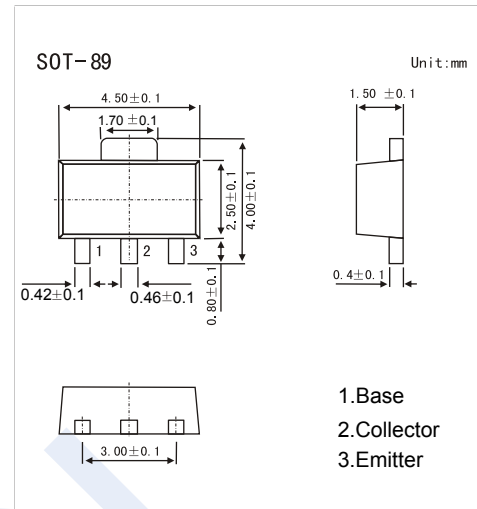


## NPN Transistors

### 2SD1280-HF

#### ■ Features

- Satisfactory operation performances at high efficiency with the low-voltage power supply.
- Low collector to emitter saturation voltage  $V_{CE(sat)}$
- Complementary to 2SB956-HF
- Pb-Free Package May be Available. The G-Suffix Denotes a Pb-Free Lead Finish



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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	$V_{CB0}$	20	V
Collector - Emitter Voltage	$V_{CE0}$	20	
Emitter - Base Voltage	$V_{EB0}$	5	
Collector Current - Continuous	$I_C$	1	A
Collector Current - Pulse	$I_{CP}$	2	
Collector Power Dissipation	$P_C$	1	W
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55 to 150	

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{CB0}$	$I_C = 100 \mu\text{A}, I_E = 0$	20			V
Collector-emitter breakdown voltage	$V_{CE0}$	$I_C = 1 \text{ mA}, I_B = 0$	20			
Emitter - base breakdown voltage	$V_{EB0}$	$I_E = 100 \mu\text{A}, I_C = 0$	5			
Collector-base cut-off current	$I_{CB0}$	$V_{CB} = 20 \text{ V}, I_E = 0$			1	$\mu\text{A}$
Emitter cut-off current	$I_{EB0}$	$V_{EB} = 5 \text{ V}, I_C = 0$			1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 1 \text{ A}, I_B = 50 \text{ mA}$			0.5	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = 500 \text{ mA}, I_B = 50 \text{ mA}$			1.2	
DC current gain	$h_{FE(1)}$	$V_{CE} = 2 \text{ V}, I_C = 500 \text{ mA}$	90	150	360	
	$h_{FE(2)}$	$V_{CE} = 2 \text{ V}, I_C = 1.5 \text{ A}$	50	100		
Collector output capacitance	$C_{ob}$	$V_{CB} = 6 \text{ V}, I_E = 0, f = 1 \text{ MHz}$		18		pF
Transition frequency	$f_T$	$V_{CE} = 6 \text{ V}, I_E = -50 \text{ mA}, f = 200 \text{ MHz}$		150		MHz

