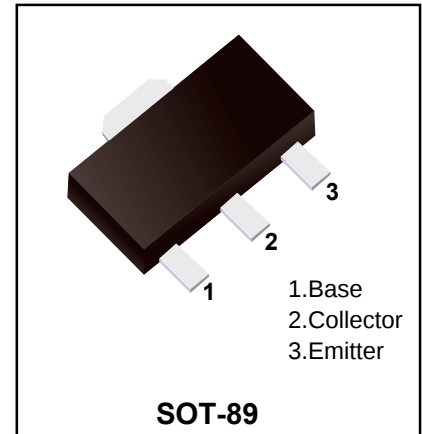


NPN Transistors

Features

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



Absolute Maximum Rating (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)

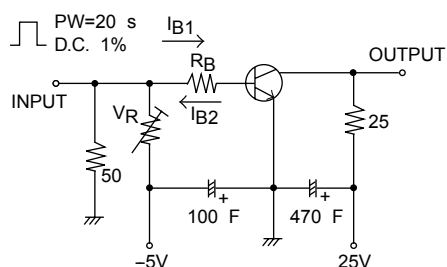
Electrical Characteristics (Ta=25°C)

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 _{CBO}	V _{CB} = 50 V, I _E = 0			1	uA
Emitter cut-off current	I _{EBO}	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

h_{FE} Classification

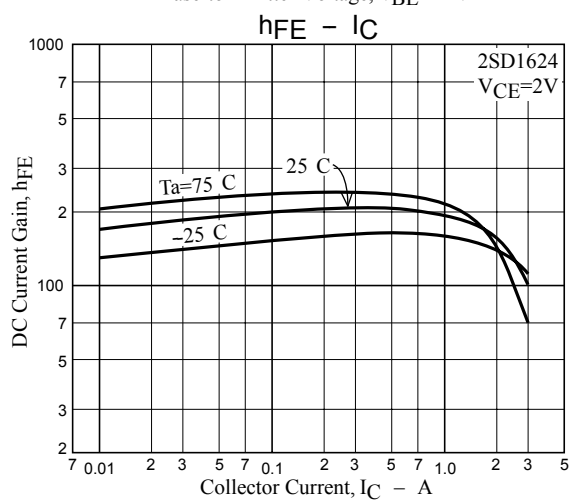
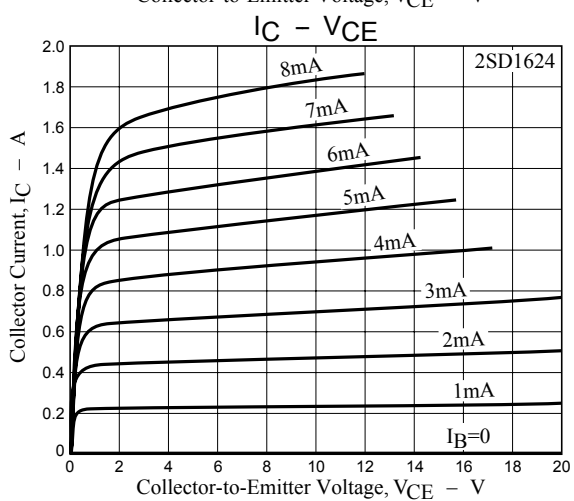
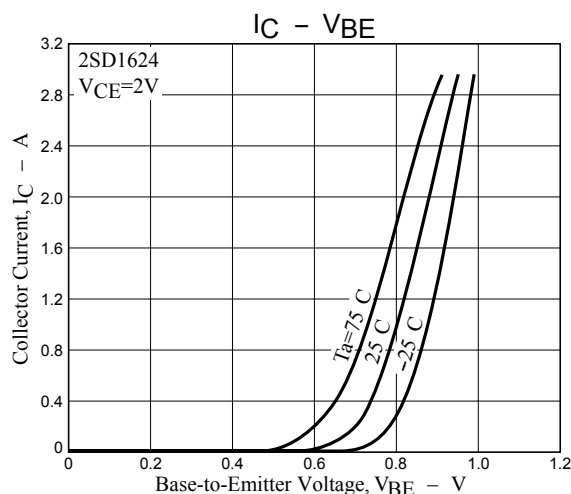
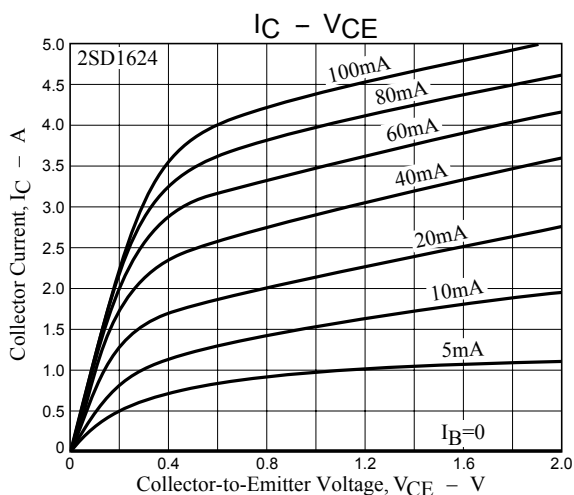
Type	2SD1624-R	2SD1624-S	2SD1624-T	2SD1624-U
Range	100-200	140-280	200-400	280-560
Marking	DG R*	DG S*	DG T*	DG U*

