Unit in mm

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

## 2 S C 2 5 0 0

STROBE FLASH APPLICATIONS.

MEDIUM POWER AMPLIFIER APPLICATIONS.

- High DC Current Gain and Excellent hFE Linearity
  - :  $h_{FE(1)} = 140 \sim 600 \text{ (V}_{CE} = 1\text{V, I}_{C} = 0.5\text{A})$
  - :  $h_{FE}(2) = 70$  (Min.), 200 (Typ.) ( $V_{CE} = 1V$ ,  $I_{C} = 2A$ )
- Low Saturation Voltage
  - $: V_{CE (sat)} = 0.5V (Max.) (I_{C} = 2A, I_{B} = 50mA)$

## MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT	
Collector-Base Voltage		$v_{CBO}$	30	V	
Collector-Emitter Voltage		$v_{CES}$	30	V	
		$v_{CEO}$	10		
Emitter-Base Voltage		$v_{\mathrm{EBO}}$	6	V	
Collector Current	DC	$I_{\mathbf{C}}$	2	Α	
	Pulsed (Note 1)	$I_{CP}$	5	A	
Base Current		$I_{\mathbf{B}}$	0.5	Α	
Collector Power Dissipation		$P_{\mathbf{C}}$	900	mW	
Junction Temperature		$T_j$	150	°C	
Storage Temperature Range		$T_{ m stg}$	-55~150	°C	

1. EMITTER
2. COLLECTOR
3. BASE

JEDEC TO-92MOD

EIAJ —

TOSHIBA 2-5J1A

Weight: 0.36g

Note 1 : Pulse Width ≤ 10ms, Duty Cycle ≤ 30%

## ELECTRICAL CHARACTERISTICS (Ta = 25°C)

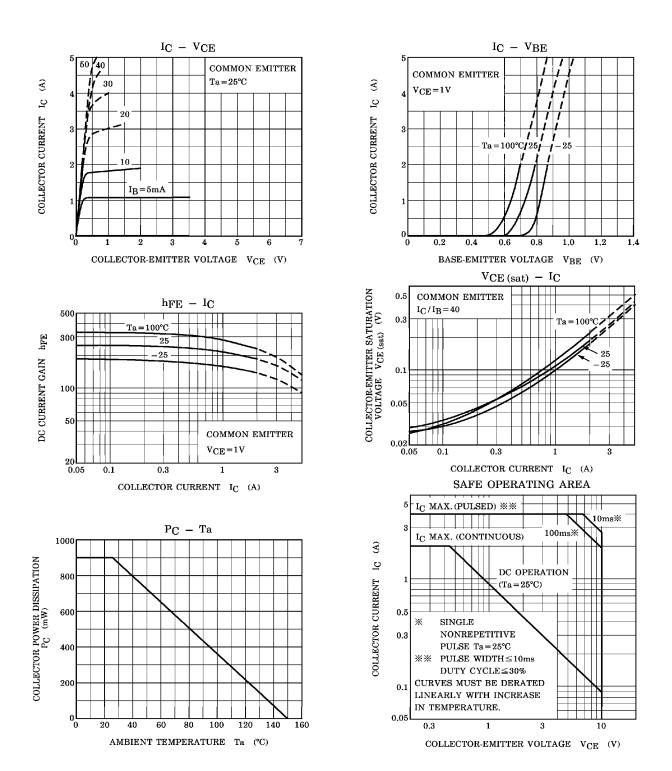
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	$I_{CBO}$	$V_{CB} = 30V, I_{E} = 0$	_	_	100	nA
Emitter Cut-off Current	$I_{EBO}$	$V_{EB}=6V, I_{C}=0$	_	_	100	nA
Collector-Emitter Breakdown Voltage	$v_{CEO}$	$I_{C} = 10 \text{mA}, I_{B} = 0$	10	_	_	v
Emitter-Base Breakdown Voltage	$v_{EBO}$	$I_{\rm E}=1$ mA, $I_{\rm C}=0$	6	_	_	v
DC Current Gain	hFE (1) (Note 2)	$V_{CE} = 1V, I_{C} = 0.5A$	140	_	600	
	h <sub>FE</sub> (2)	$V_{CE}=1V$ , $I_{C}=2A$	70	200	_	
Collector-Emitter Saturation Voltage	V <sub>CE</sub> (sat)	$I_{C}=2A, I_{B}=50mA$	_	0.2	0.5	v
Base-Emitter Voltage	$ m V_{BE}$	$V_{CE}=1V$ , $I_{C}=2A$	_	0.86	1.5	V
Transition Frequency	$ m f_T$	$V_{CE} = 1V, I_{C} = 0.5A$	_	150	_	MHz
Collector Output Capacitance	$C_{ m ob}$	$V_{CB} = 10V, I_{E} = 0, f = 1MHz$	_	27	_	рF

Note 2:  $h_{FE(1)}$  Classification A:  $140\sim240$ , B:  $200\sim330$ , C:  $300\sim450$ , D:  $420\sim600$ 

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