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# 2SA743, 2SA743A

Silicon PNP Epitaxial

# HITACHI

Apr. 13, 1998

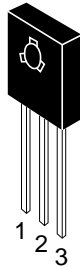
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## Application

Low frequency power amplifier complementary pair with 2SC1212 and 2SC1212A

## Outline

TO-18 MOD



- 1. Emitter
- 2. Collector
- 3. Base

## 2SA743, 2SA743A

### Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings		Unit
		2SA743	2SA743A	
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 +150	-55 to +150	°C

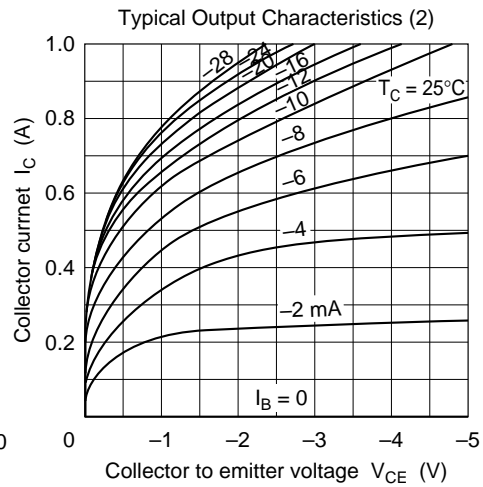
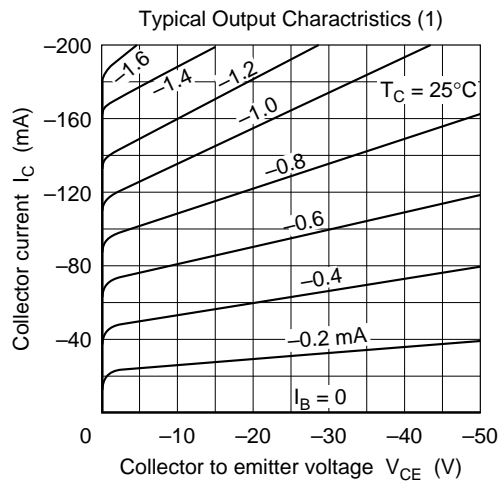
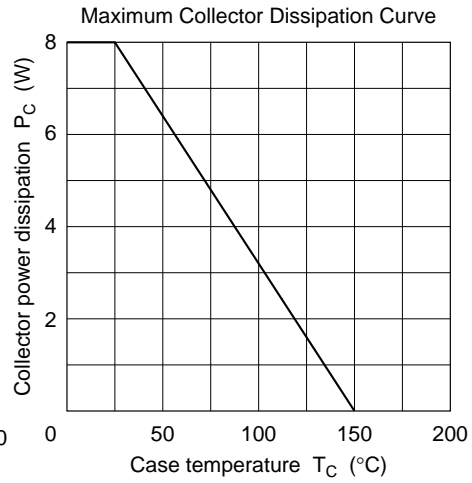
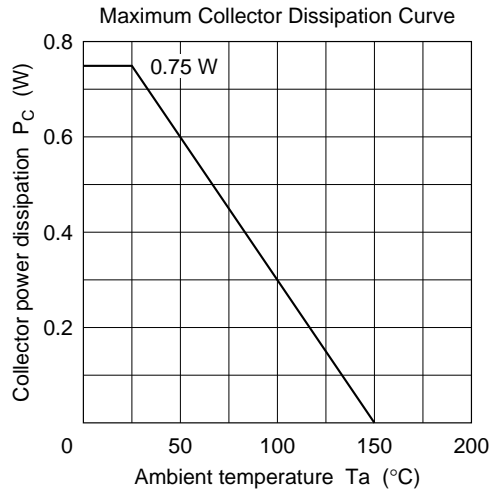
Note: 1. Value at  $T_C = 25^\circ\text{C}$ .

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

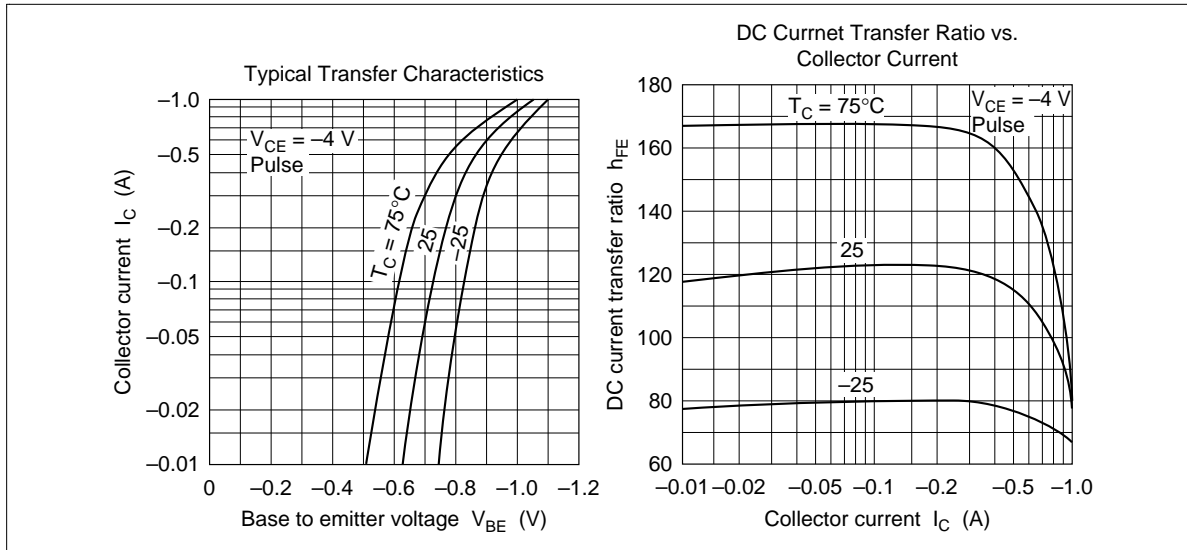
Item	Symbol	2SA743			2SA743A			Unit	Test conditions
		Min	Typ	Max	Min	Typ	Max		
Collector to base breakdown voltage	$V_{(BR)CBO}$	-50	—	—	-80	—	—	V	$I_C = -1\text{ mA}$ , $I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	-50	—	—	-80	—	—	V	$I_C = -10\text{ mA}$ , $R_{BE} = \infty$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	-4	—	—	-4	—	—	V	$I_E = -1\text{ mA}$ , $I_C = 0$
Collector cutoff current	$I_{CER}$	—	—	-20	—	—	—	$\mu\text{A}$	$V_{CE} = -50\text{ V}$ , $R_{BE} = 1\text{ k}\Omega$
	$I_{CER}$	—	—	—	—	—	-20		$V_{CE} = -80\text{ V}$ , $R_{BE} = 1\text{ k}\Omega$
DC current transfer ratio	$h_{FE}^{*1}$	60	120	200	60	120	200		$V_{CE} = -4\text{ V}$ , $I_C = -50\text{ mA}$
	$h_{FE}$	20	—	—	20	—	—		$V_{CE} = -4\text{ V}$ , $I_C = -1\text{ A}$ (pulse)
Base to emitter voltage	$V_{BE}$	—	-0.65	-1.0	—	-0.65	1.0	V	$V_{CE} = -4\text{ V}$ , $I_C = -50\text{ mA}$
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



## 2SA743, 2SA743A



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