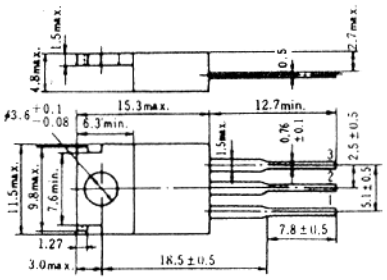
HITACHI

2SB857, 2SB858

SILICON PNP TRIPLE DIFFUSED

LOW FREQUENCY POWER AMPLIFIER
COMPLEMENTARY PAIR WITH 2SD1133 AND 2SD1134



1. Base
2. Collector (Flange)
3. Emitter

(Dimensions in mm)

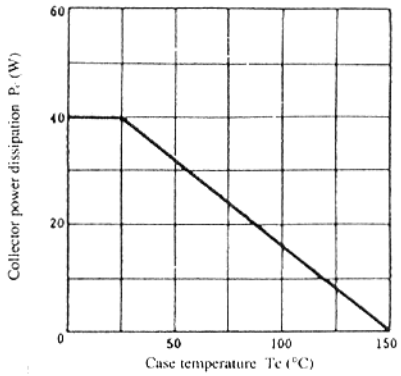
(JEDEC TO-220AB)

■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Item	Symbol	2SB857	2SB858	Unit
Collector to base voltage	V_{CBO}	−70	−70	V
Collector to emitter voltage	V_{CEO}	−50	−60	V
Emitter to base voltage	V_{EBO}	−5	−5	V
Collector current	I_C	−4	−4	A
Collector peak current	$i_{C(peak)}$	−8	−8	A
Collector power dissipation	P_C*	40	40	W
Junction temperature	T_j	150	150	°C
Storage temperature	T_{stg}	−45 to +150	−45 to +150	°C

* Value at Tc = 25°C

MAXIMUM COLLECTOR DISSIPATION CURVE



■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

Item	Symbol	Test Condition		2SB857 min.	2SB857 typ.	2SB857 max.	2SB858 min.	2SB858 typ.	2SB858 max.	Unit
Collector to base breakdown voltage	$V_{(BR)CBO}$	I_C = −10μA, I_E = 0		−70	—	—	−70	—	—	V
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	I_C = −50mA, R_{BE} = ∞		−50	—	—	−60	—	—	V
Emitter to base breakdown voltage	$V_{(BR)EBO}$	I_E = −10μA, I_C = 0		−5	—	—	−5	—	—	V
Collector cutoff current	I_{CBO}	V_{CB} = −50V, I_E = 0		—	—	−1	—	—	−1	μA
DC current transfer ratio	h_{FE1}*	V_{CE} = −4V	I_C = −1A**	60	—	320	60	—	320	
	h_{FE2}		I_C = −0.1A**	35	—	—	35	—	—	
Collector to emitter saturation voltage	$V_{CE(sat)}$	I_C = −2A, I_B = −0.2A**		—	—	−1	—	—	−1	V
Base to emitter voltage	V_{BE}	V_{CE} = −4V, I_C = −1A**		—	—	−1	—	—	−1	V
Gain bandwidth product	f_T	V_{CE} = −4V, I_C = −0.5A**		—	15	—	—	15	—	MHz

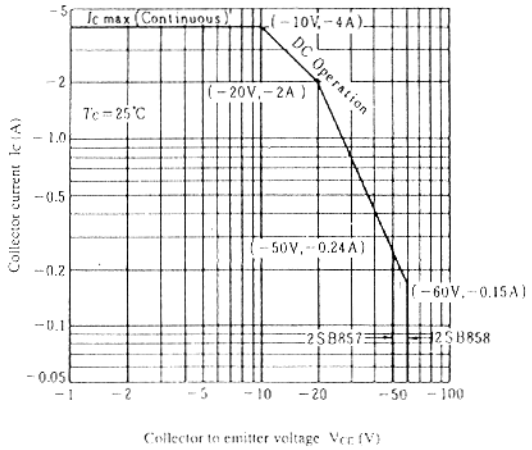
* The 2SB857 and 2SB858 are grouped by h_{FE1} as follows.

** Pulse Test

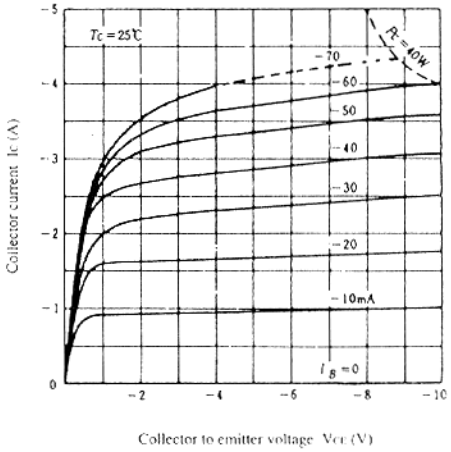
B	C	D
60 to 120	100 to 200	160 to 320

2SB857, 2SB858

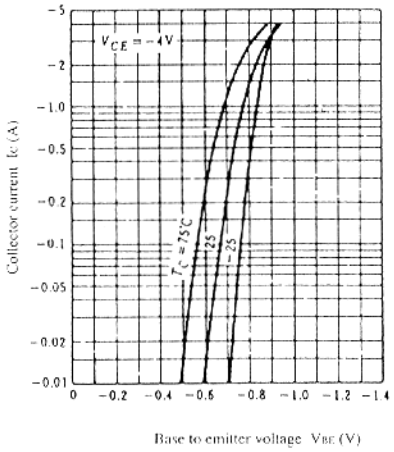
AREA OF SAFE OPERATION



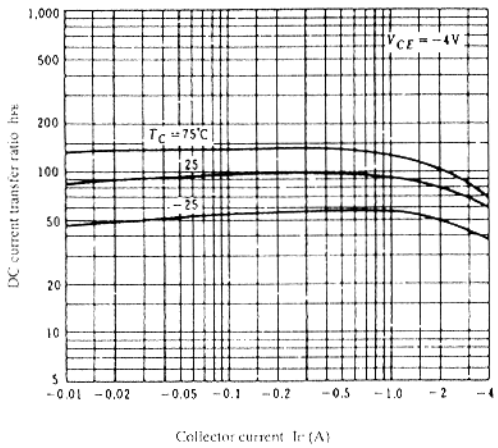
TYPICAL OUTPUT CHARACTERISTICS



TYPICAL TRANSFER CHARACTERISTICS



DC CURRENT TRANSFER RATIO VS. COLLECTOR CURRENT



COLLECTOR TO EMITTER SATURATION VOLTAGE VS. COLLECTOR CURRENT