

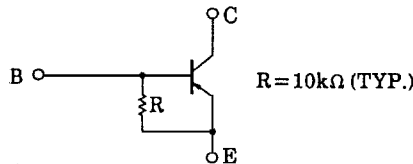
RN6003

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

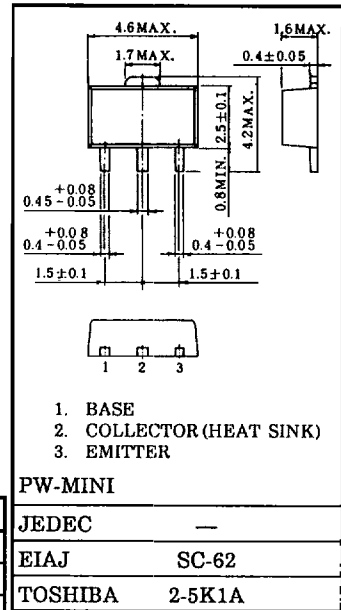
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CB0}	-30	V
Collector-Emitter Voltage	V_{CES}	-30	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-2	A
Base Current	I_B	-0.4	A
Collector Power Dissipation	P_C	500	mW
Collector Power Dissipation	P_C^*	1000	mW
Junction Temperature	T_j	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_{CB0}	$V_{CB} = -30V, I_E = 0$	—	—	-0.1	μA
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 Ω

Unit in mm



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

PW-MINI

JEDEC	—
EIAJ	SC-62
TOSHIBA	2-5K1A

Weight : 0.05g

MARKING

