



## 2SA1253/2SC3135

### High- $h_{FE}$ , AF Amp Applications

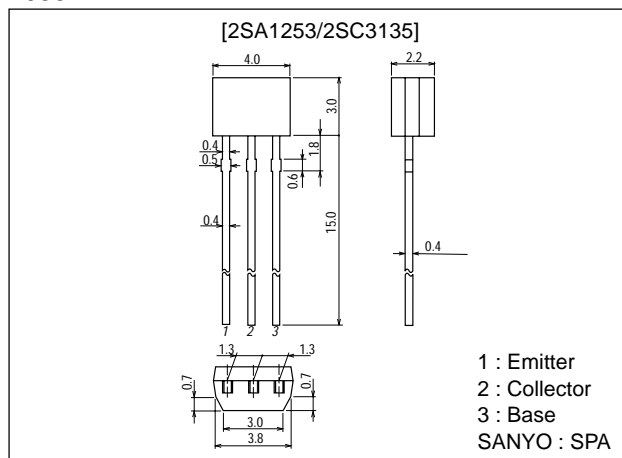
#### Features

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

#### Package Dimensions

unit:mm

2033A



() : 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

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

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Rank	R	S	T	U
$h_{FE}$	100 to 200	140 to 280	200 to 400	280 to 560

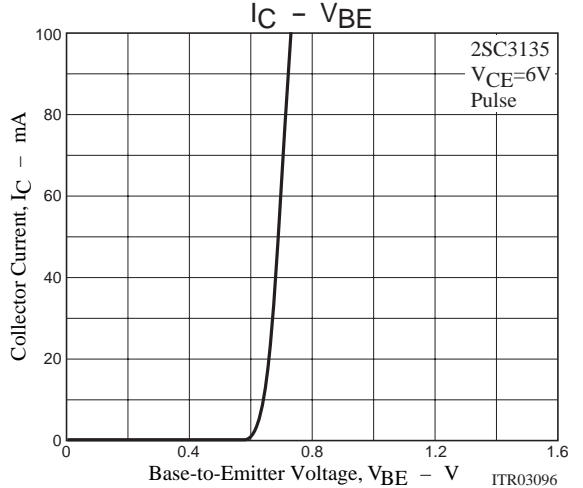
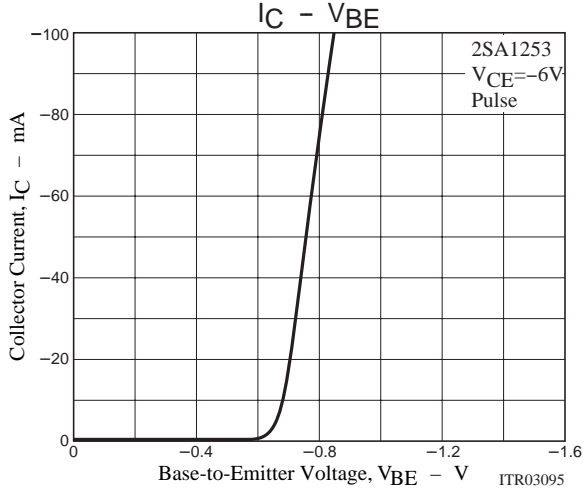
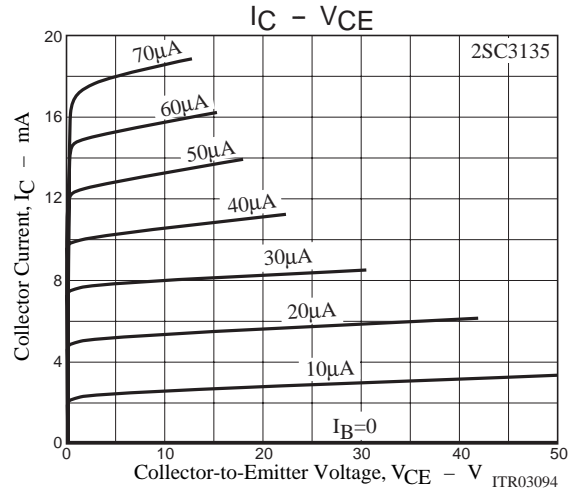
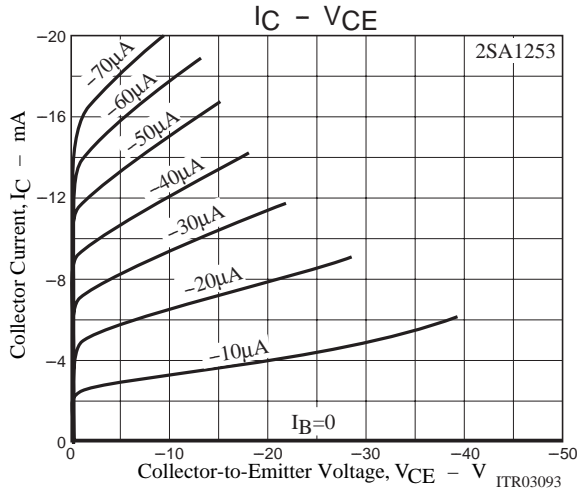
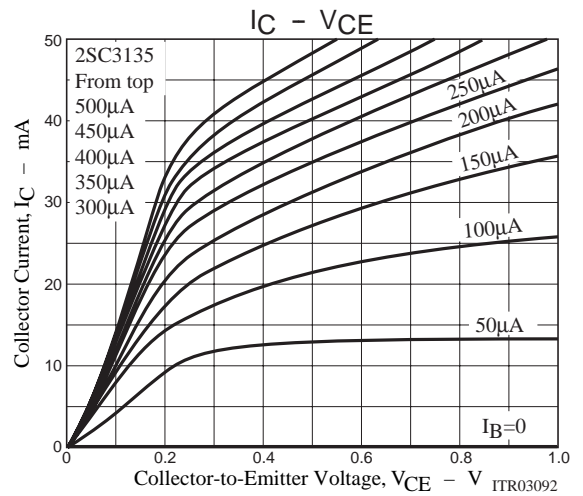
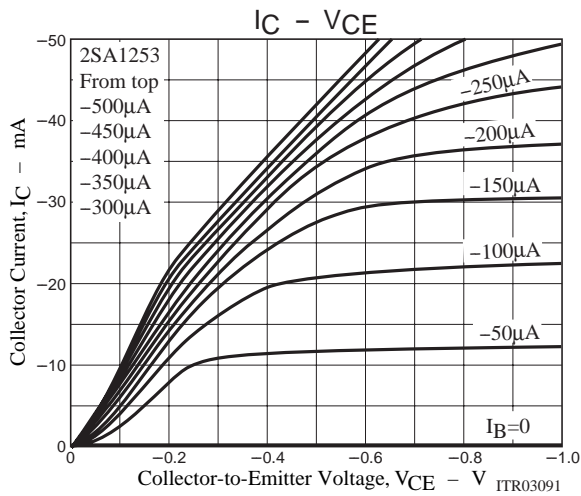
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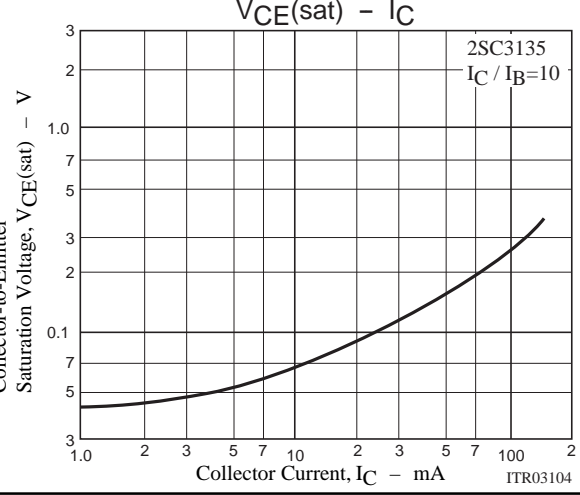
