



# 2SA1253/2SC3135

## High-h<sub>FE</sub>, AF Amp Applications

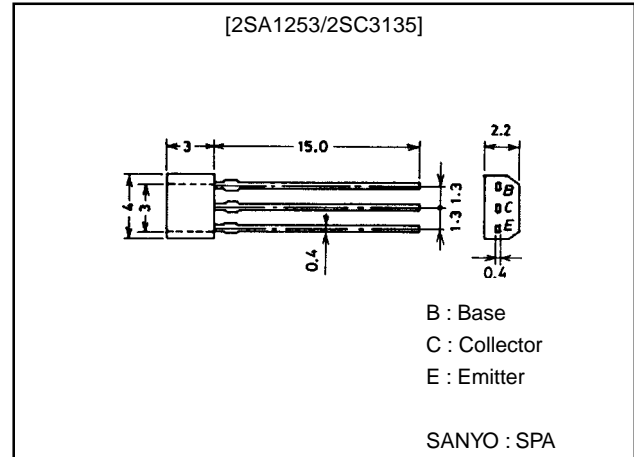
### Features

- High  $V_{EBO}$ .
- Wide ASO and high durability against breakdown.

### Package Dimensions

unit:mm

2033



() : 2SA1253

### Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	$V_{CBO}$		(-)60	V
Collector-to-Emitter Voltage	$V_{CEO}$		(-)50	V
Emitter-to-Base Voltage	$V_{EBO}$		(-)15	V
Collector Current	$I_C$		(-)200	mA
Collector Current (Pulse)	$I_{CP}$		(-)400	mA
Collector Dissipation	$P_C$		250	mW
Junction Temperature	$T_j$		150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$		-55 to +150	$^\circ\text{C}$

