

2SA743, 2SA743A

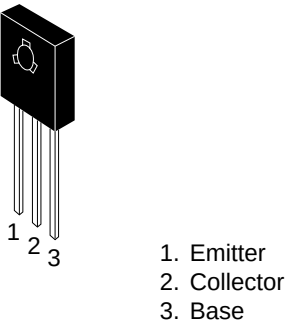
Silicon PNP Epitaxial
Low Frequency Power Amplifier Complementary Pair with 2SC1212 and 2SC1212A

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	2SA743	2SA743A	Unit
Collector to base voltage	V _{CBO}	-50	-80	V
Collector to emitter voltage	V _{CEO}	-50	-80	V
Emitter to base voltage	V _{EBO}	-4	-4	V
Collector current	I _C	-1	-1	A
Collector power dissipation	P _C	0.75	0.75	W
	P _C ^{*1}	8	8	
Junction temperature	T _j	150	150	°C
Storage temperature	T _{stg}	-55 to	-55 to	°C
		+150	+150	

Note: 1. Value at T_C = 25°C.

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Electrical Characteristics (Ta = 25°C)

Item	Symbol	2SA743			2SA743A			Unit	Test condition
		Min	Typ	Max	Min	Typ	Max		
Collector to base breakdown voltage	V _{(BR)CBO}	-50	—	—	-80	—	—	V	I _C = -1 mA, I _E = 0
Collector to emitter breakdown voltage	V _{(BR)CEO}	-50	—	—	-80	—	—	V	I _C = -10 mA, R _{BE} = ∞
Emitter to base breakdown voltage	V _{(BR)EBO}	-4	—	—	-4	—	—	V	I _E = -1 mA, I _C = 0
Collector cutoff current	I _{CER}	—	—	-20	—	—	—	μA	V _{CE} = -50 V, R _{BE} = 1 kΩ
	I _{CER}	—	—	—	—	—	-20		V _{CE} = -80 V, R _{BE} = 1 kΩ
DC current transfer ratio	h _{FE} ^{*1}	60	120	200	60	120	200		V _{CE} = -4 V, I _C = -50 mA
	h _{FE}	20	—	—	20	—	—		V _{CE} = -4 V, I _C = -1 A (pulse)
Base to emitter voltage	V _{BE}	—	-0.65	-1.0	—	-0.65	1.0	V	V _{CE} = -4 V, I _C = -50 mA

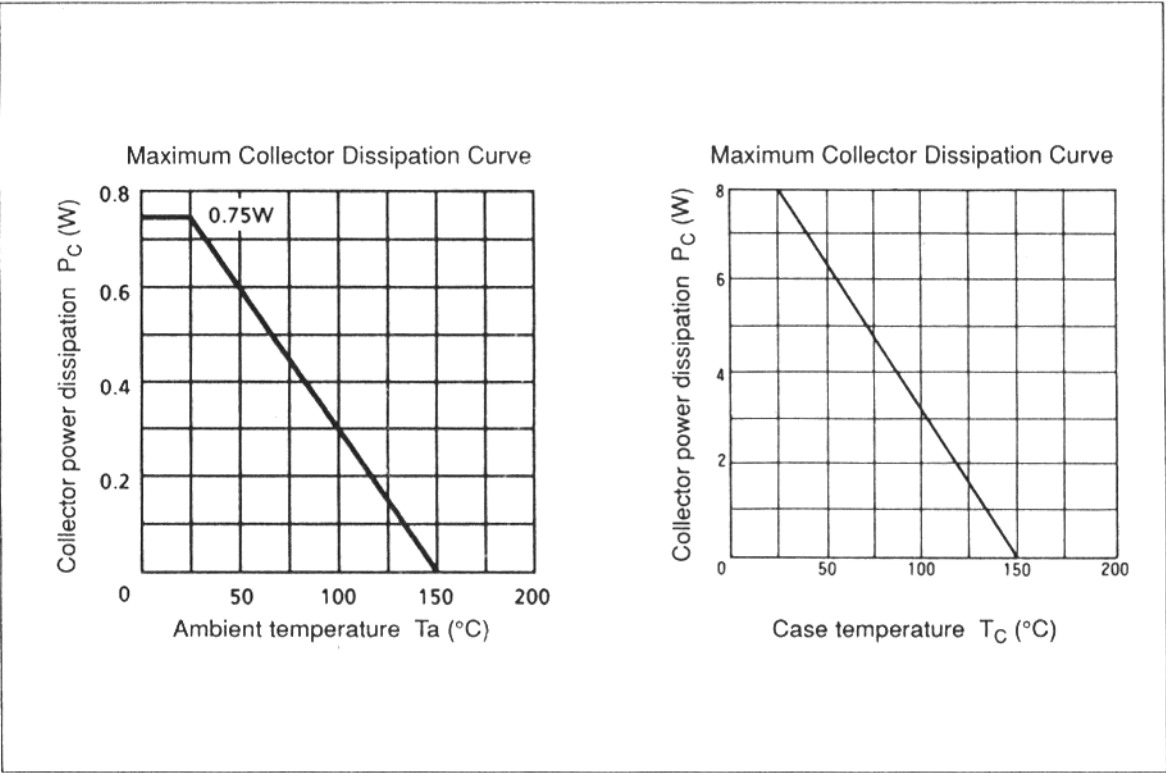
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Electrical Characteristics (Ta = 25°C) (cont)

