

# 4AE11

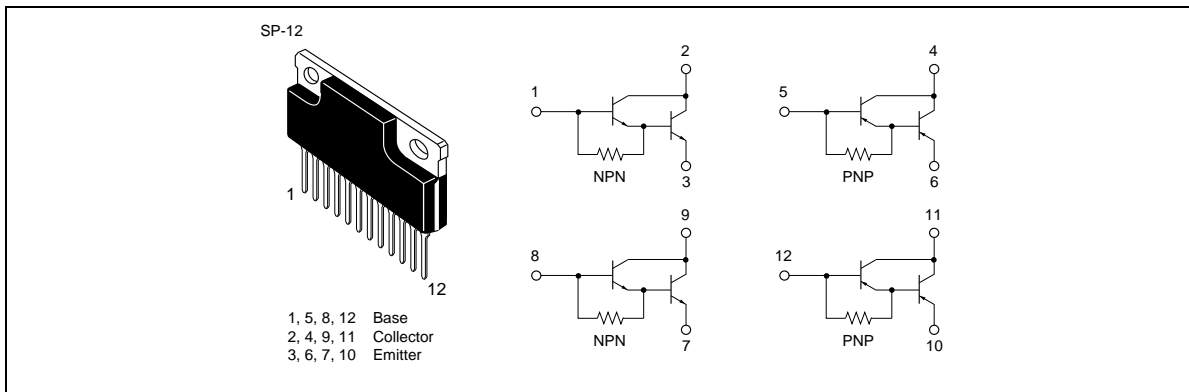
Silicon NPN/PNP Triple Diffused

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### Application

Low frequency power amplifier

### Outline



## 4AE11

### Absolute Maximum Ratings (for each device, Ta = 25°C)

Item	Symbol	Ratings		Unit
		NPN	PNP	
Collector to base voltage	$V_{CBO}$	300	-300	V
Collector to emitter voltage	$V_{CEO}$	300	-300	V
Emitter to base voltage	$V_{EBO}$	7	-7	V
Collector current	$I_C$	0.3	-0.3	A
Collector peak current	$I_{C(peak)}$	0.6	-0.6	A
Collector power dissipation	$P_C^{*1}$	32	32	W
Junction temperature	$T_j$	150	150	°C
Storage temperature	$T_{stg}$	-55 to 150	-55 to 150	°C

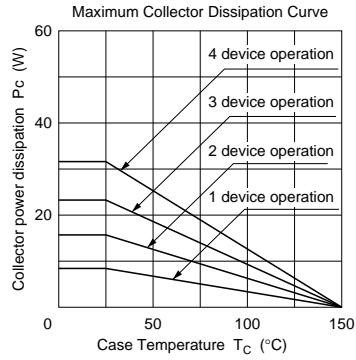
Note: 1. Value at  $T_C = 25^\circ\text{C}$ .

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

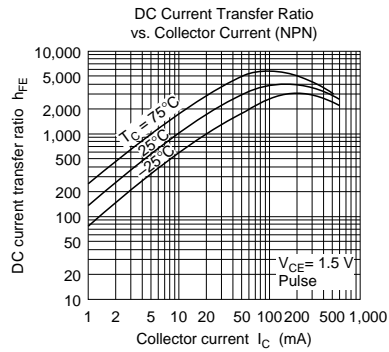
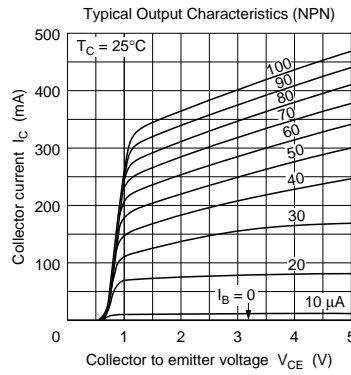
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	300	—	—	V	$I_C = 1\text{ mA}, I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	300	—	—	V	$I_C = 10\text{ mA}, R_{BE} = \infty$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	7	—	—	V	$I_E = 1\text{ mA}, I_C = 0$
Collector cutoff current	$I_{CBO}$	—	—	10	$\mu\text{A}$	$V_{CB} = 300\text{ V}, I_E = 0$
	$I_{CEO}$	—	—	10		$V_{CE} = 60\text{ V}, R_{BE} = \infty$
Emitter cutoff current	$I_{EBO}$	—	—	10	$\mu\text{A}$	$V_{EB} = 5\text{ V}, I_C = 0$
DC current transfer ratio	$h_{FE1}$	1000	—	—		$V_{CE} = 1.5\text{ V}, I_C = 20\text{ mA}^{*1}$
	$h_{FE2}$	3000	—	30000		$V_{CE} = 1.5\text{ V}, I_C = 100\text{ mA}^{*1}$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	1.5	V	$I_C = 100\text{ mA}, I_B = 0.2\text{ mA}^{*1}$
Base to emitter saturation voltage	$V_{BE(sat)}$	—	—	2.0	V	$I_C = 100\text{ mA}, I_B = 0.2\text{ mA}^{*1}$

Notes: 1. Pulse test.

