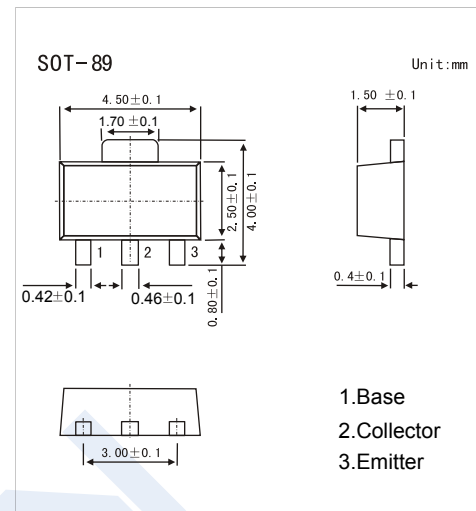


NPN Transistors

2SD1664

■ Features

- Low $V_{CE(sat)}$
- Compliments to 2SB1132

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

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	40	V
Collector-Emitter Voltage	V_{CEO}	32	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current (DC) $P_w=20\text{ms, duty}=1/2$	I_C	1	A
		2	A
Collector Power Dissipation	P_C *	0.5	W
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature Range	T_{stg}	-55 to +150	$^\circ\text{C}$

* mounted on a 40x40x0.7mm ceramic board.

