance	C _{ob}	_	V _{CB} = −10V, I _E = 0, f = 1 MHz	_	40	_	pF
Resistor	R	_	_	1.4	2.0	2.6	kΩ

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000707EAA

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