

**TOSHIBA**

**2SA1892**

TOSHIBA TRANSISTOR SILICON PNP EPITAXIAL TYPE (PCT PROCESS)

# 2SA1892

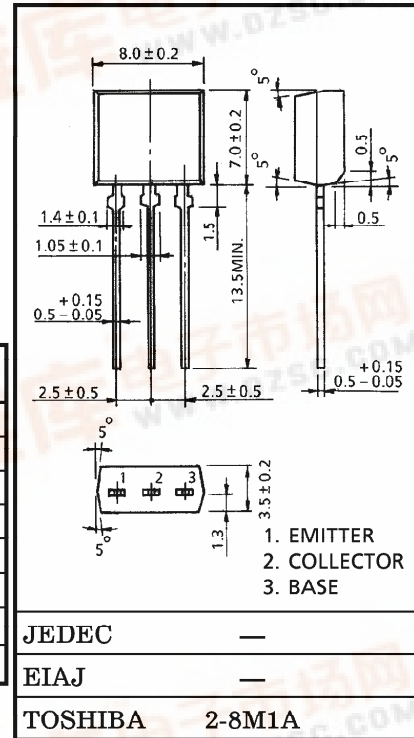
POWER AMPLIFIER APPLICATIONS  
POWER SWITCHING APPLICATIONS

Unit in mm

- Low Collector Saturation Voltage :  $V_{CE(sat)} = -0.5V$  (Max.)
- High Power Dissipation :  $P_C = 1.3W$
- High Speed Switching Time :  $t_{stg} = 1.0\mu s$  (Typ.)
- Complementary to 2SC5029

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	$V_{CBO}$	-50	V
Collector-Emitter Voltage	$V_{CEO}$	-50	V
Emitter-Base Voltage	$V_{EBO}$	-5	V
Collector Current	$I_C$	-3	A
Base Current	$I_B$	-0.2	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.)

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

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT	
Collector Cut-off Current	$I_{CBO}$	$V_{CB} = -50V, I_E = 0$	—	—	-1.0	$\mu A$	
Emitter Cut-off Current	$I_{EBO}$	$V_{EB} = -5V, I_C = 0$	—	—	-1.0	$\mu A$	
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -10mA, I_B = 0$	-50	—	—	V	
DC Current Gain	$h_{FE(1)}$ (NOTE)	$V_{CE} = -2V, I_C = -0.5A$	70	—	240	V	
	$h_{FE(2)}$	$V_{CE} = -2V, I_C = -1.5A$	40	—	—		
Saturation Voltage	Collector-Emitter	$V_{CE(sat)}$	$I_C = -1A, I_B = -0.05A$	—	—	-0.5	
	Base-Emitter	$V_{BE(sat)}$	$I_C = -1A, I_B = -0.05A$	—	—	-1.2	
Transition Frequency	$f_T$	$V_{CE} = -2V, I_C = -0.5A$	—	100	—	MHz	
Collector Output Capacitance	$C_{ob}$	$V_{CB} = -10V, I_E = 0, f = 1MHz$	—	40	—	pF	
Switching Time	Turn-on Time	$t_{on}$			—	0.1	$\mu s$
	Storage Time	$t_{stg}$			—	1.0	
	Fall Time	$t_f$			—	0.1	

Note :  $h_{FE(1)}$  Classification O : 70~140, Y : 120~240

961001FAA2

TOSHIBA is continually working to improve the quality and the reliability of its products. Nevertheless, semiconductor devices in general can malfunction or fail due to their inherent electrical sensitivity and vulnerability to physical stress. It is the responsibility of the buyer, when utilizing TOSHIBA products, to observe standards of safety, and to avoid situations in which a malfunction or failure of a TOSHIBA product could cause loss of human life, bodily injury or damage to property. In developing your designs, please ensure that TOSHIBA products are used within specified operating ranges as set forth in the most recent products specifications. Also, please keep in mind the precautions and conditions set forth in the TOSHIBA Semiconductor Reliability Handbook.

