

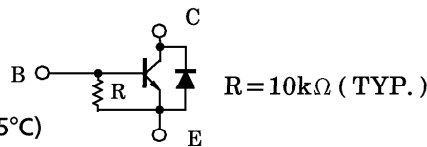
TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

# 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	$I_C$	2
	Pulse (Note1)	$I_{CP}$	4
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	$T_{stg}$	-55~150	$^\circ C$

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

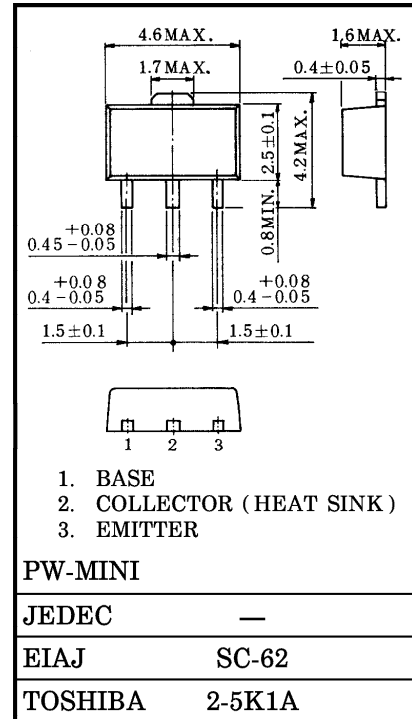
ELECTRICAL CHARACTERISTICS ( $T_a = 25^\circ C$ )

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	$I_{CBO}$	$V_{CB}=10V, I_E=0$	—	—	0.1	$\mu A$
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 $\Omega$

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Unit in mm



Weight : 0.05g

MARKING

