**TOSHIBA** 2SA1802

### TOSHIBA TRANSISTOR SILICON PNP EPITAXIAL TYPE

# 2 S A 1 8 0 2

### STROBE FLASH APPLICATIONS MEDIUM POWER AMPLIFIER APPLICATIONS

Excellent hFE Linearity : hFE (1) =  $200 \sim 600$  (VCE = -2 V, IC = -0.5 A) : hFE (2) = 140 (Min.) (VCE = -2 V, IC = -3 A)

Low Collector Saturation Voltage

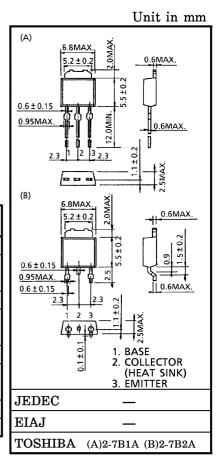
:  $V_{CE (sat)} = -0.5 V (Max.) (I_{C} = -3 A, I_{B} = -60 mA)$ 

Surface Mount Package: Lead Bending Type 2-7B2A

Complementary to 2SC4681

## MAXIMUM RATINGS (Ta = 25°C)

CHARACT	SYMBOL	RATING	UNIT		
Collector-Base Volt	$v_{CBO}$	-30	V		
Collector-Emitter Voltage		$v_{CES}$	-30	V	
		$v_{CEO}$	-10		
Emitter-Base Volta	$V_{EBO}$	-6	V		
Collector Current	DC	$I_{\mathbf{C}}$	-3	A	
	Pulsed (Note 1)	$I_{CP}$	-6		
Base Current	$I_{\mathbf{B}}$	-0.5	A		
Collector Power	$Ta = 25^{\circ}C$	D	1.0	w	
Dissipation	$Tc = 25^{\circ}C$	$^{\mathrm{P}_{\mathrm{C}}}$	10		
Junction Temperat	Tj	150	°C		
Storage Temperature Range		$\mathrm{T_{stg}}$	-55~150	$^{\circ}\mathrm{C}$	



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

### ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	$I_{CBO}$	$V_{CB} = -30 \text{ V}, I_{E} = 0$	_	_	-100	nA
Emitter Cut-off Current	$I_{EBO}$	$V_{EB} = -6 V, I_{C} = 0$		_	-100	nA
Collector-Emitter Breakdown Voltage	V (BR) CEO	$I_{\mathrm{C}} = -10  \mathrm{mA},  I_{\mathrm{B}} = 0$	-10	_	_	V
DC Current Gain	h <sub>FE (1)</sub>	$V_{CE} = -2 V, I_{C} = -0.5 A$	200	_	600	
	hFE (2)	$V_{CE} = -2 V, I_{C} = -3 A$	140	200	_	
Collector-Emitter Saturation Voltage	V <sub>CE</sub> (sat)	$I_{\rm C} = -3~{ m A},~I_{ m B} = -60~{ m mA}$	l	-0.25	-0.50	V
Base-Emitter Voltage	$ m V_{BE}$	$V_{CE} = -2 V, I_{C} = -3 A$		-0.86	-1.2	V
Transition Frequency	$ m f_{T}$	$V_{CE} = -2 V, I_{C} = -0.5 A$	_	180	_	MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB} = -10 \text{ V}, I_{E} = 0, f = 1 \text{ MHz}$	_	50	_	pF

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