TOSHIBA 2SA1431

TOSHIBA TRANSISTOR SILICON PNP EPITAXIAL TYPE (PCT PROCESS)

2 S A 1 4 3 1

STOROBE FLASH APPLICATIONS

MEDIUM POWER AMPLIFIER APPLICATIONS

High DC Current Gain and Excellent hFE Linearity

: $h_{FE(1)} = 100 \sim 320 (V_{CE} = -2V, I_C = -0.5A)$

: $h_{FE(2)} = 70 \text{ (Min.) } (V_{CE} = -2V, I_C = -4A)$

• Low Saturation Voltage

: $V_{CE (sat)} = -1.0V (Max.) (I_C = -4A, I_B = -0.1A)$

MAXIMUM RATINGS (Ta = 25°C)

CHARACT	SYMBOL	RATING	UNIT		
Collector-Base Voltage		v_{CBO}	-35	V	
Collector-Emitter Voltage		v_{CEO}	-20	V	
Emitter-Base Voltage		$V_{ m EBO}$	-8	V	
Collector Current	DC	$I_{\mathbb{C}}$	-5	A	
	Pulsed (Note 1)	I_{CP}	-8		
Base Current		$I_{\mathbf{B}}$	-0.5	A	
Collector Power Dissipation		PC	1000	mW	
Junction Temperature		T_{j}	150	°C	
Storage Temperature Range		$\mathrm{T_{stg}}$	-55~150	°C	

7.1MAX
3.8
3.2
0.55-0.05
0.85
0.45-0.05
1. BASE
2. COLLECTOR
3. EMITTER

JEDEC

JEITA

TOSHIBA
2.7MAX
2.7MAX
1.0
0.45-0.05
0.45-0.05
1.025±0.05
1.025±0.05

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JEDEC

JEITA

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TOSHIBA
2-7D101A

Unit in mm

Weight: 0.2g (Typ.)

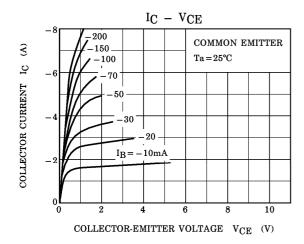
(Note 1): Pulse Width=10ms (Max.), Duty Cycle=30% (Max.)

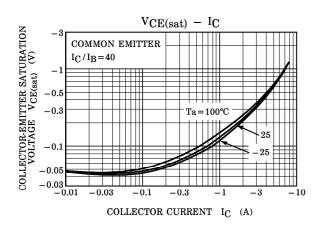
ELECTRICAL CHARACTERISTICS (Ta = 25°C)

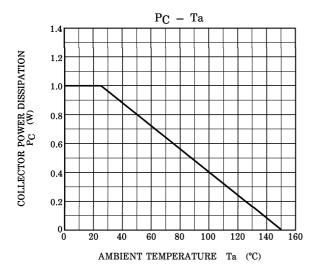
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB} = -35V, I_{E} = 0$	_	_	-100	nA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = -8V, I_C = 0$	_	_	-100	nA
Collector-Emitter Breakdown Voltage	V _(BR) CEO	$I_{C} = -10 \text{mA}, I_{B} = 0$	-20	_	_	V
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	$I_E = -1 \text{mA}, I_C = 0$	-8	_	_	V
DC Current Gain	hFE (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	$V_{ m BE}$	$V_{CE} = -2V, I_{C} = -4A$	_	_	-1.5	V
Transition Frequency	$ m 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

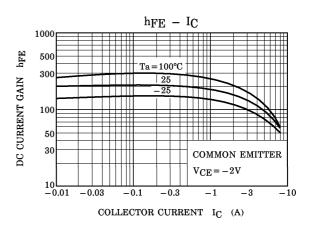
(Note 2): $h_{FE(1)}$ Classification O: $100\sim200$, Y: $160\sim320$

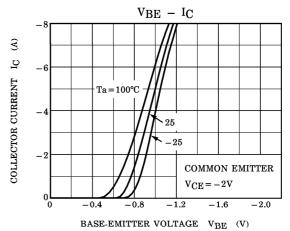
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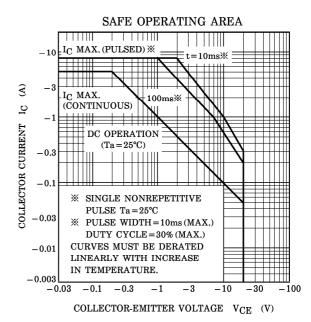












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