

TOSHIBA TRANSISTOR   SILICON NPN EPITAXIAL TYPE (PCT PROCESS) (DARLINGTON)

2SD1508

PULSE MOTOR DRIVE, HAMMER DIVE APPLICATIONS

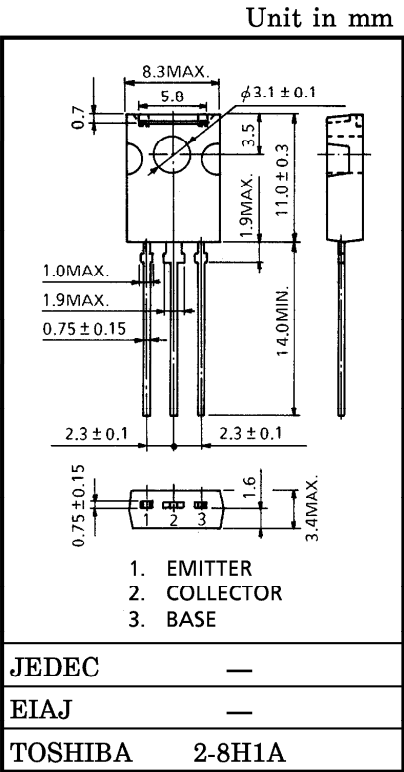
SWITCHING APPLICATIONS

POWER AMPLIFIER APPLICATIONS

- High DC Current Gain  
:  $h_{FE}=4000$  (Min.)
- Low Saturation Voltage  
:  $V_{CE(sat)}=1.5V$  (Max.)

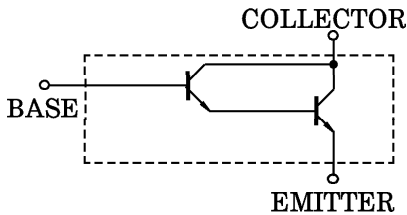
MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		$V_{CBO}$	30	V
Collector-Emitter Voltage		$V_{CEO}$	30	V
Emitter-Base Voltage		$V_{EBO}$	10	V
Collector Current	DC	$I_C$	1.5	A
	Pulse	$I_{CP}$	3.0	
Base Current		$I_B$	50	mA
Collector Power Dissipation	Ta = 25°C	$P_C$	1.2	W
	Tc = 25°C		10	
Junction Temperature		$T_j$	150	°C
Storage Temperature Range		$T_{stg}$	-55~150	°C



Weight : 0.72g (Typ.)

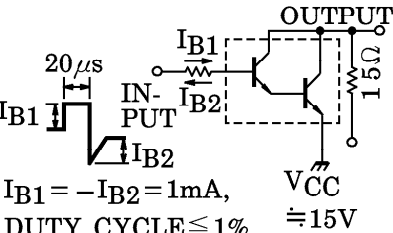
EQUIVALENT CIRCUIT



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ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		ICBO	V <sub>CB</sub> = 30V, I <sub>E</sub> = 0	—	—	10	μA
Emitter Cut-off Current		IEBO	V <sub>EB</sub> = 10V, I <sub>C</sub> = 0	—	—	10	μA
Collector-Emitter Breakdown Voltage		V <sub>(BR)</sub> CEO	I <sub>C</sub> = 10mA, I <sub>B</sub> = 0	30	—	—	V
DC Current Gain		h <sub>FE</sub>	V <sub>CE</sub> = 2V, I <sub>C</sub> = 150mA	4000	—	—	
Collector-Emitter Saturation Voltage		V <sub>CE</sub> (sat)	I <sub>C</sub> = 1A, I <sub>B</sub> = 1mA	—		1.5	V
Base-Emitter Saturation Voltage		V <sub>BE</sub> (sat)	I <sub>C</sub> = 1A, I <sub>B</sub> = 1mA	—		2.2	V
Switching Time	Turn-on Time	t <sub>on</sub>	 I <sub>B1</sub> = -I <sub>B2</sub> = 1mA, DUTY CYCLE ≤ 1%	—	0.18	—	μs
	Storage Time	t <sub>stg</sub>		—	0.6	—	
	Fall Time	t <sub>f</sub>		—	0.3	—	

