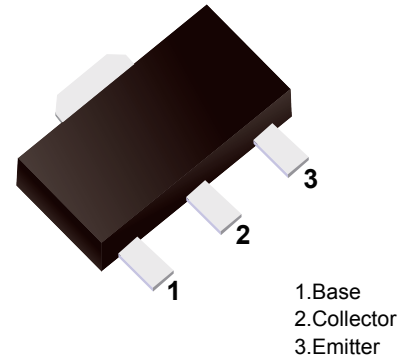


■ NPN Transistors

■ Features

- Low collector-to-emitter saturation voltage.
- Large current capacity and wide ASO.
- Fast switching speed.
- Complementary to 2SB1124



■ Simplified outline(SOT-89)

■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V _{CB0}	60	V
Collector - Emitter Voltage	V _{CE0}	50	
Emitter - Base Voltage	V _{EB0}	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	

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

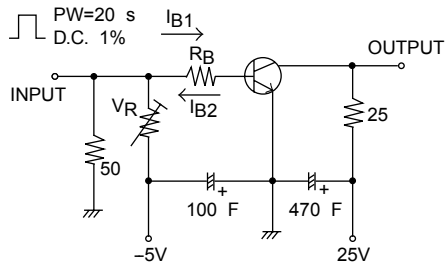
■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V _{CB0}	I _c = 100 uA, I _E = 0	60			V
Collector- emitter breakdown voltage	V _{CE0}	I _c = 1 mA, R _{BE} = ∞	50			
Emitter - base breakdown voltage	V _{EB0}	I _E = 100 uA, I _c = 0	6			
Collector-base cut-off current	I _{CB0}	V _{CB} = 50 V, I _E = 0			1	uA
Emitter cut-off current	I _{EB0}	V _{EB} = 4V, I _c =0			1	
Collector-emitter saturation voltage	V _{CE(sat)}	I _c =2 A, I _B =100 mA		0.19	0.5	V
Base - emitter saturation voltage	V _{BE(sat)}	I _c =2 A, I _B =100 mA			1.2	
DC current gain	h _{FE}	V _{CE} = 2V, I _c = 100 mA	100		560	
		V _{CE} = 2V, I _c = 3 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} = 10V, I _E = 0, f=1MHz		25		pF
Transition frequency	f _T	V _{CE} = 10V, I _c = 50mA		150		MHz

■ Classification of h_{FE}(1)

