TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

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STOROBO FLASH APPLICATIONS

MEDIUM POWER AMPLIFIER APPLICATIONS

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

MAXIMUM RATINGS (Ta = 25°C)								
CHARACT	SYMBOL RATING		UNIT					
Collector-Base Voltage		V _{CBO}	30	V				
Collector-Emitter Voltage		VCES	30	v				
		VCEO	10					
Emitter-Base Voltage		VEBO	6	V				
Collector Current	DC	IC	2	Α				
	Pulsed (Note 1)	ICP	5					
Base Current		IB	0.2	Α				
Collector Power Dissipation		PC	750	mW				
Junction Temperature		T_{j}	150	°C				
Storage Temperature Range		T _{stg}	$-55 \sim 150$	°C				



Weight: 0.21 g

(Note 1) : Pulse Width = 10 ms (Max.), Duty Cycle = 30% (Max.)

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CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	ICBO	$V_{CB} = 30 V, I_E = 0$	_	_	0.1	$\mu \mathbf{A}$
Emitter Cut-off Current	IEBO	$V_{EB} = 6 V, I_{C} = 0$	_		0.1	$\mu \mathbf{A}$
Collector-Emitter Breakdown Voltage	V (BR) CEO	$I_{C} = 10 \text{ mA}, I_{B} = 0$	10	_	_	v
Emitter-Base Breakdown Voltage	V (BR) EBO	$I_E = 1 \text{ mA}, I_C = 0$	6	_	_	v
DC Current Gain	hFE (1) (Note 2)	$V_{CE} = 1 V, I_{C} = 0.5 A$	140		600	
	hFE (2)	$V_{CE} = 1 V, I_C = 2 A$	70	200	—	
Collector-Emitter Sturation Voltage	V _{CE (sat)}	$I_{\rm C}=2\rm A,\ I_{\rm B}=50\rm mA$	—	0.2	0.5	v
Base-Emitter Voltage	V _{BE}	$V_{CE} = 1 V, I_{C} = 2 A$	_	0.86	1.5	V
Transition Frequency	$f_{\rm T}$	$V_{CE} = 1 V, I_{C} = 0.5 A$	—	150	—	MHz
Collector Output Capacitance	C _{ob}	$V_{CB} = 10 \text{ V}, \text{ I}_{E} = 0, \text{ f} = 1 \text{ MHz}$	_	27		pF

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

 $(Note \ 2): \ h_{FE \ (1)} \ Classification \\ L: 140 \sim 240, \ M: 200 \sim 330, \ N: 300 \sim 450, \ P: 420 \sim 600$

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