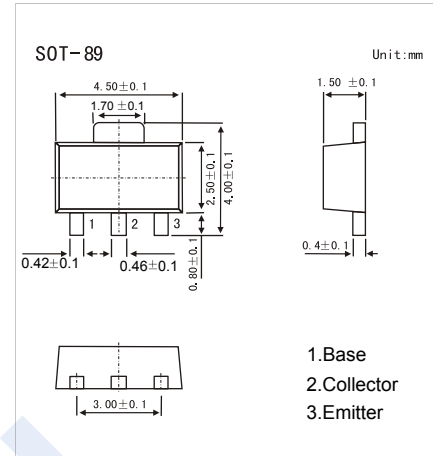


NPN Transistors

2SD1619

■ Features

- Very small size making it easy to provide highdensity, small-sized hybrid IC's.
- Complementary to 2SB1119

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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CB0}	25	V
Collector - Emitter Voltage	V_{CE0}	25	
Emitter - Base Voltage	V_{EB0}	5	
Collector Current - Continuous	I_C	1	A
Collector Current - Pulse	I_{CP}	2	
Collector Power Dissipation (Note.1)	P_C	0.5	W
		1.3	
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to 150	

Note.1: Mounted on ceramic board (250mm² × 0.8mm)

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CB0}	$I_C = 100 \mu\text{A}$, $I_E = 0$	25			V
Collector- emitter breakdown voltage	V_{CE0}	$I_C = 1 \text{ mA}$, $R_{BE} = \infty$	25			
Emitter - base breakdown voltage	V_{EB0}	$I_E = 100 \mu\text{A}$, $I_C = 0$	5			
Collector-base cut-off current	I_{CB0}	$V_{CB} = 20 \text{ V}$, $I_E = 0$			0.1	μA
Emitter cut-off current	I_{EB0}	$V_{EB} = 4 \text{ V}$, $I_C = 0$			0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 500 \text{ mA}$, $I_B = 50 \text{ mA}$		0.1	0.3	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = 500 \text{ mA}$, $I_B = 50 \text{ mA}$		0.85	1.2	
DC current gain	h_{FE}	$V_{CE} = 2 \text{ V}$, $I_C = 50 \text{ mA}$	100		560	
		$V_{CE} = 2 \text{ V}$, $I_C = 1 \text{ A}$	40			
Collector output capacitance	C_{ob}	$V_{CB} = 10 \text{ V}$, $I_E = 0$, $f = 1 \text{ MHz}$		15		pF
Transition frequency	f_T	$V_{CE} = 10 \text{ V}$, $I_C = 50 \text{ mA}$		180		MHz

