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# 2SD2121(L)/(S)

Silicon NPN Epitaxial

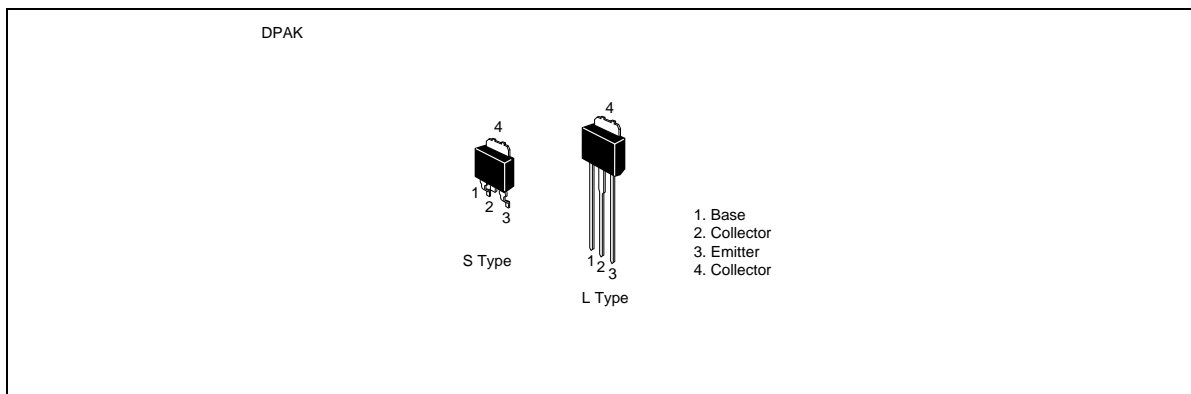
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### Application

Low frequency power amplifier complementary pair with 2SB1407(L)/(S)

### Outline



### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

Item	Symbol	Ratings	Unit
Collector to base voltage	$V_{CBO}$	35	V
Collector to emitter voltage	$V_{CEO}$	35	V
Emitter to base voltage	$V_{EBO}$	5	V
Collector current	$I_C$	2.5	A
Collector peak current	$I_{C(\text{peak})}$	3	A
Collector power dissipation	$P_C^{*1}$	18	W
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

Note: 1. Value at  $T_c = 25^\circ\text{C}$ .

## 2SD2121(L)/(S)

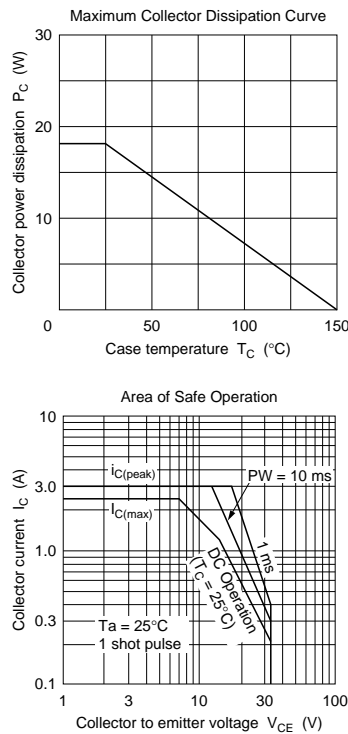
### Electrical Characteristics (Ta = 25°C)

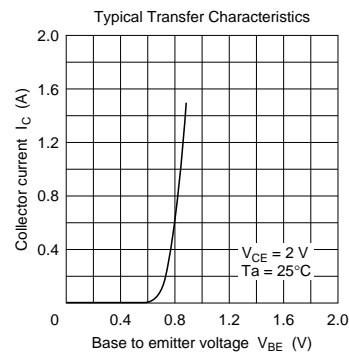
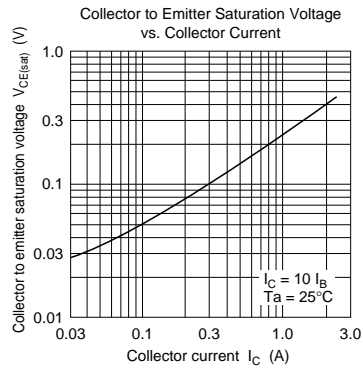
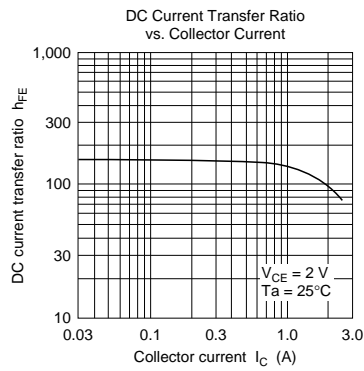
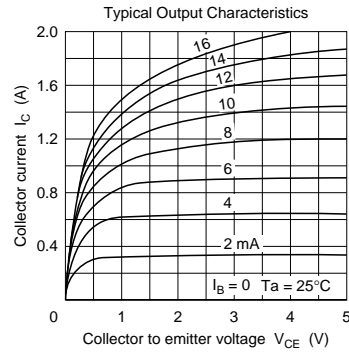
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	35	—	—	V	$I_C = 1 \text{ mA}$ , $I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	35	—	—	V	$I_C = 10 \text{ mA}$ , $R_{BE} = \infty$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	5	—	—	V	$I_E = 1 \text{ mA}$ , $I_C = 0$
Collector cutoff current	$I_{CBO}$	—	—	20	$\mu\text{A}$	$V_{CB} = 35 \text{ V}$ , $I_E = 0$
DC current transfer ratio	$h_{FE1}^{*1}$	60	—	320		$V_{CE} = 2 \text{ V}$ , $I_C = 0.5 \text{ A}^{*2}$
	$h_{FE2}$	20	—	—		$V_{CE} = 2 \text{ V}$ , $I_C = 1.5 \text{ A}^{*2}$
Base to emitter voltage	$V_{BE}$	—	—	1.5	V	$V_{CE} = 2 \text{ V}$ , $I_C = 1.5 \text{ A}^{*2}$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	1.0	V	$I_C = 2 \text{ A}$ , $I_B = 0.2 \text{ A}^{*2}$

Notes: 1. The 2SD2121(L)/(S) is grouped by  $h_{FE1}$  as follows.

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

2. Pulse test.





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