Unit: mm

1.6 MAX.

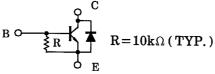
TOSHIBA Transistor Silicon NPN Epitaxial Type (PCT Process)

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
- $PC = 1 \sim 2W$ (mounted on ceramic substrate)
- Complementary to RN6006

Equivalent Circuit



TOSHIBA Weight: 0.05g (typ.)

PW-MINI

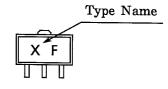
JEDEC

JEITA

3. EMITTER

 1.5 ± 0.1

Marking



 1.5 ± 0.1

COLLECTOR (HEAT SINK)

SC-62

2-5K1A

Maximum Ratings (Ta = 25°C)

Characteristic		Symbol	Rating	Unit	
Collector-base voltage		V_{CBO}	10	V	
Collector-emitter voltage		V_{CEO}	10	V	
Emitter-base voltage		V _{EBO}	6	V	
Collector current	DC	Ic	2	А	
	Pulse (Note1)	I _{CP}	4		
Base current		ΙΒ	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	

1

Note: Pulse width ≤ 10 ms, duty cycle ≤ 30 %

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

Electrical Characteristics (Ta = 25°C)

Characteristic	Symbol	Test Circuit	Test Condition	Min	Тур.	Max	Unit
Collector cut-offcurrent	I _{CBO}	_	V _{CB} = 10V, I _E = 0	_	_	0.1	μΑ
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	_		٧
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 = 1 MHz	_	30	_	pF
Resistor	R	_	_	7	10	13	kΩ

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000707EAA

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