

2SB1015A

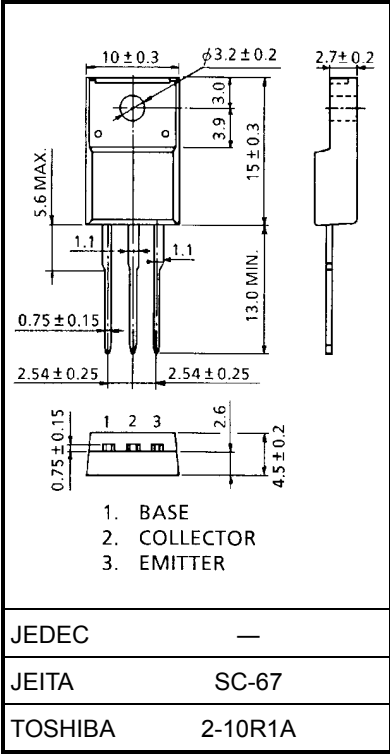
Audio Frequency Power Amplifier Applications

- Low collector saturation voltage:  $V_{CE(sat)} = -1.7\text{ V (max)}$   
( $I_C = -3\text{ A}$ ,  $I_B = -0.3\text{ A}$ )
- Collector power dissipation:  $P_C = 25\text{ W (T}_c = 25^\circ\text{C)}$

Maximum Ratings (Ta = 25°C)

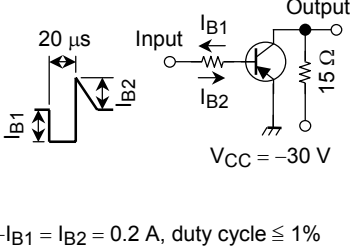
Characteristics		Symbol	Rating	Unit
Collector-base voltage		$V_{CBO}$	-60	V
Collector-emitter voltage		$V_{CEO}$	-60	V
Emitter-base voltage		$V_{EBO}$	-7	V
Collector current		$I_C$	-3	A
Base current		$I_B$	-0.5	A
Collector power dissipation	Ta = 25°C	$P_C$	2.0	W
	Tc = 25°C		25	
Junction temperature		$T_j$	150	°C
Storage temperature range		$T_{stg}$	-55~150	°C

Unit: mm



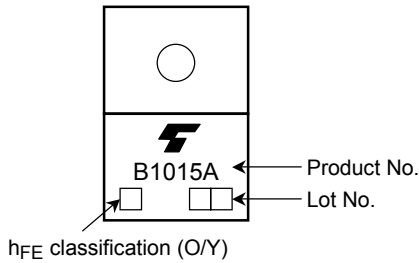
Weight: 1.7 g (typ.)

Electrical Characteristics (Ta = 25°C)

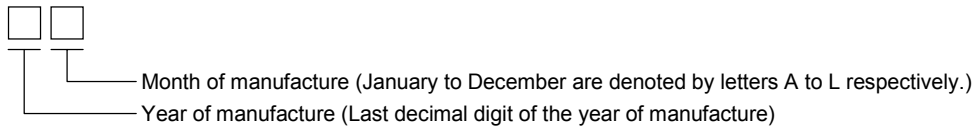
Characteristics		Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current		ICBO	V <sub>CB</sub> = -60 V, I <sub>E</sub> = 0	—	—	-100	μA
Emitter cut-off current		IEBO	V <sub>EB</sub> = -7 V, I <sub>C</sub> = 0	—	—	-100	μA
Collector-emitter breakdown voltage		V <sub>(BR)</sub> CEO	I <sub>C</sub> = -50 mA, I <sub>B</sub> = 0	-60	—	—	V
DC current gain	h <sub>FE</sub> (1) (Note)		V <sub>CE</sub> = -5 V, I <sub>C</sub> = -0.5 A	60	—	200	
	h <sub>FE</sub> (2)		V <sub>CE</sub> = -5 V, I <sub>C</sub> = -3 A	20	—	—	
Collector-emitter saturation voltage		V <sub>CE</sub> (sat)	I <sub>C</sub> = -3 A, I <sub>B</sub> = -0.3 A	—	-0.5	-1.7	V
Base-emitter voltage		V <sub>BE</sub>	V <sub>CE</sub> = -5 A, I <sub>C</sub> = -0.5 A	—	-0.7	-1.0	V
Transition frequency		f <sub>T</sub>	V <sub>CE</sub> = -5 V, I <sub>C</sub> = -0.5 A	—	9	—	MHz
Collector output capacitance		C <sub>ob</sub>	V <sub>CB</sub> = -10 V, I <sub>E</sub> = 0, f = 1 MHz	—	150	—	pF
Switching time	Turn-on time	t <sub>on</sub>	 -I <sub>B1</sub> = I <sub>B2</sub> = 0.2 A, duty cycle ≤ 1%	—	0.4	—	μs
	Storage time	t <sub>stg</sub>		—	1.7	—	
	Fall time	t <sub>f</sub>		—	0.5	—	

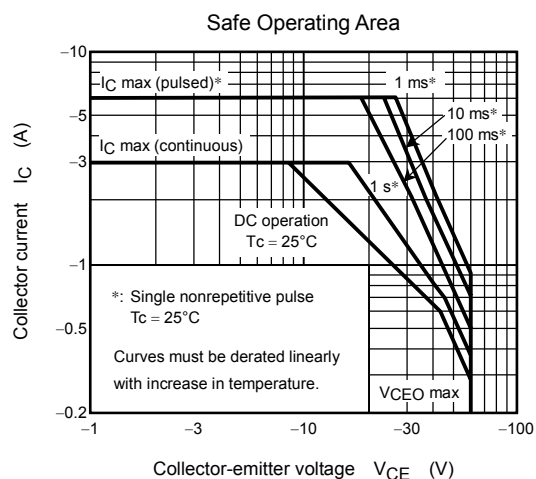
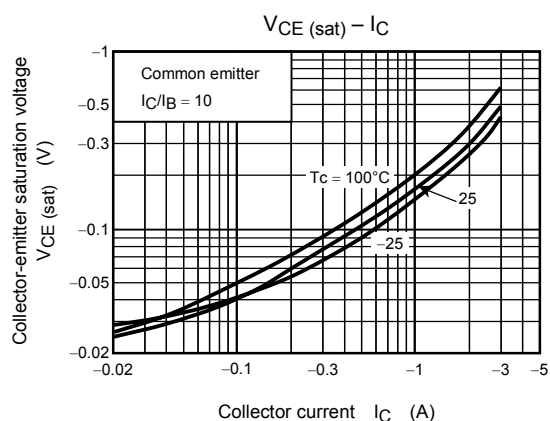
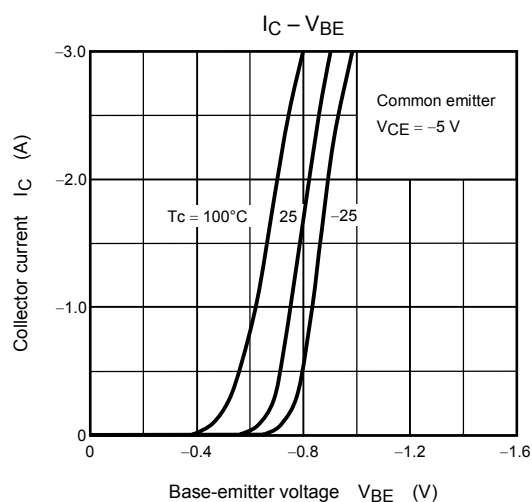
Note: h<sub>FE</sub> (1) classification O: 60~120, Y: 100~200

Marking



Explanation of Lot No.





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