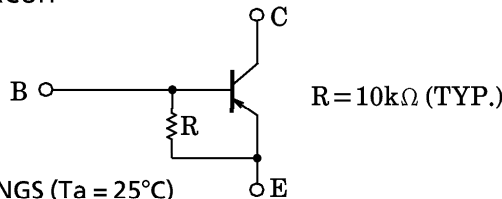


TOSHIBA TRANSISTOR SILICON PNP EPITAXIAL TYPE (PCT PROCESS)

# RN6003

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 RN5003
- EQUIVALENT CIRCUIT



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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	$V_{CBO}$	-30	V
Collector-Emitter Voltage	$V_{CES}$	-30	V
Emitter-Base Voltage	$V_{EBO}$	-5	V
Collector Current	$I_C$	-2	A
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	$^\circ C$

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

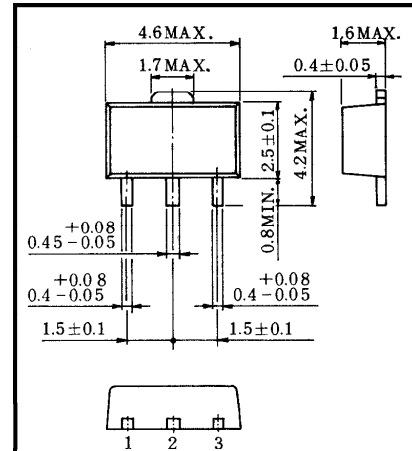
ELECTRICAL CHARACTERISTICS ( $T_a = 25^\circ C$ )

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	$I_{CBO}$	$V_{CB} = -30V, I_E = 0$	—	—	-0.1	$\mu A$
Emitter Cut-off Current	$I_{EBO}$	$V_{EB} = -5V, I_C = 0$	-0.385	-0.50	-0.714	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	—	400	
	$h_{FE(2)}$	$V_{CE} = -2V, I_C = -2.0A$	30	—	—	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -1A, I_B = -0.05A$	—	—	-0.5	V
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	$C_{ob}$	$V_{CB} = -10V, I_E = 0, f = 1MHz$	—	40	—	pF
Resistor	R		7	10	13	k $\Omega$

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Unit in mm



1. BASE
2. COLLECTOR (HEAT SINK)
3. EMITTER

PW-MINI

JEDEC	—
EIAJ	SC-62
TOSHIBA	2-5K1A

Weight : 0.05g

MARKING

