

# 2SA743, 2SA743A

Silicon PNP Epitaxial

# HITACHI

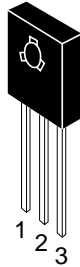
ADE-208-853 (Z)  
1st. Edition  
Sep. 2000

## Application

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

## Outline

TO-126 MOD



1. Emitter  
2. Collector  
3. Base

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

Item	Symbol	Ratings		Unit
		2SA743	2SA743A	
Collector to base voltage	$V_{\text{CBO}}$	-50	-80	V
Collector to emitter voltage	$V_{\text{CEO}}$	-50	-80	V
Emitter to base voltage	$V_{\text{EBO}}$	-4	-4	V
Collector current	$I_{\text{C}}$	-1	-1	A
Collector power dissipation	$P_{\text{C}}$	0.75	0.75	W
	$P_{\text{C}}^{*1}$	8	8	
Junction temperature	$T_{\text{j}}$	150	150	$^\circ\text{C}$
Storage temperature	$T_{\text{stg}}$	-55 to +150	-55 to +150	$^\circ\text{C}$

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

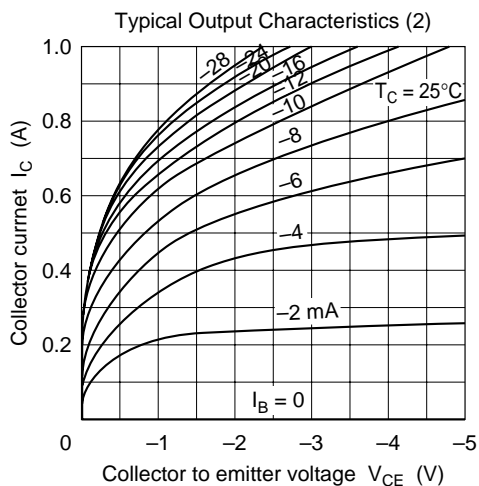
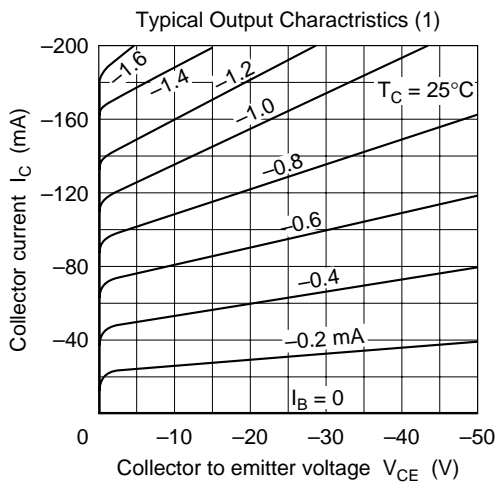
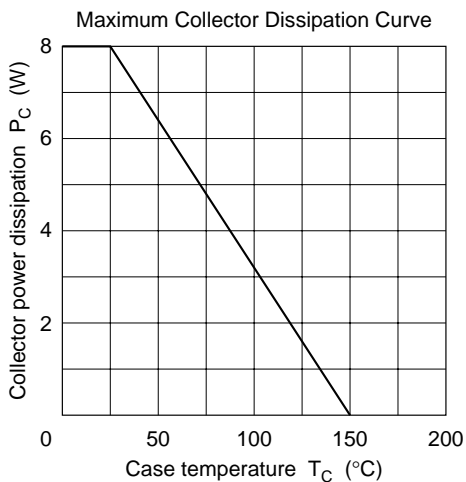
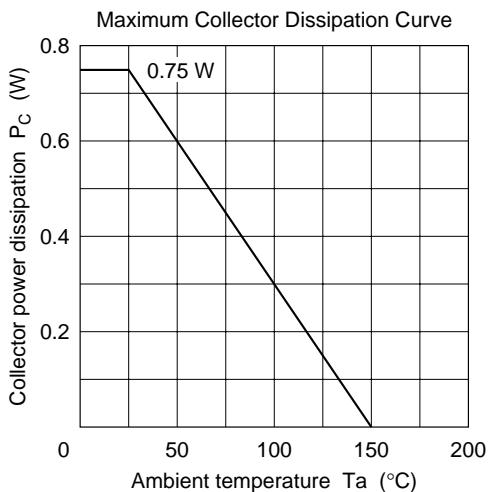
# 2SA743, 2SA743A

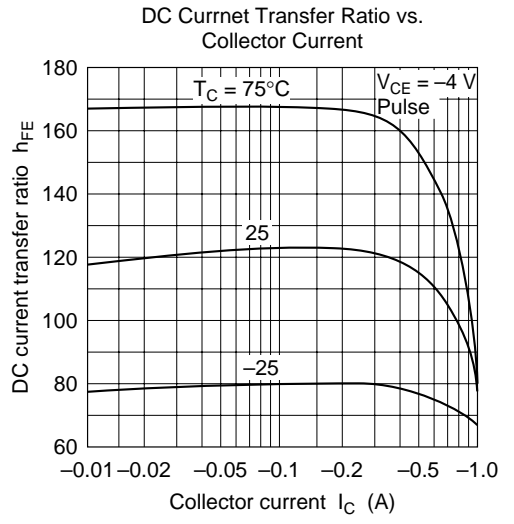
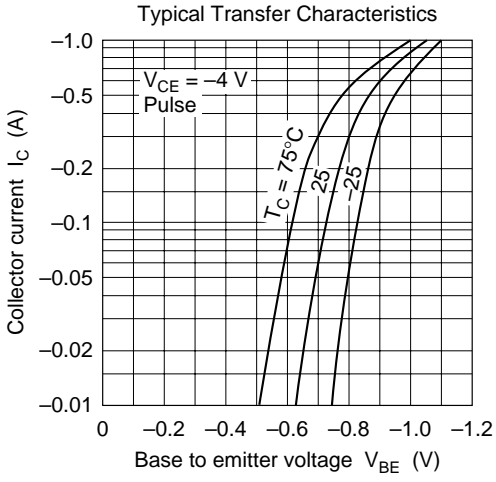
## Electrical Characteristics (Ta = 25°C)

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





**Package Dimensions**





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