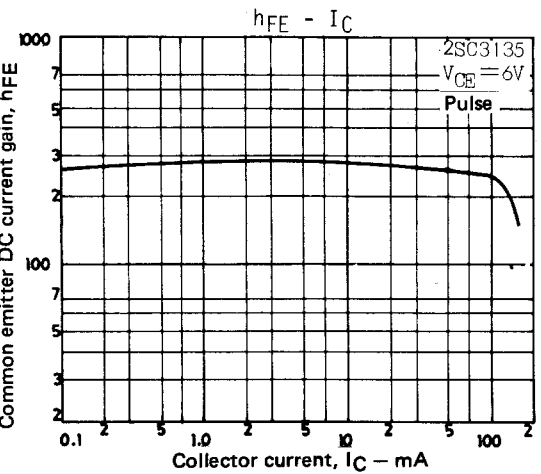
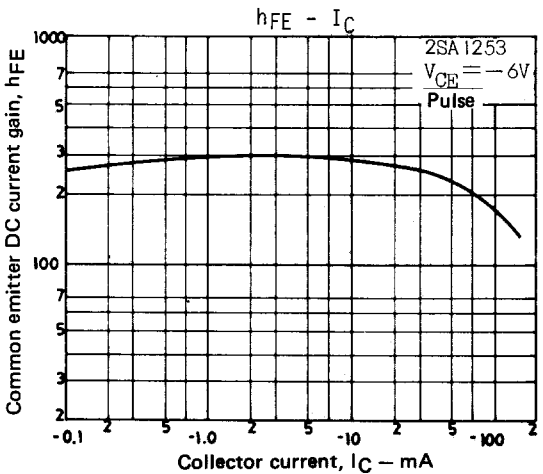
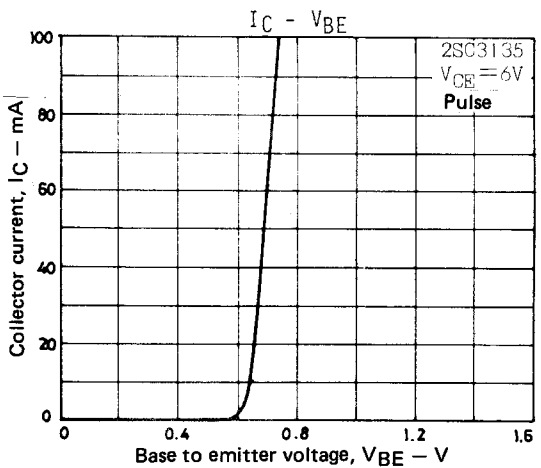
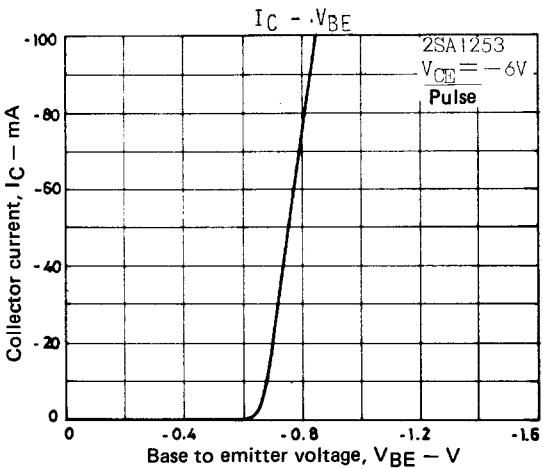
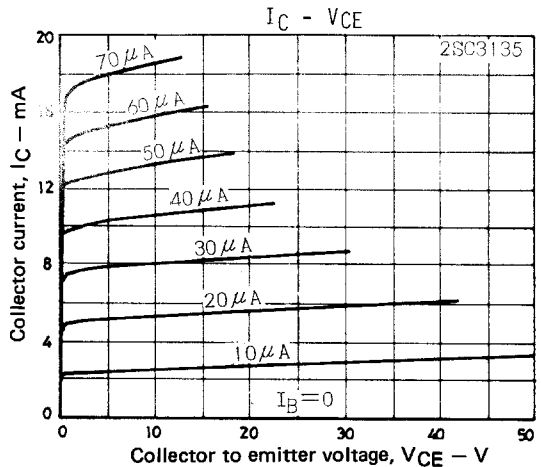
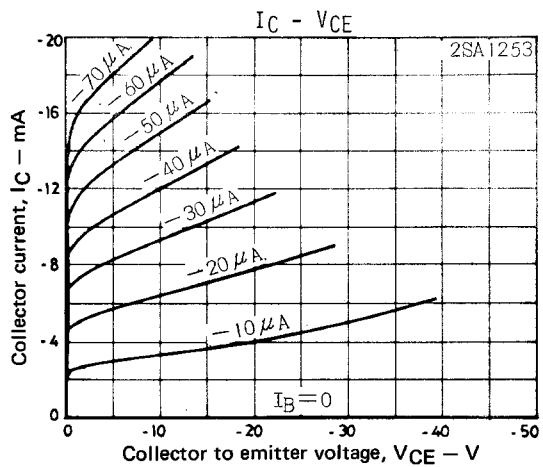
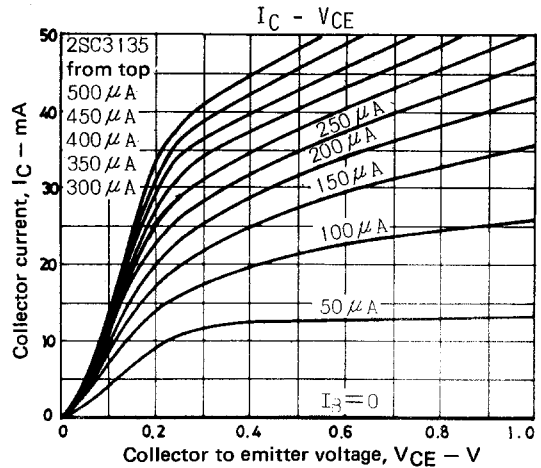
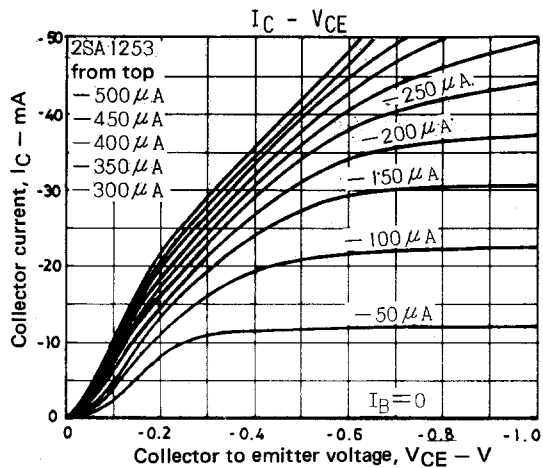
#### Electrical Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	$I_{CBO}$	$V_{CB}=(-)40\text{V}, I_E=0$			(-)0.1	$\mu\text{A}$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=(-)10\text{V}, I_C=0$			(-)0.1	$\mu\text{A}$
DC Current Gain	$h_{FE}$	$V_{CE}=(-)6\text{V}, I_C=(-)1\text{mA}$	100*		560*	
Gain-Bandwidth Product	$f_T$	$V_{CE}=(-)6\text{V}, I_C=(-)1\text{mA}$		100		MHz
Common Base Output Capacitance	$C_{ob}$	$V_{CB}=(-)6\text{V}, f=1\text{MHz}$		(3.8) 2.5		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)50\text{mA}, I_B=(-)5\text{mA}$		(-0.2) 0.15	(-)0.5	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=(-)10\mu\text{A}, I_E=0$	(-)60			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=(-)1\text{mA}, R_{BE}=\infty$	(-)50			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=(-)10\mu\text{A}, I_C=0$	(-)15			V