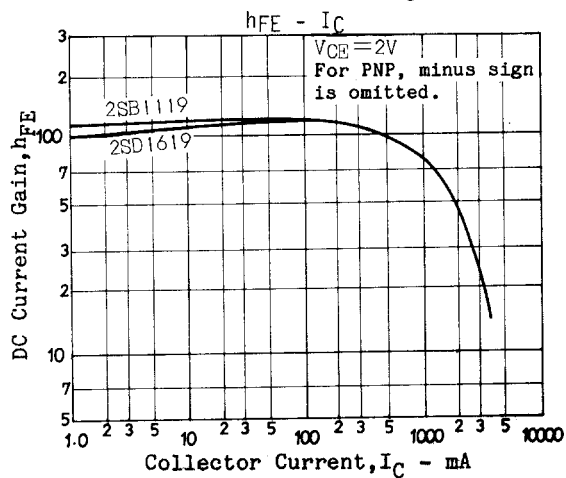
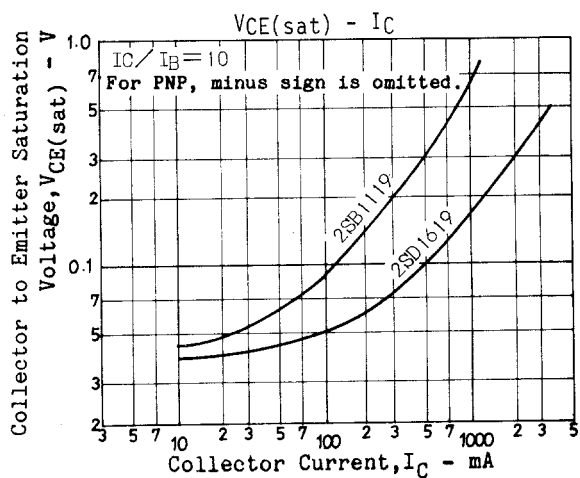
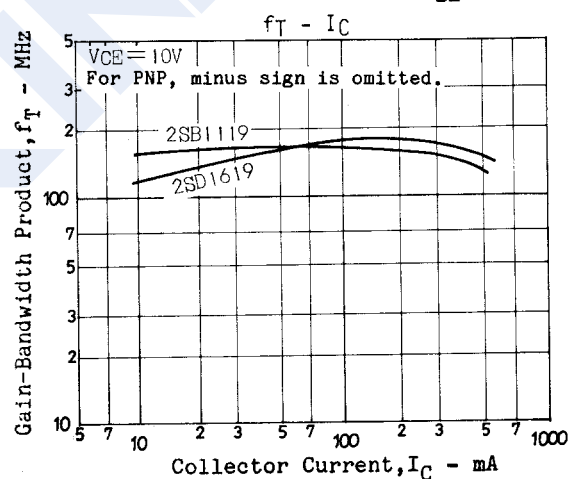
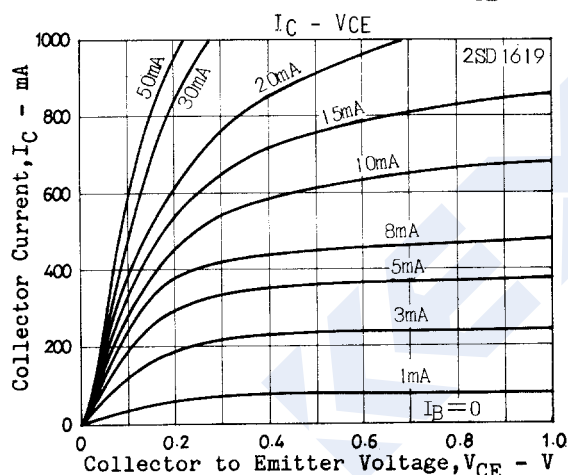
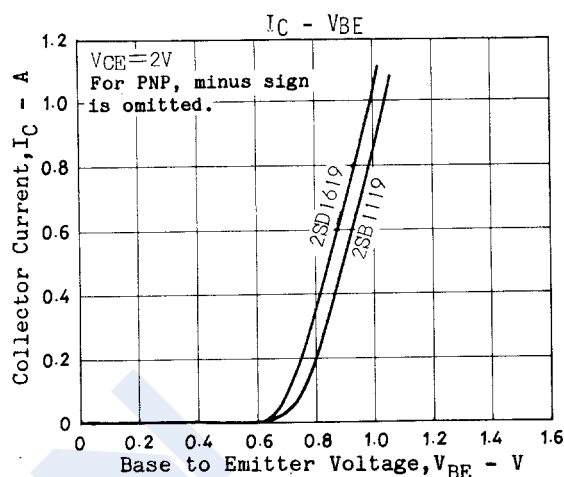
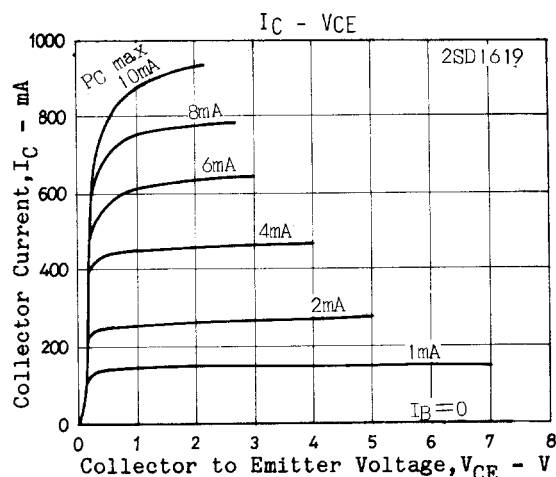
■ Classification of $h_{FE}(1)$

Type	2SD1619-R	2SD1619-S	2SD1619-T	2SD1619-U
Range	100-200	140-280	200-400	280-560
Marking	DB R*	DB S*	DB T*	DB U*

NPN Transistors

2SD1619

■ Typical Characteristics



NPN Transistors

2SD1619

■ Typical Characteristics

