TOSHIBA Transistor Silicon PNP Epitaxial Type (PCT process)

# 2SA1832

#### Audio Frequency General Purpose Amplifier Applications

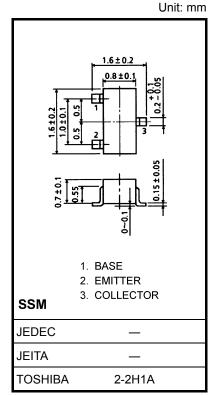
High voltage and high current:  $V_{\rm CEO}$  = –50 V,  $I_{\rm C}$  = –150 mA (max)

- Excellent hFE linearity: hFE (IC = –0.1 mA)/ hFE (IC = –2 mA)
- = 0.95 (typ.) • High hFE: hFE = 70~400
- High hFE: hFE =  $70 \sim 400$
- Complementary to 2SC4738
- Small package

#### Absolute Maximum Ratings (Ta = 25°C)

Characteristics	Symbol	Rating	Unit	
Collector-base voltage	V <sub>CBO</sub>	-50	V	
Collector-emitter voltage	V <sub>CEO</sub>	-50	V	
Emitter-base voltage	V <sub>EBO</sub>	-5	V	
Collector current	IC	-150	mA	
Base current	Ι <sub>Β</sub>	-30	mA	
Collector power dissipation	PC	100	mW	
Junction temperature	Tj	125	°C	
Storage temperature range	T <sub>stg</sub>	-55~125	°C	

Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings.



Weight: 2.4 mg (typ.)

Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/"Derating Concept and Methods") and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

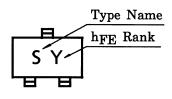
#### **Electrical Characteristics (Ta = 25°C)**

Characteristics	Symbol	Test Condition	Min	Тур.	Max	Unit
Collector cut-off current	I <sub>CBO</sub>	$V_{CB} = -50 \text{ V}, I_E = 0$	—	_	-0.1	μA
Emitter cut-off current	I <sub>EBO</sub>	$V_{EB}=-5~V,~I_C=0$		_	-0.1	μA
DC current gain	h <sub>FE</sub> (Note)	$V_{CE} = -6 \text{ V}, \text{ I}_{C} = -2 \text{ mA}$	70	_	400	
Collector-emitter saturation voltage	V <sub>CE (sat)</sub>	$I_{C} = -100 \text{ mA}, I_{B} = -10 \text{ mA}$	_	-0.1	-0.3	V
Transition frequency	f <sub>T</sub>	$V_{CE} = -10 \text{ V}, I_{C} = -1 \text{ mA}$	80	—	—	MHz
Collector output capacitance	Cob	$V_{CB} = -10 \text{ V}, \text{ I}_{E} = 0, \text{ f} = 1 \text{ MHz}$	_	4	7	рF

Note: hFE classification O (O): 70~140, Y (Y): 120~240, GR (G): 200~400

( ) marking symbol

#### Marking



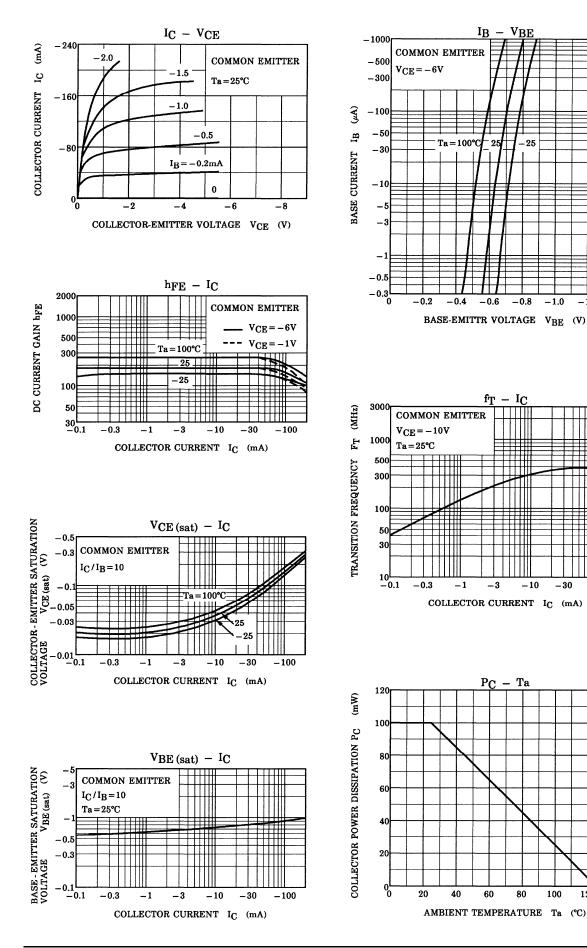
## TOSHIBA

-1.2

-30

-100

-1.4



140

120

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