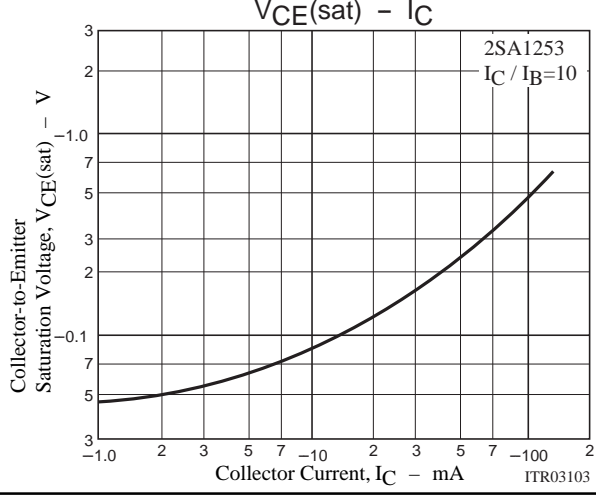
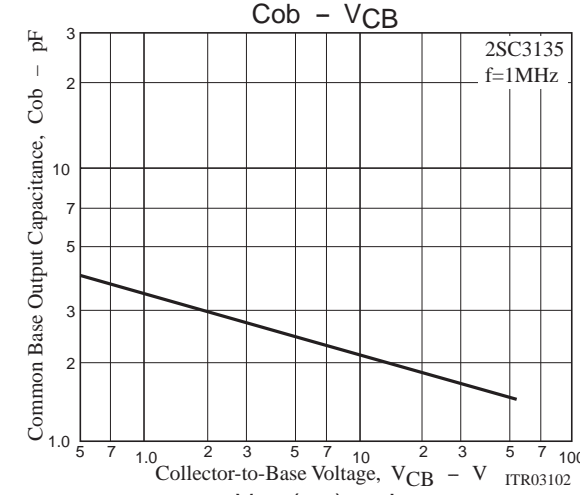
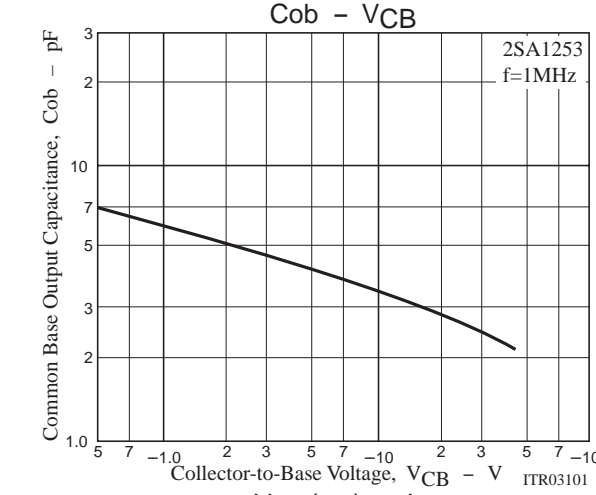
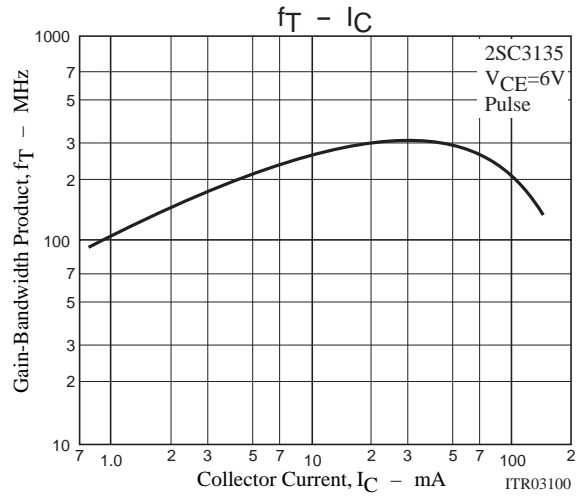
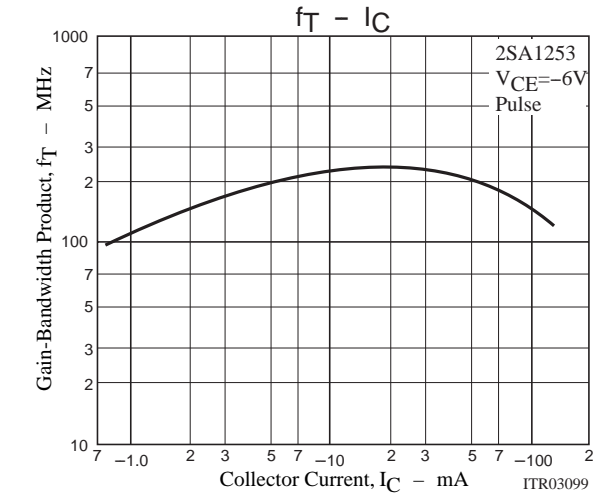
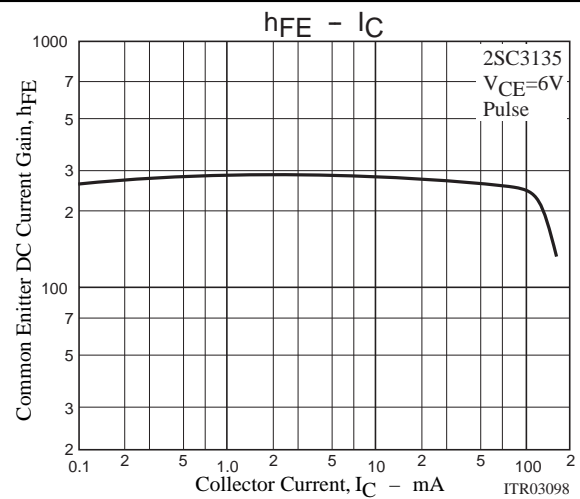
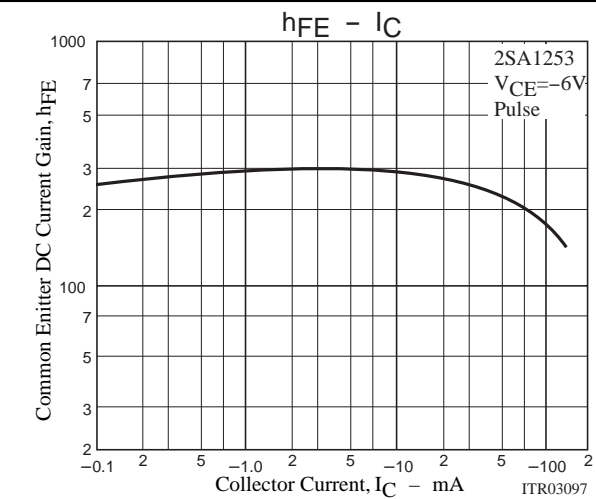
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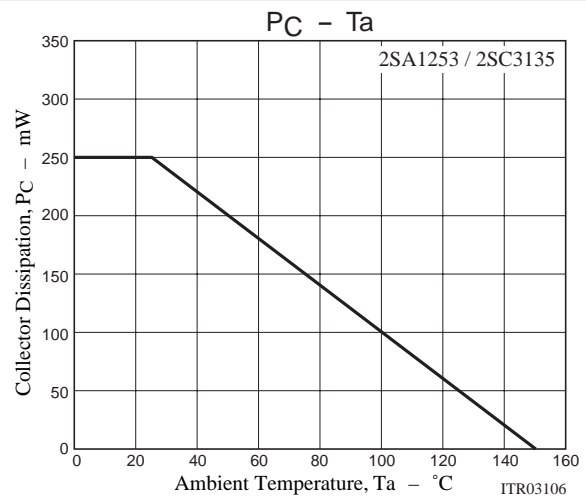
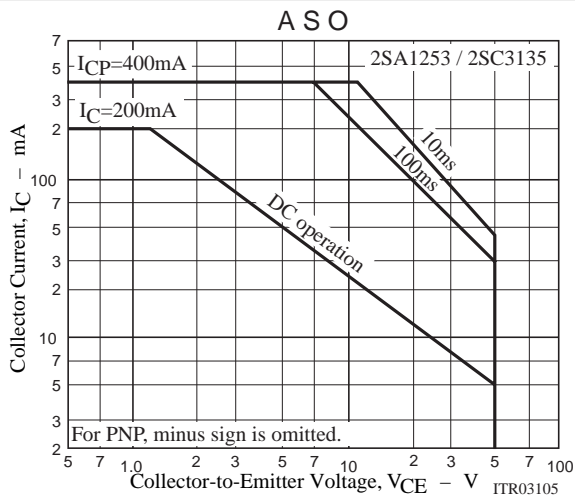
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)50\text{mA}$ , $I_B=(-)5\text{mA}$		(-0.2) 0.15	(-)0.5	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=(-)10\mu\text{A}$ , $I_E=0$	(-)60			V
Collector-to-Emitter Breakdown 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



2SA1253/2SC3135



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