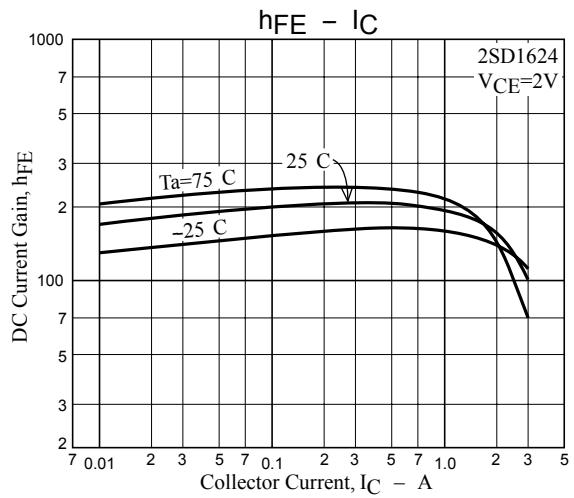
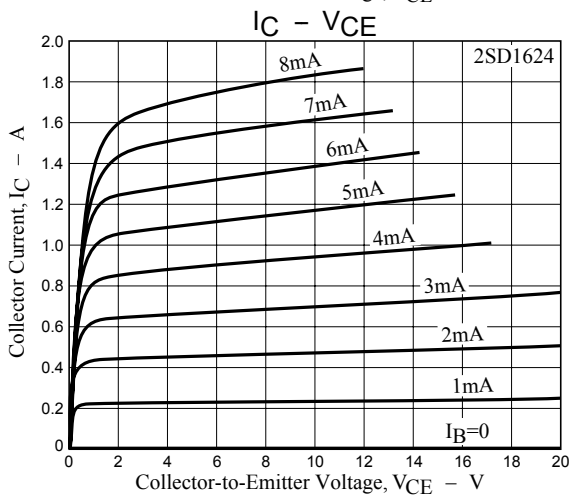
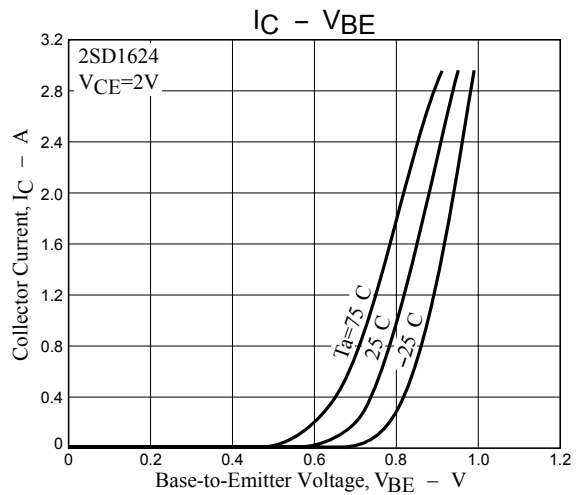
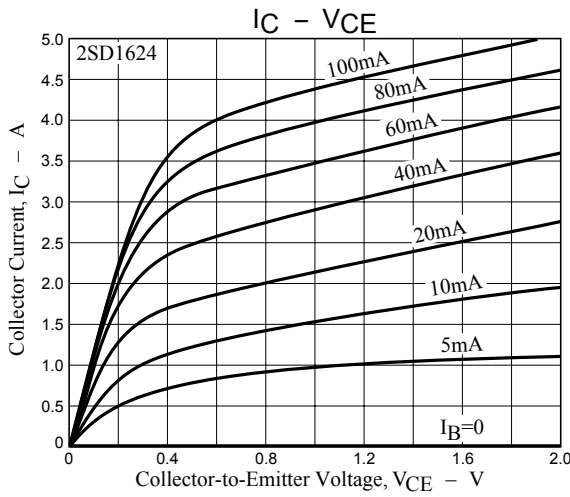
Type	2SD1624-R	2SD1624-S	2SD1624-T	2SD1624-U
Range	100-200	140-280	200-400	280-560
Marking	DG R*	DG S*	DG T*	DG U*