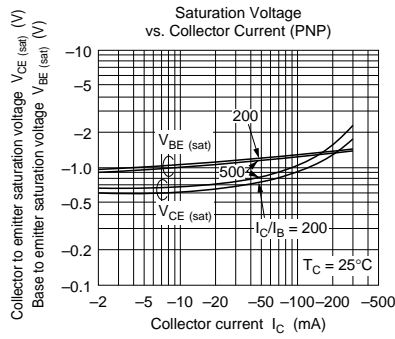
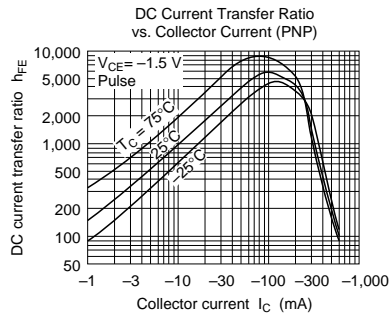
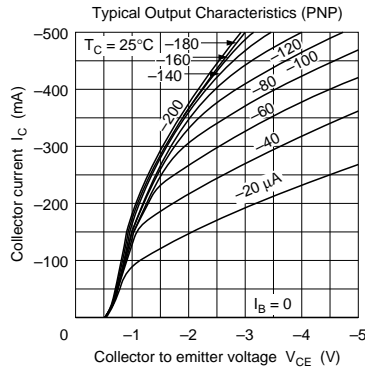
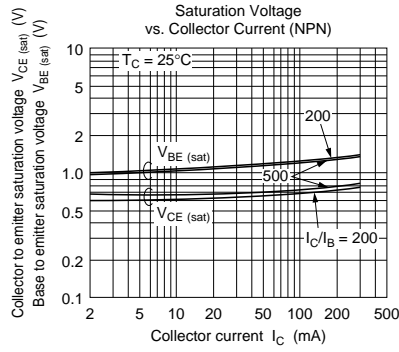
2. The minus sign of PNP is omitted.



Note: Collector power dissipation of each devices is identical.

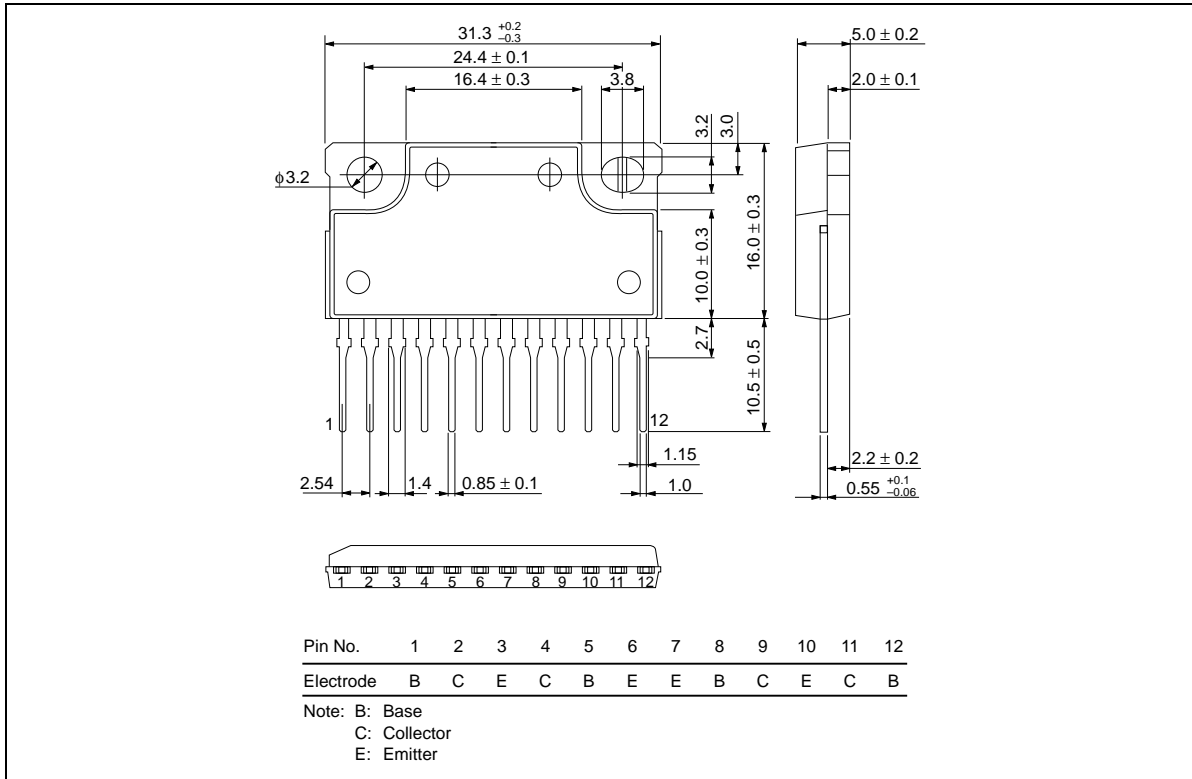


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Unit: mm



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