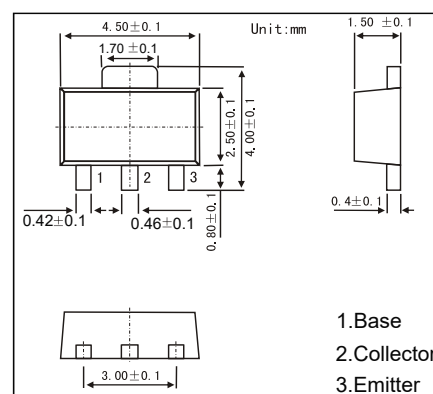


**SOT-89 Plastic-Encapsulate Transistors**
**FEATURES**

- Low collector to emitter saturation voltage
- Large current capacity and wide ASO
- Fast switching speed.
- Transistors NPN

**MECHANICAL DATA**

- Case style:SOT-89 molded plastic
- Mounting position:any


**MAXIMUM RATINGS AND CHARACTERISTICS**

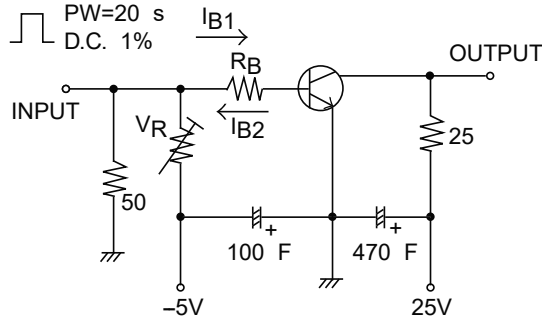
@ 25°C Ambient Temperature (unless otherwise noted)

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	$V_{CB0}$	60	V
Collector - Emitter Voltage	$V_{CEO}$	50	
Emitter - Base Voltage	$V_{EBO}$	6	
Collector Current - Continuous	$I_C$	3	A
Collector Current - Pulse	$I_{CP}$	6	
Collector Power Dissipation (Note.1)	$P_C$	0.5	W
		1.5	
Junction Temperature	$T_J$	150	°C
Storage Temperature Range	$T_{stg}$	-55 to +150	

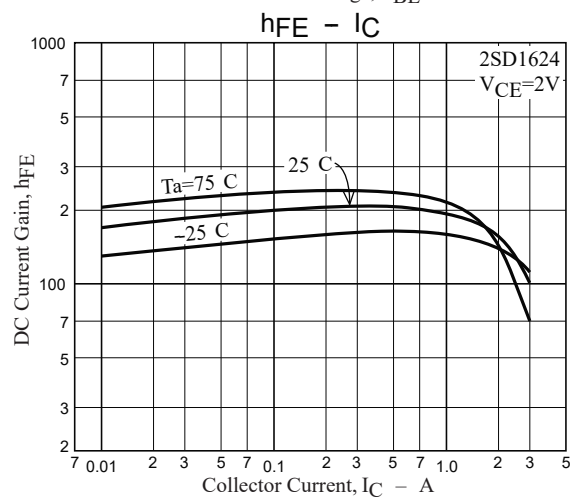
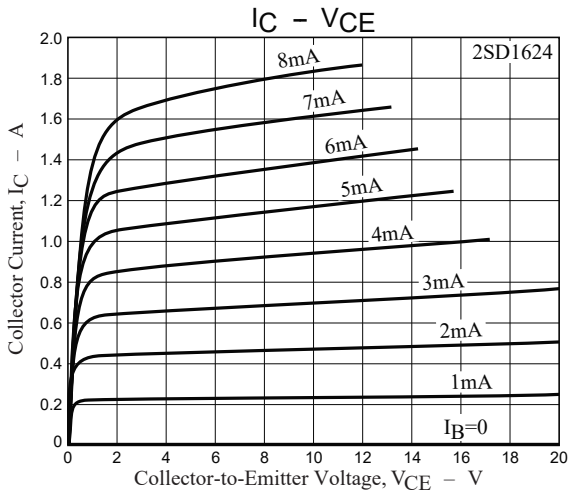
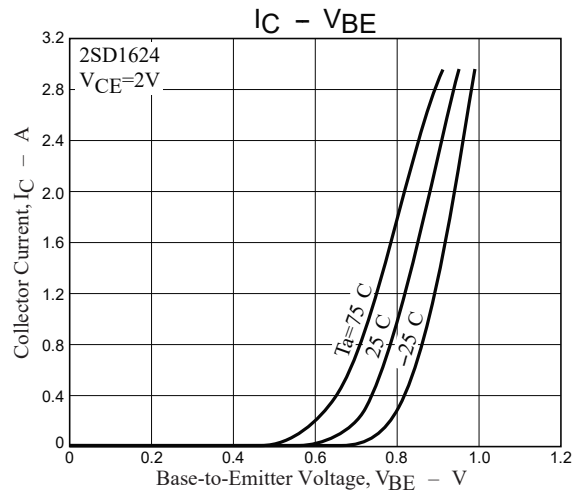
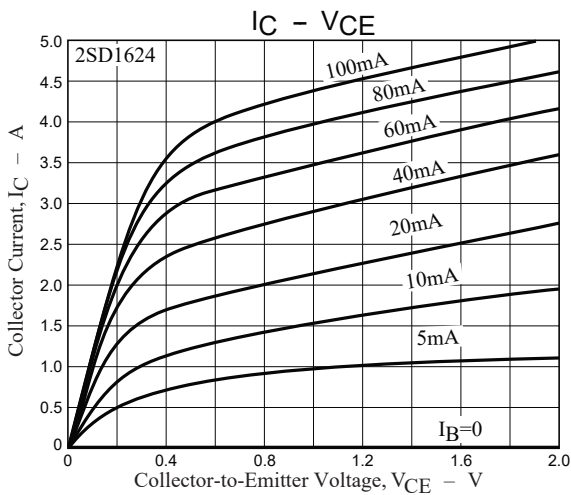
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	$V_{CB0}$	$I_C = 100 \mu A, I_E = 0$	60			V
Collector- emitter breakdown voltage	$V_{CEO}$	$I_C = 1 \text{ mA}, R_{BE} = \infty$	50			
Emitter - base breakdown voltage	$V_{EBO}$	$I_E = 100 \mu A, I_C = 0$	6			
Collector-base cut-off current	$I_{CBO}$	$V_{CB} = 50 \text{ V}, I_E = 0$			1	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = 4 \text{ V}, I_C = 0$			1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 2 \text{ A}, I_B = 100 \text{ mA}$		0.19	0.5	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = 2 \text{ A}, I_B = 100 \text{ mA}$			1.2	
DC current gain	$h_{FE}$	$V_{CE} = 2 \text{ V}, I_C = 100 \text{ mA}$	100		560	
		$V_{CE} = 2 \text{ V}, I_C = 3 \text{ A}$	35			
Turn-ON Time	$t_{on}$	See specified Test Circuit		70		ns
Storage Time	$t_{stg}$			650		
Fall Time	$t_f$			35		
Collector output capacitance	$C_{ob}$	$V_{CB} = 10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$		25		pF
Transition frequency	$f_T$	$V_{CE} = 10 \text{ V}, I_C = 50 \text{ mA}$		150		MHz

RATINGS AND CHARACTERISTIC CURVES

Switching Time Test Circuit



$10I_{B1} = -10I_{B2} = I_C = 1A$   
 (For PNP, the polarity is reversed.)



## RATINGS AND CHARACTERISTIC CURVES