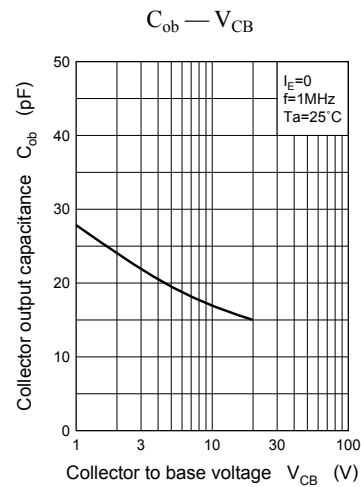
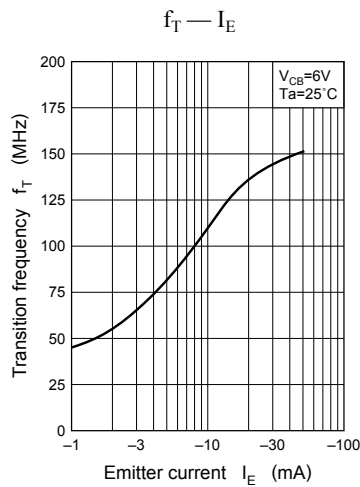
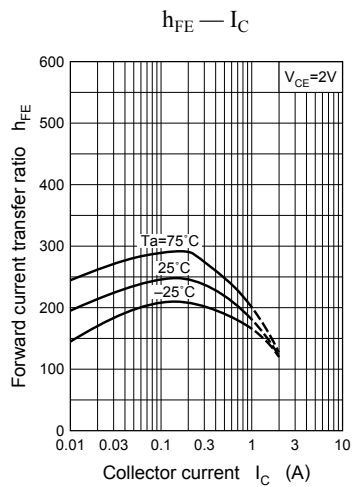
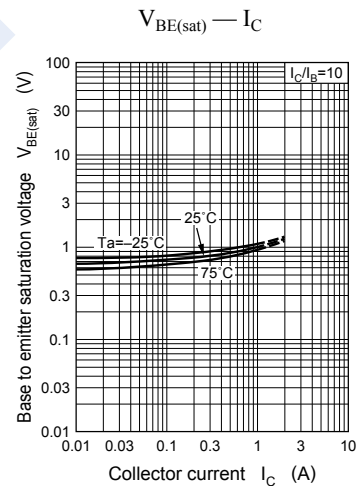
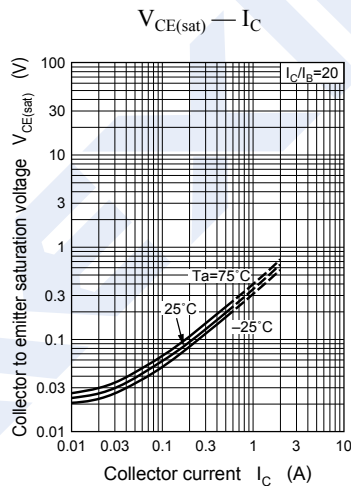
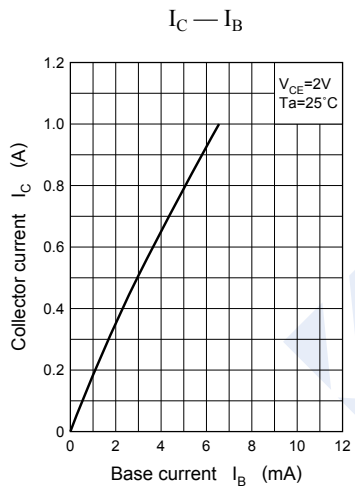
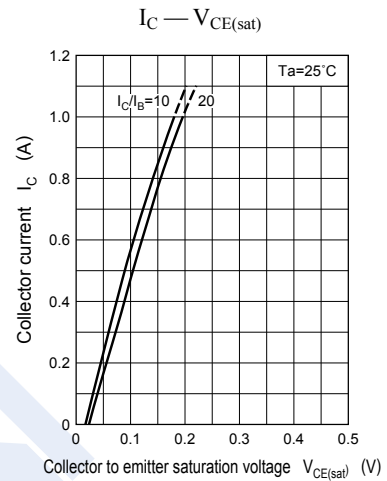
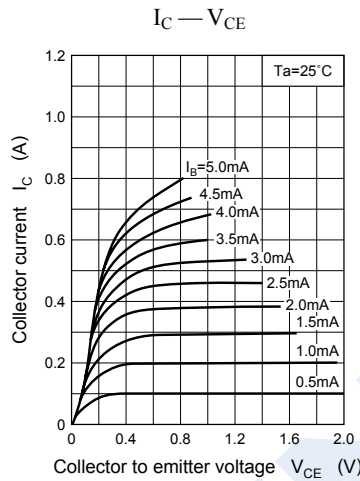
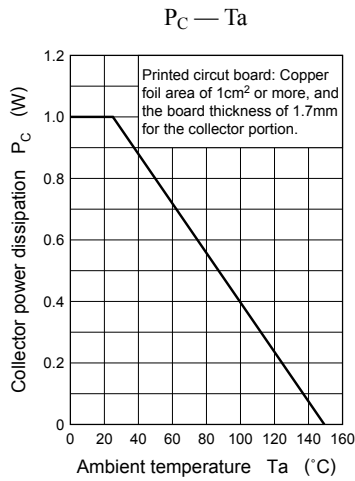
#### ■ Classification of $h_{FE(1)}$

Type	2SD1280-Q-HF	2SD1280-R-HF	2SD1280-S-HF	2SD1280-T-HF
Range	90-155	130-210	180-280	250-360
Marking	RQ <sub>F</sub>	RR <sub>F</sub>	RS <sub>F</sub>	RT <sub>F</sub>

# NPN Transistors

## 2SD1280-HF

### Typical Characteristics



## NPN Transistors

## 2SD1280-HF

## ■ Typical Characteristics

