

# 2SC2591, 2SC2592

## Silicon NPN Epitaxial Planar Type

AF Driver, High Power Amplifier  
Complementary Pair with 2SA1111, 2SA1112

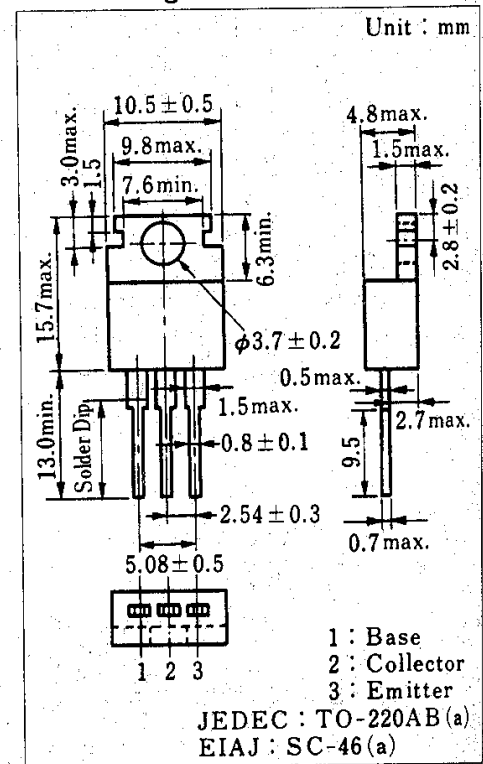
### ■ Features

- Very good linearity of DC current gain ( $h_{FE}$ )
- High transition frequency ( $f_T$ )
- Optimum for the driver of 60~100W in complementary pair with 2SA1111 and 2SA1112

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

Item	Symbol	Value	Unit
Collector-base voltage	2SC2591	150	V
	2SC2592	180	
Collector-emitter voltage	2SC2591	150	V
	2SC2592	180	
Emitter-base voltage	$V_{EBO}$	5	V
Peak collector current	$I_{CP}$	1.5	A
Collector current	$I_C$	1	A
Collector power dissipation ( $T_c=25^\circ\text{C}$ )	$P_C$	20	W
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 ~ +150	$^\circ\text{C}$

### ■ Package Dimensions



### ■ Electrical Characteristics ( $T_c=25^\circ\text{C}$ )

Item	Symbol	Condition	min.	typ.	max.	Unit
Collector-base voltage	2SC2591	$I_C=100\ \mu\text{A}, I_B=0$	150			V
	2SC2592		180			
Emitter-base voltage	$V_{EBO}$	$I_E=10\ \mu\text{A}, I_C=0$	5			V
DC current gain	$h_{FE1}^*$	$V_{CE}=10\ \text{V}, I_C=150\ \text{mA}$	90	160	330	
	$h_{FE2}$	$V_{CE}=5\ \text{V}, I_C=500\ \text{mA}$	50	100		
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=500\ \text{mA}, I_B=50\ \text{mA}$		0.5	2	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=500\ \text{mA}, I_B=50\ \text{mA}$		1	2	V
Transition frequency	$f_T$	$V_{CB}=10\ \text{V}, I_E=-50\ \text{mA}, f=200\ \text{MHz}$		200		MHz
Collector output capacitance	$C_{ob}$	$V_{CB}=10\ \text{V}, I_E=0, f=1\ \text{MHz}$		20	30	pF

### \* $h_{FE1}$ Classifications

Class	Q	R	S
$h_{FE1}$	90 ~ 155	130 ~ 220	185 ~ 330