



PRODUCT DATA SHEET

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Datasheet



Resources



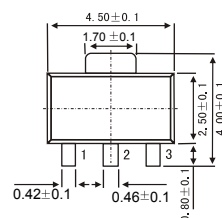
Samples

Please note: Please check the JINGAO Semiconductor website to verify the updated device numbers. The most current and up-to-date ordering information can be found at www.jg-semi.cn. Please email any questions regarding the system integration to JINGAO_questions@jgsemi.com.

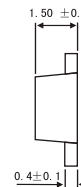
■ Features

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

SOT-89



Unit:mm



1. Base
2. Collector
3. Emitter

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

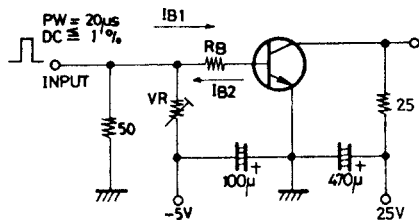
Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CB0}	-60	V
Collector - Emitter Voltage	V_{CEO}	-50	
Emitter - Base Voltage	V_{EBO}	-6	
Collector Current - Continuous	I_C	-3	A
Collector current -Pulse	I_{CP}	-6	
Collector Power Dissipation (Note.1)	P_C	0.5	W
		1.5	
Junction Temperature	T_J	150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

Note.1: Mounted on ceramic board ($250\text{mm}^2 \times 0.8\text{mm}$)

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CB0}	$I_C = -100 \mu\text{A}$, $I_E = 0$	-60			V
Collector- emitter breakdown voltage	V_{CEO}	$I_C = -1 \text{ mA}$, $R_{BE} = \infty$	-50			
Emitter - base breakdown voltage	V_{EBO}	$I_E = -100 \mu\text{A}$, $I_C = 0$	-6			
Collector-base cut-off current	I_{CBO}	$V_{CB} = -50\text{V}$, $I_E = 0$			-1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -5\text{V}$, $I_C = 0$			-1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -2 \text{ A}$, $I_B = -100\text{mA}$		-0.35	-0.7	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = -2 \text{ A}$, $I_B = -100\text{mA}$		-0.94	-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}			450		
Fall Time	t_f			35		
Collector output capacitance	C_{ob}	$V_{CB} = -10\text{V}$, $I_E = 0$, $f = 1\text{MHz}$		39		pF
Transition frequency	f_r	$V_{CE} = -10\text{V}$, $I_C = -50\text{mA}$		150		MHz

Switching Time Test Circuit

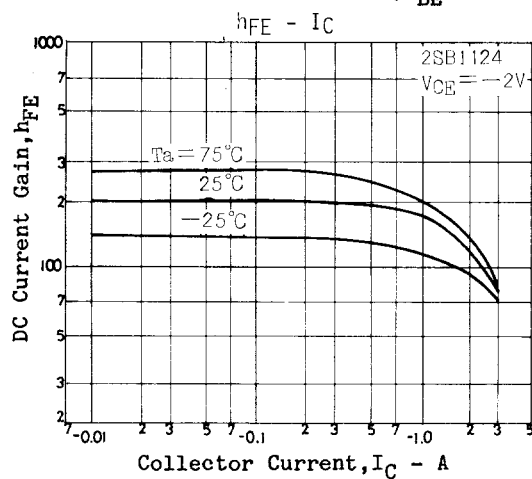
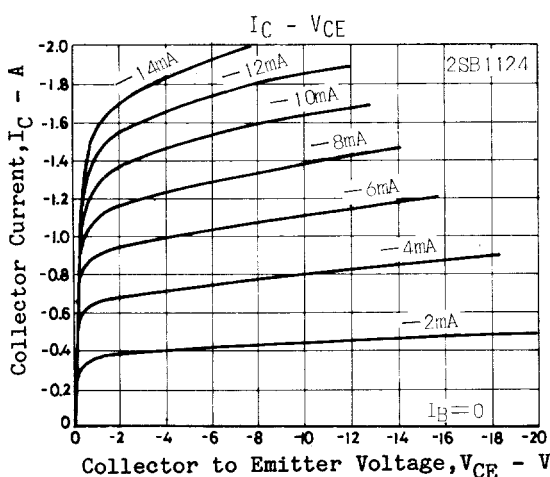
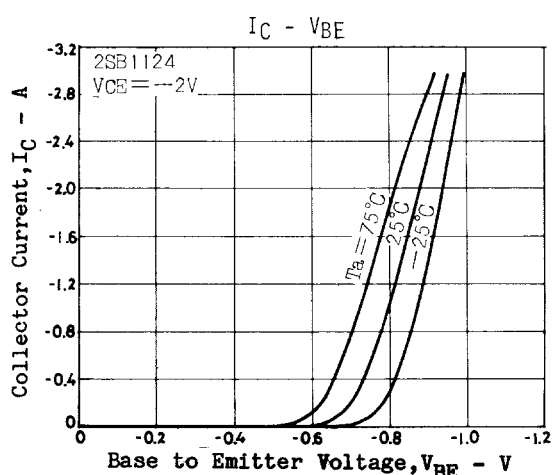
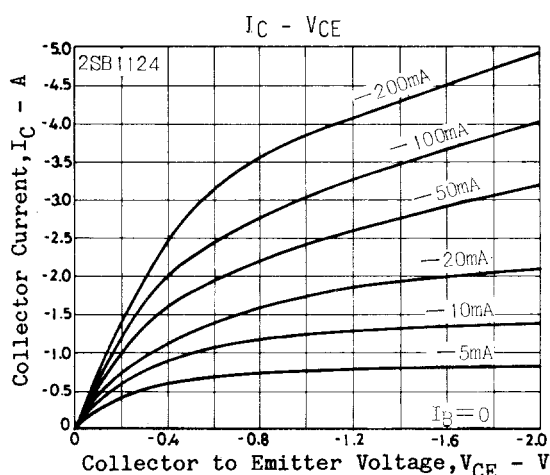