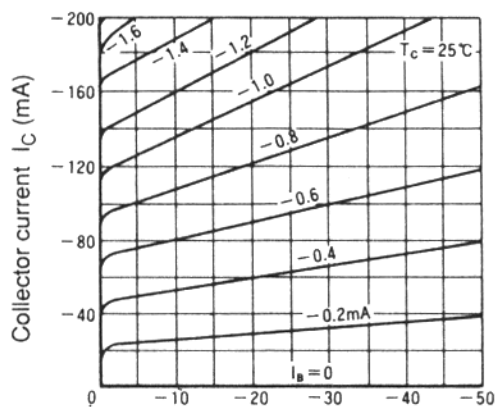
Item	Symbol	2SA743			2SA743A			Unit	Test condition
		Min	Typ	Max	Min	Typ	Max		
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	−0.75	−1.5	—	−0.75	−1.5	V	$I_C = -1\text{ A}, I_B = -0.1\text{ A}$
Gain bandwidth product	f_T	—	120	—	—	120	—	MHz	$V_{CE} = -4\text{ V}, I_C = -30\text{ mA}$

Note: 1. The 2SA743 and 2SA743A is grouped by h_{FE} as follows.

B	C
60 to 120	100 to 200

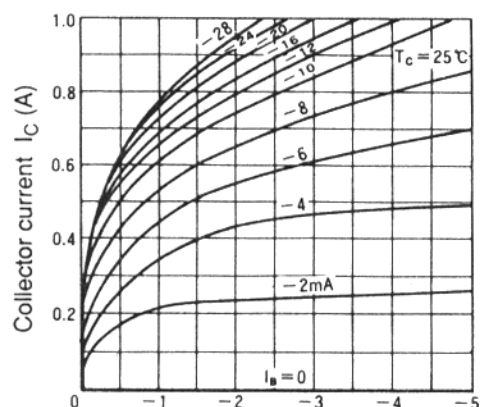


Typical Output Characteristics (1)



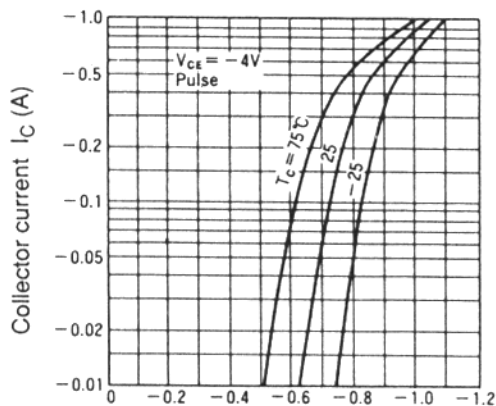
Collector to emitter voltage V_{CE} (V)

Typical Output Characteristics (2)



Collector to emitter voltage V_{CE} (V)

Typical Transfer Characteristics



Base to emitter voltage V_{BE} (V)

DC Current Transfer Ratio vs. Collector Current

