

SILICON PNP EPITAXIAL TYPE

# TBC856~858

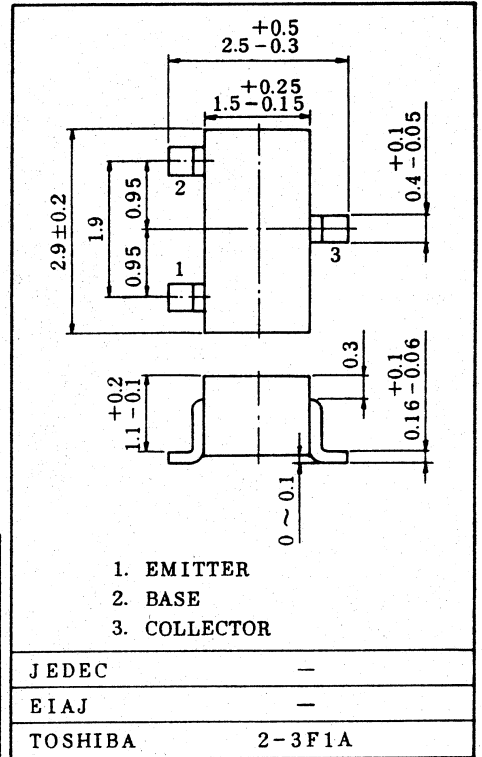
PRIMARILY INTENDED FOR USE DRIVER STAGE OF AUDIO AMPLIFIERS.

- High  $V_{CEO}$  : -65V (TBC856)  
                   -45V (TBC857)  
                   -30V (TBC858)
- Low Noise

MAXIMUM RATINGS ( $T_a=25^\circ\text{C}$ )

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Breakdown Voltage	TBC856	$V_{(BR)CBO}$	-80	V
	TBC857		-50	
	TBC858		-30	
Collector-Emitter Breakdown Voltage	TBC856	$V_{(BR)CEO}$	-65	V
	TBC857		-45	
	TBC858		-30	
Emitter-Base Breakdown Voltage		$V_{(BR)EBO}$	-5	V
Collector Current	DC	$I_C$	-100	mA
	Peak	$I_{CP}$	-200	
Base Current (Peak)		$I_{BP}$	-200	mA
Collector Power Dissipation		$P_C$	150	mW
Junction Temperature		$T_j$	125	$^\circ\text{C}$
Storage Temperature Range		$T_{stg}$	-55~125	$^\circ\text{C}$

Unit in mm



Weight : 0.012g

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## ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	ICBO	V <sub>CB</sub> =-30V, I <sub>E</sub> =0	-	-	-15	nA
Emitter Cut-off Current	IEBO	V <sub>EB</sub> =-5V, I <sub>C</sub> =0	-	-	-1	μA
Collector-Emitter Breakdown Voltage	TBC856	V(BR)CEO I <sub>C</sub> =-1mA, I <sub>B</sub> =0	-65	-	-	V
	TBC857		-45	-	-	
	TBC858		-30	-	-	
DC Current Gain	TBC856	h <sub>FE</sub> (Note) V <sub>CE</sub> =-5V, I <sub>C</sub> =-2mA	75	-	800	
	TBC857					
	TBC858					
Small Signal Current Gain	h <sub>fe</sub>	V <sub>CE</sub> =-5V, I <sub>C</sub> =-2mA, f=1kHz	75	-	900	
Base-Emitter Voltage	V <sub>BE</sub>	V <sub>CE</sub> =-5V, I <sub>C</sub> =-2mA	-600	-650	-750	mV
		V <sub>CE</sub> =-5V, I <sub>C</sub> =-10mA	-	-	-820	
Collector-Emitter Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =-10mA, I <sub>B</sub> =-0.5mA	-	-	-300	mV
		I <sub>C</sub> =-100mA, I <sub>B</sub> =-5mA	-	-	-650	
Base-Emitter Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =-10mA, I <sub>B</sub> =-0.5mA	-	-700	-	mV
		I <sub>C</sub> =-100mA, I <sub>B</sub> =-5mA	-	-850	-	
Knee Voltage	V <sub>CEK</sub>	I <sub>C</sub> =-10mA, I <sub>B</sub> =Value for which I <sub>C</sub> =-11mA, at V <sub>CE</sub> =-1V	-	-250	-600	mV
Transition Frequency	f <sub>T</sub>	V <sub>CE</sub> =-5V, I <sub>C</sub> =-10mA	-	300	-	MHz
Collector Output Capacitance	C <sub>ob</sub>	V <sub>CB</sub> =-10V, f=1MHz	-	4.5	-	pF
Noise Figure	NF	V <sub>CE</sub> =-5V, I <sub>C</sub> =-0.2mA R <sub>g</sub> =2kΩ, f=1kHz	-	2	-	dB

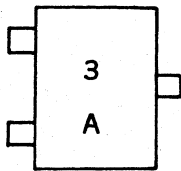
Note : h<sub>FE</sub> Classification    A : 125~250

                                      B : 220~475

                                      C : 420~800

free RANK : 75~800

MARKING    ex. TBC856-A



	A	B	C
TBC856	3A	3B	
TBC857	3E	3F	3G
TBC858	3J	3K	3L