$$10I_{B1} = -10I_{B2} = I_C = 1A$$

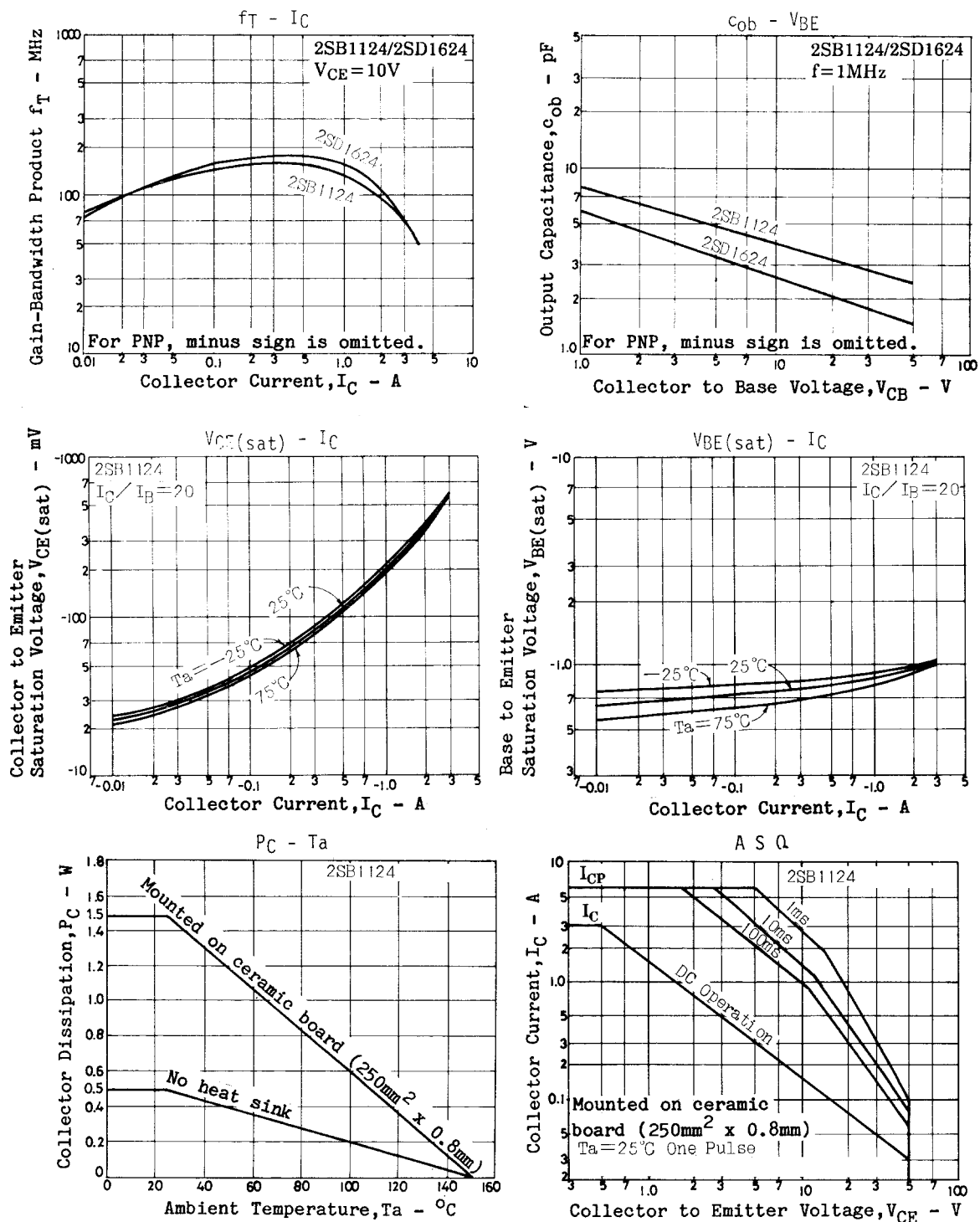
(For PNP, the polarity is reversed.)

Unit (resistance : Ω, capacitance : F)

■ Typical Characteristics



■ Typical Characteristics



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