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

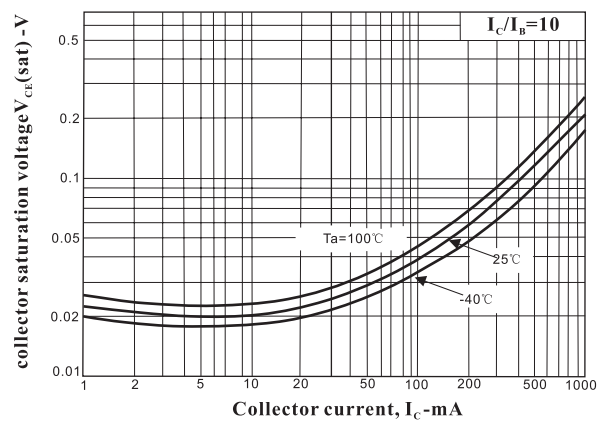
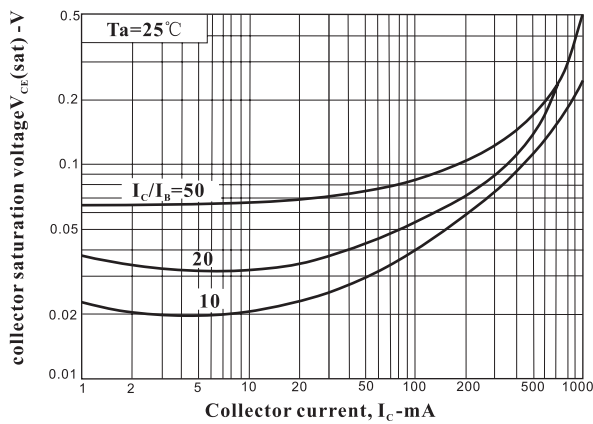
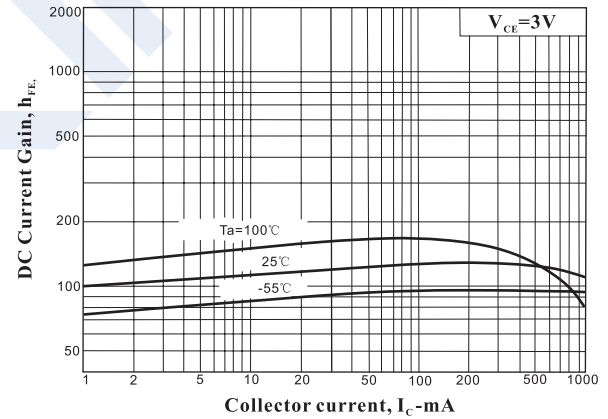
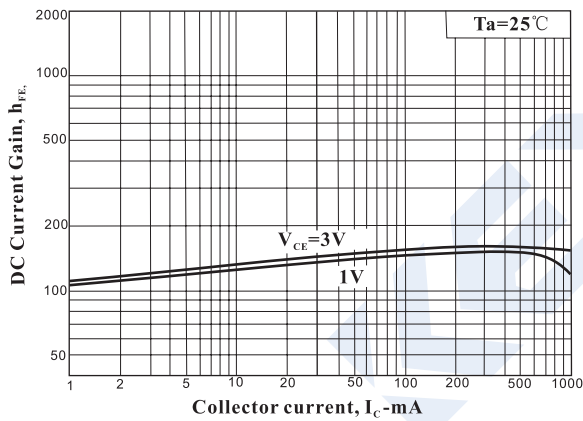
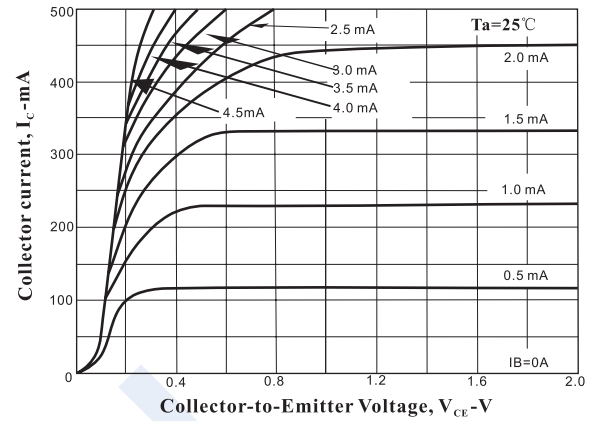
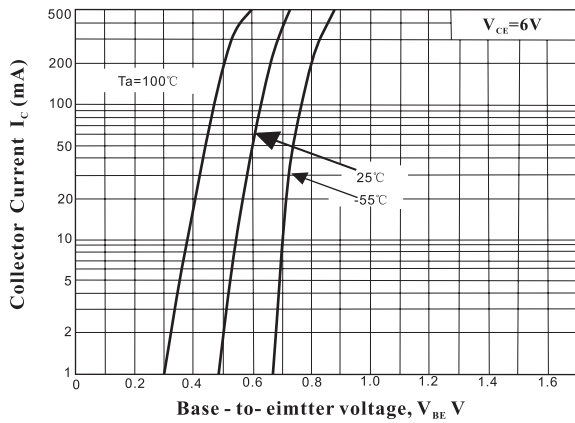
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	$I_C = 50\text{ }\mu\text{A}, I_E = 0$	40			V
Collector- emitter breakdown voltage	V_{CEO}	$I_C = 1\text{ mA}, I_B = 0$	32			
Emitter - base breakdown voltage	V_{EBO}	$I_E = 50\text{ }\mu\text{A}$	5			
Collector-base cut-off current	I_{CBO}	$V_{CB} = 20\text{ V}, I_E = 0$			0.5	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 4\text{ V}, I_C = 0$			0.5	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 500\text{ mA}, I_B = 50\text{ mA}$		0.15	0.4	V
DC current gain	h_{FE}	$V_{CE} = 3\text{ V}, I_C = 100\text{ mA}$	82		390	
Collector output capacitance	C_{ob}	$V_{CB} = 10\text{ V}, I_E = 0, f = 1\text{ MHz}$		15		pF
Transition frequency	f_T	$V_{CE} = 5\text{ V}, I_C = -50\text{ mA}, f = 100\text{ MHz}$		150		MHz

■ h_{FE} Classification

Marking	DA*		
Rank	P	Q	R
h_{FE}	82 ~ 180	120 ~ 270	180 ~ 390

2SD1664

■ Typical Characteristics



2SD1664

■ Typical Characteristics