Switching Time Test Circuit

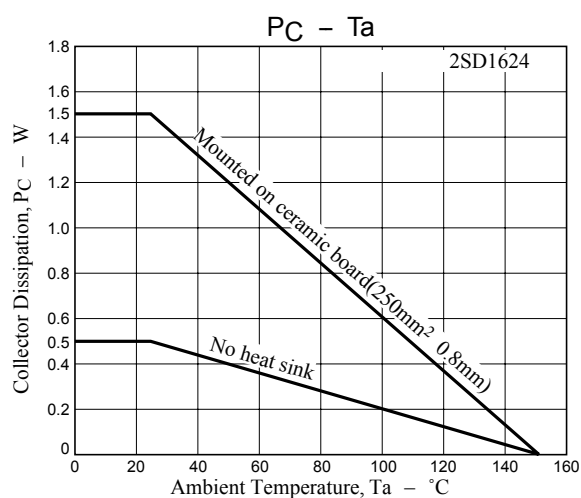
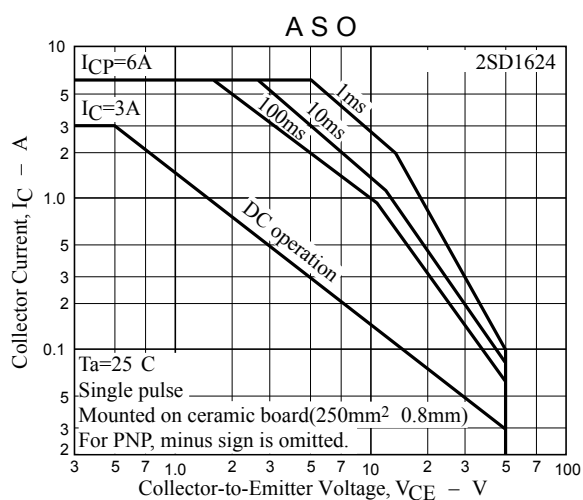
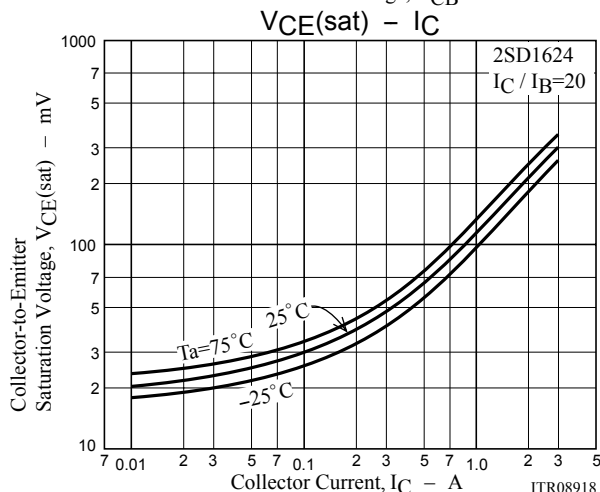
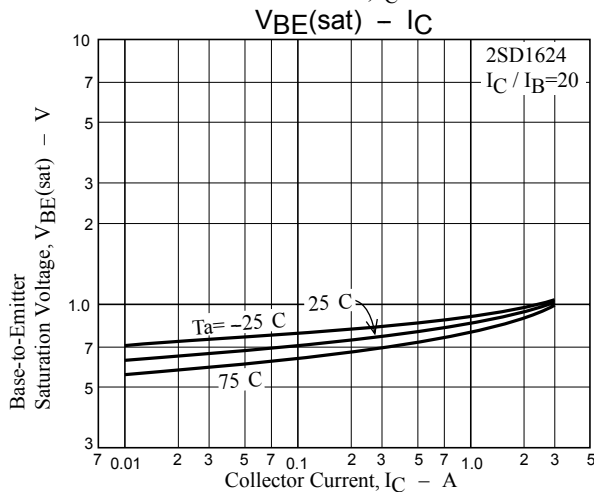
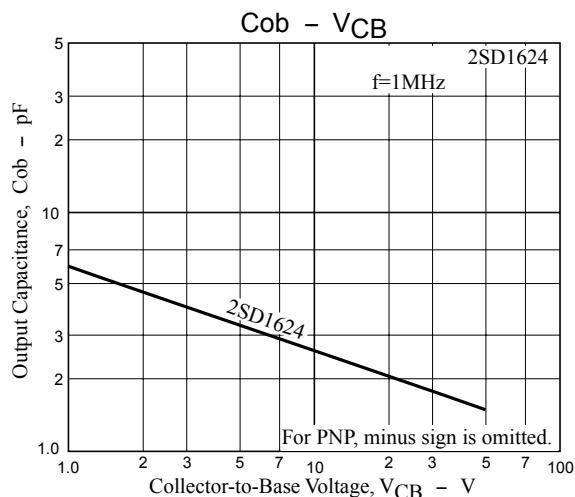
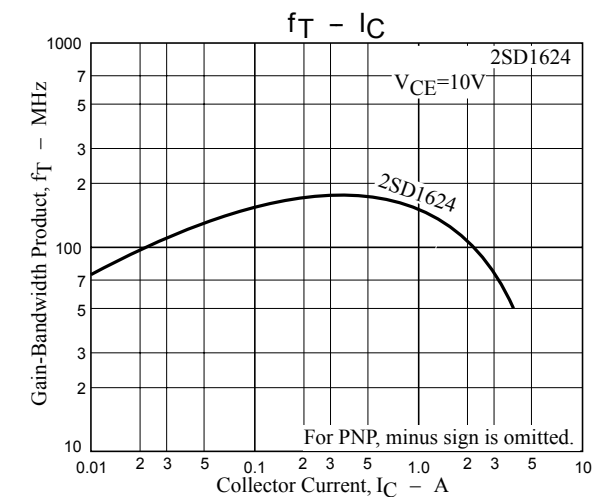


