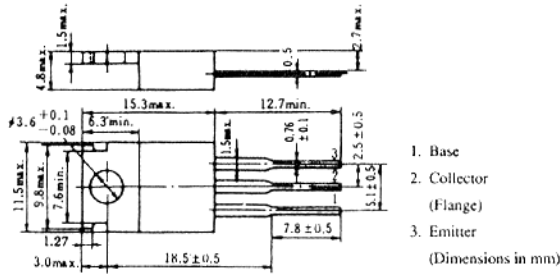


## 2SD1133, 2SD1134

SILICON NPN TRIPLE DIFFUSED

LOW FREQUENCY POWER AMPLIFIER

COMPLEMENTARY PAIR WITH 2SB857 AND 2SB858



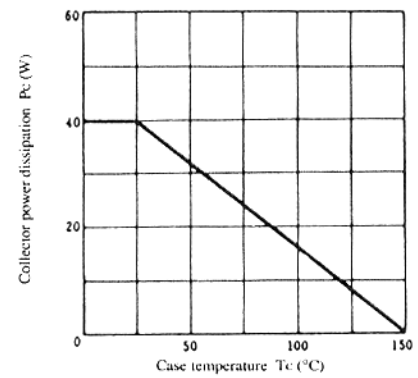
(JEDEC TO-220AB)

### ■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Item	Symbol	2SD1133	2SD1134	Unit
Collector to base voltage	VCBO	70	70	V
Collector to emitter voltage	VCEO	50	60	V
Emitter to base voltage	VEBO	5	5	V
Collector current	IC	4	4	A
Collector peak current	iC(peak)	8	8	A
Collector power dissipation	PC*	40	40	W
Junction temperature	Tj	150	150	°C
Storage temperature	Tsig	-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	2SD1133			2SD1134			Unit	
			min.	typ.	max.	min.	typ.	max.		
Collector to base breakdown voltage	V(BR)CBO	IC = 10μA, IE = 0	70	—	—	70	—	—	V	
Collector to emitter breakdown voltage	V(BR)CEO	IC = 50mA, RBE = ∞	50	—	—	60	—	—	V	
Emitter to base breakdown voltage	V(BR)EBO	IE = 10μA, IC = 0	5	—	—	5	—	—	V	
Collector cutoff current	ICBO	VCB = 50V, IE = 0	—	—	1	—	—	1	μA	
DC current transfer ratio	hFE1*	VCE = 4V	IC = 1A**		60	—	320	60	—	320
	hFE2		IC = 0.1A**		35	—	—	35	—	—
Collector to emitter saturation voltage	VCE(sat)	IC = 2A, IB = 0.2A**	—	—	1	—	—	1	V	
Base to emitter voltage	VBE	VCE = 4V, IC = 1A**	—	—	1	—	—	1	V	
Gain bandwidth product	fT	VCE = 4V, IC = 0.5A**	—	7	—	—	7	—	MHz	

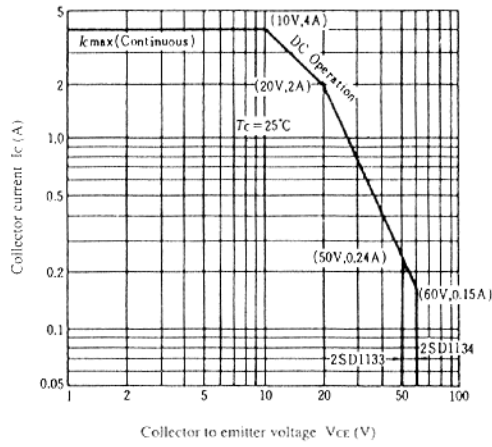
\* The 2SD1133 and 2SD1134 are grouped by hFE1 as follows.

\*\* Pulse Test.

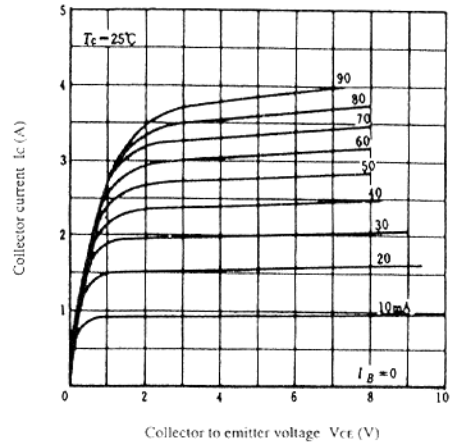
B	C	D
60 to 120	100 to 200	160 to 320

## 2SD1133, 2SD1134

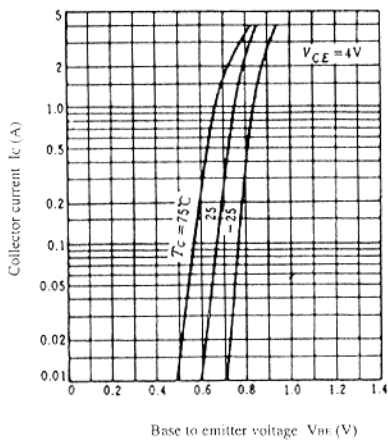
AREA OF SAFE OPERATION



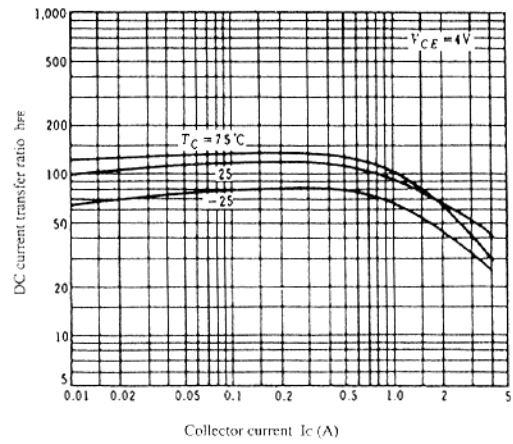
TYPICAL OUTPUT CHARACTERISTICS



TYPICAL TRANSFER CHARACTERISTICS



DC CURRENT TRANSFER RATIO VS. COLLECTOR CURRENT



COLLECTOR TO EMITTER SATURATION VOLTAGE VS. COLLECTOR CURRENT