Switching Time Test Circuit

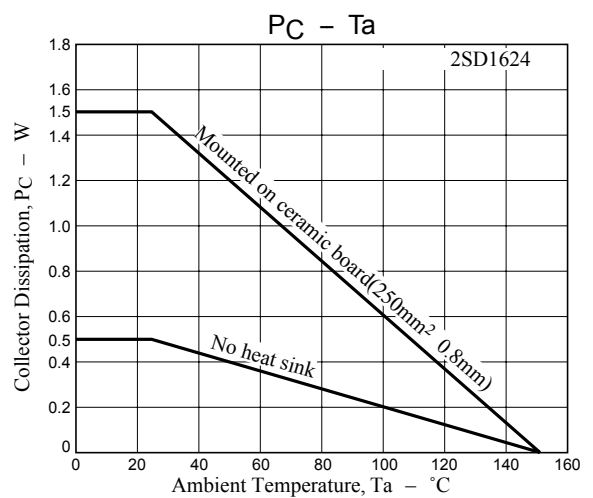
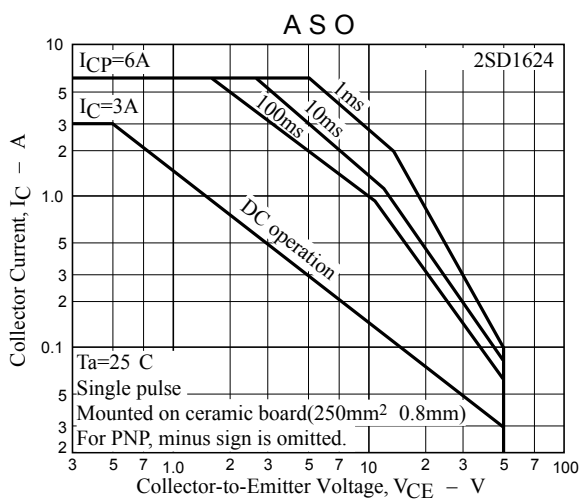
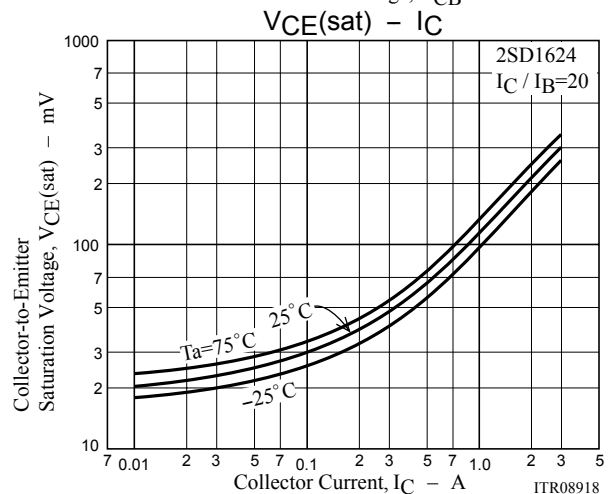
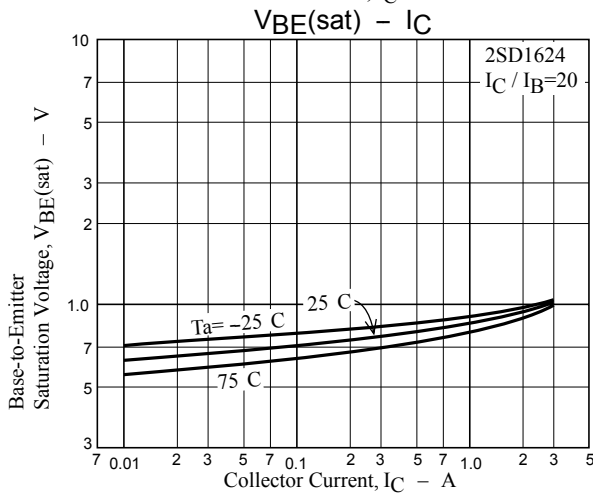
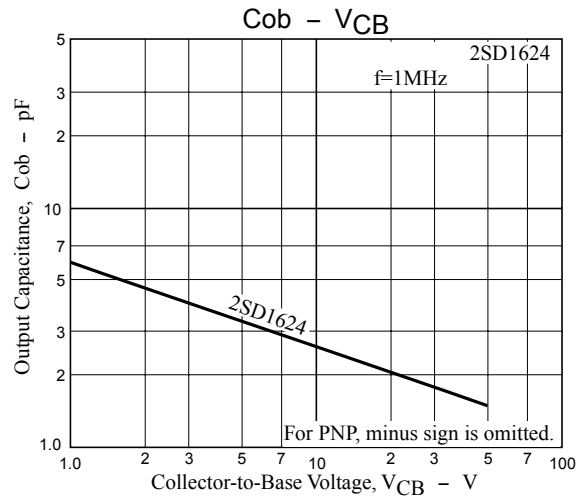
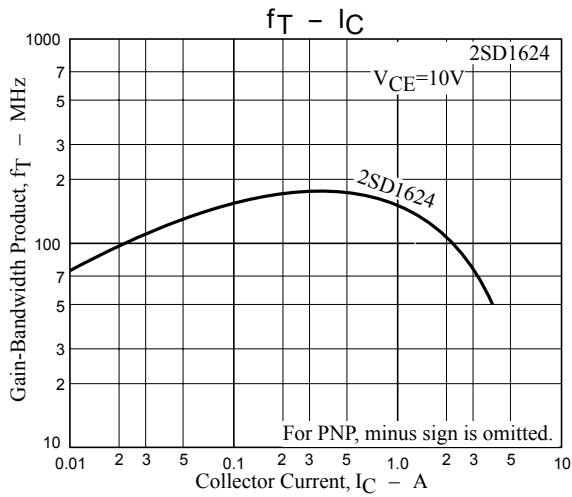