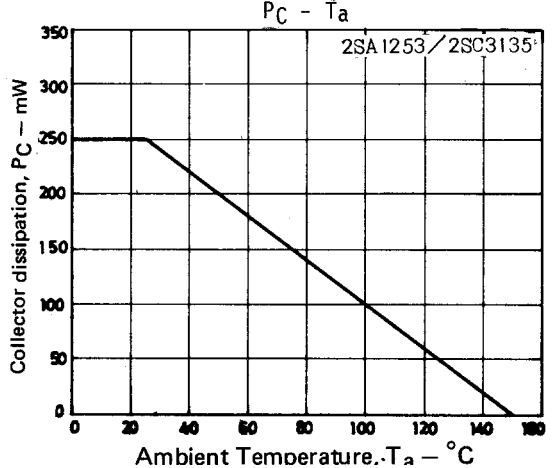
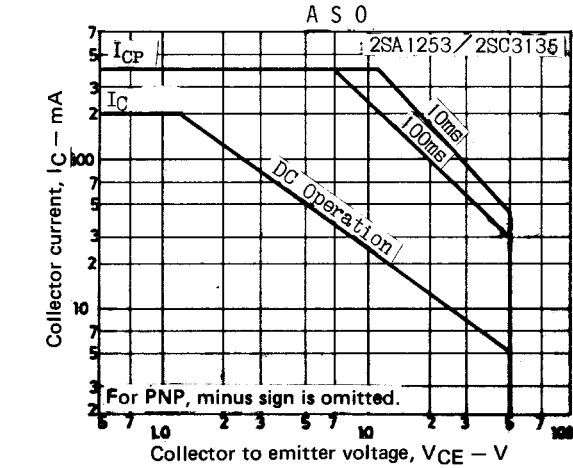
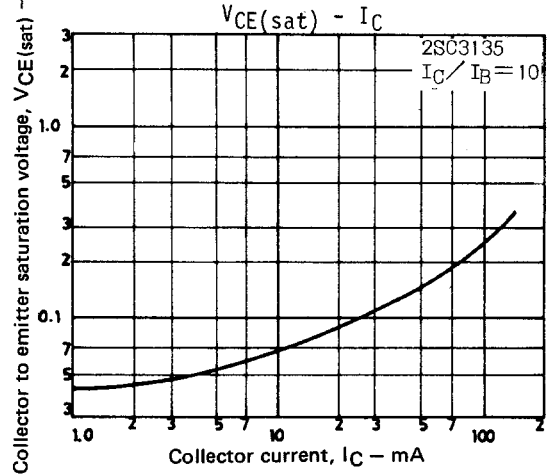
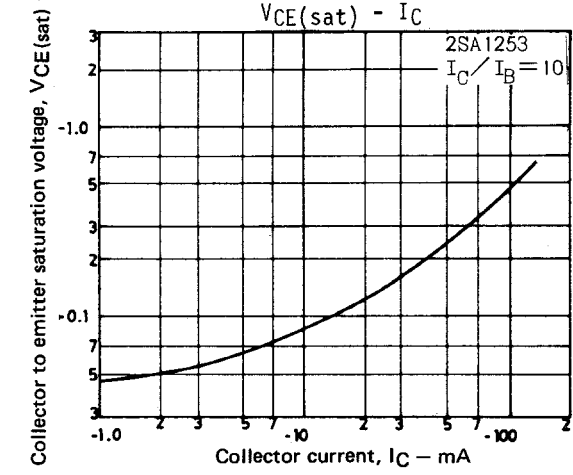
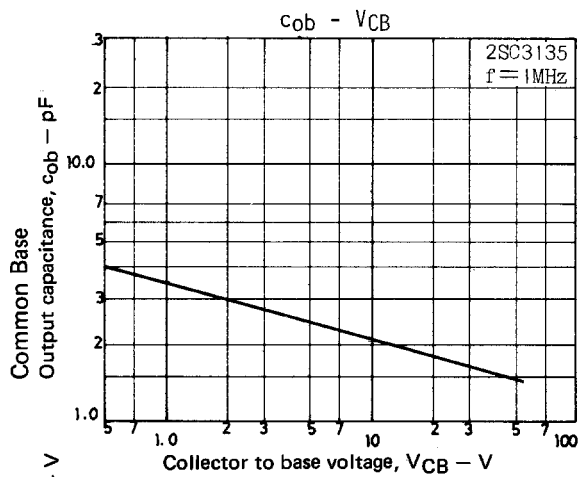
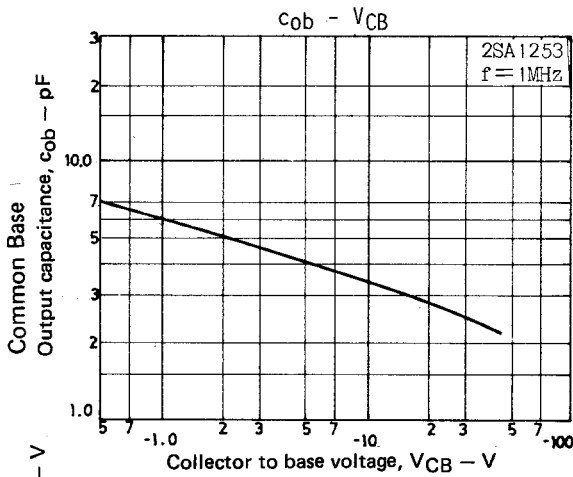
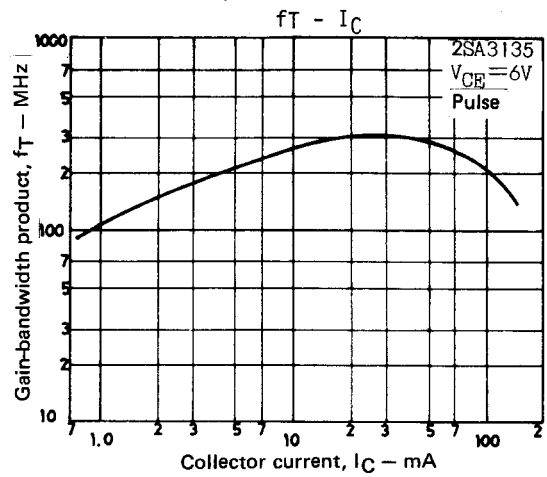
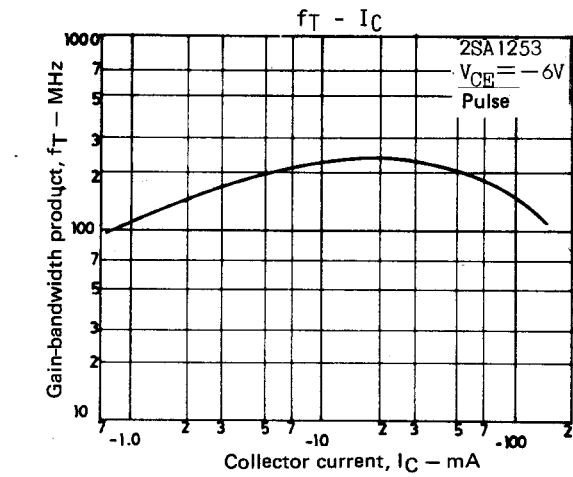
\* : The 2SA1253/2SC3135 are classified by 1mA  $h_{FE}$  as follows :

100	R	200	140	S	280	200	T	400	280	U	560
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2SA1253/2SC3135



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