$10I_{B1} = -10I_{B2} = I_C = 1A$
(For PNP, the polarity is reversed.)

Typical Characteristics



Typical Characteristics



Ordering information

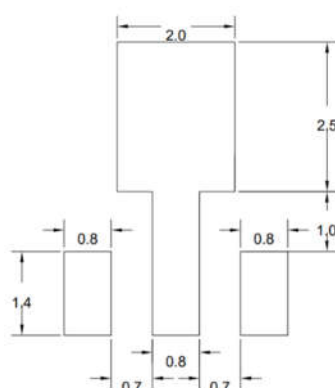
Package	Packing Description	Base Quantity	Packing Quantity
SOT-89	Tape/Reel, 7" reel	1000pcs/Reel	6000PCS/Box 30000PCS/Carton

Package Dimensions

SOT-89

Dim	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	1.40	1.60	0.055	0.063
b	0.32	0.52	0.013	0.020
b1	0.38	0.58	0.015	0.023
c	0.35	0.45	0.014	0.018
D	4.40	4.60	0.173	0.181
D1	1.45	1.65	0.057	0.065
D2	1.70	1.80	0.067	0.071
E	2.30	2.60	0.091	0.102
E1	3.95	4.25	0.156	0.167
E2	1.80	2.00	0.071	0.079
e	1.40	1.60	0.055	0.063
e1	2.80	3.20	0.110	0.126
L	0.90	1.20	0.035	0.047

The recommended mounting pad size



UNIT:MM

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