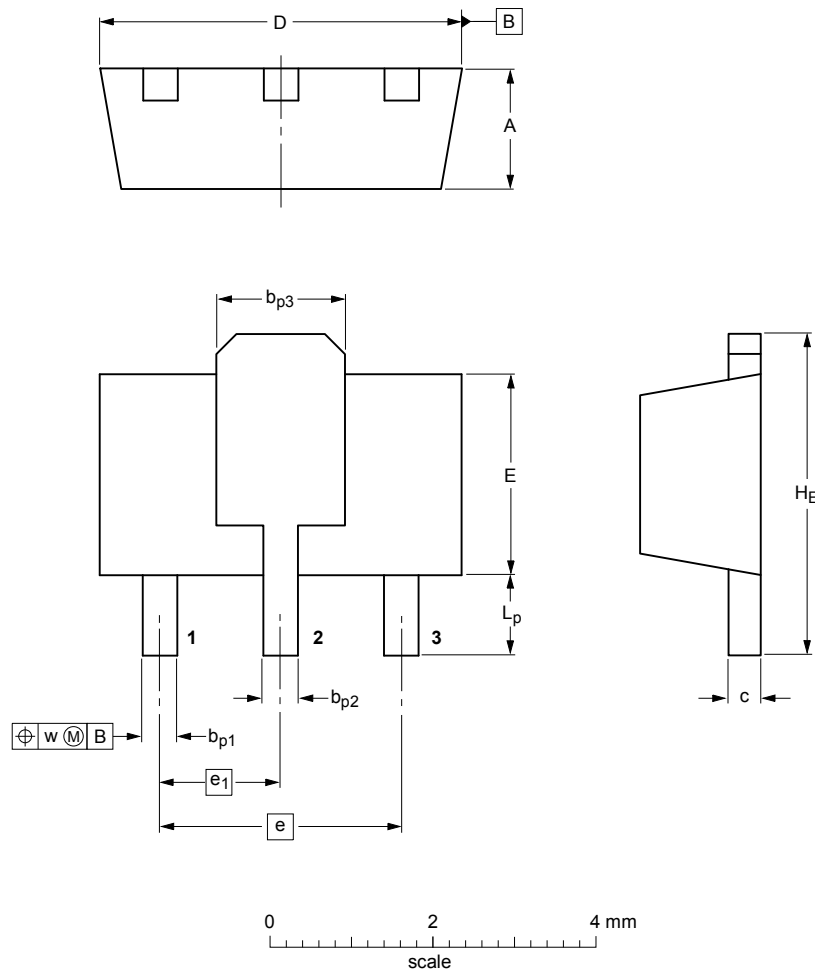
$10I_{B1} = -10I_{B2} = I_C = 1A$
(For PNP, the polarity is reversed.)

■ **Typical Characteristics**



■ Typical Characteristics





DIMENSIONS (mm are the original dimensions)

UNIT	A	b_{p1}	b_{p2}	b_{p3}	c	D	E	e	e_1	H_E	L_p	w
mm	1.6 1.4	0.48 0.35	0.53 0.40	1.8 1.4	0.44 0.23	4.6 4.4	2.6 2.4	3.0	1.5	4.25 3.75	1.2 0.8	0.13

Summary of Packing Options

Package	Package Description	Packing Quantity	Industry Standard
SOT-89	Tape/Reel, 7" reel	1000	EIA-481-1