

TOSHIBA TRANSISTOR SILICON PNP EPITAXIAL TYPE (PCT PROCESS)

# 2SA1893

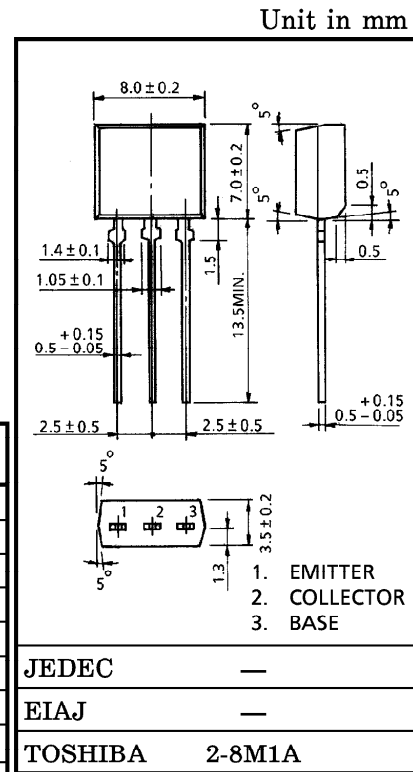
STORBE FLASH APPLICATIONS

MEDIUM POWER AMPLIFIER APPLICATIONS

- $h_{FE(1)} = 100 \sim 320$
- $h_{FE(2)} = 70$  (Min.)
- Low Collector Saturation Voltage  
:  $V_{CE(sat)} = -1.0V$  (Max.)
- High Power Dissipation :  $P_C = 1.3W$

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

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		$V_{CBO}$	-35	V
Collector-Emitter Voltage		$V_{CEO}$	-20	V
Emitter-Base Voltage		$V_{EBO}$	-8	V
Collector Current	DC	$I_C$	-5	A
	Pulse (Note 1)	$I_{CP}$	-8	A
Base Current		$I_B$	-0.5	A
Collector Power Dissipation		$P_C$	1.3	W
Junction Temperature		$T_j$	150	$^\circ C$
Storage Temperature Range		$T_{stg}$	-55~150	$^\circ C$



Weight : 0.55g (Typ.)

Note 1 : Conditions : Pulse width=10ms (Max.), Duty cycle=30% (Max.)

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

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	$I_{CBO}$	$V_{CB} = -35V, I_E = 0$	—	—	-100	nA
Emitter Cut-off Current	$I_{EBO}$	$V_{EB} = -8V, I_C = 0$	—	—	-100	nA
Collector-Emitter Breakdown Voltage	$V_{CEO}$	$I_C = -10mA, I_B = 0$	-20	—	—	V
DC Current Gain	$h_{FE(1)}$ (Note 2)	$V_{CE} = -2V, I_C = -0.5A$	100	—	320	
	$h_{FE(2)}$	$V_{CE} = -2V, I_C = -4A$	70	—	—	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -4A, I_B = -0.1A$	—	—	-1.0	V
Base-Emitter Voltage	$V_{BE}$	$V_{CE} = -2V, I_C = -4A$	—	—	-1.5	V
Transition Frequency	$f_T$	$V_{CE} = -2V, I_C = -0.5A$	—	170	—	MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB} = -10V, I_E = 0, f = 1MHz$	—	62	—	pF

Note 2 :  $h_{FE(1)}$  Classification    O : 100~200,    Y : 160~320

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