

Ordering number : ENN7920



SANYO Semiconductors

DATA SHEET

2SA2124 — PNP Epitaxial Planar Silicon Transistors  
High-Current Switching Applications

Applications

- Voltage regulators, relay drivers, lamp drivers, electrical equipment.

Features

- Adoption of MBIT processes.
- Low collector-to-emitter saturation voltage.
- High current capacity.
- High-speed switching.

Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V <sub>CB0</sub>		-30	V
Collector-to-Emitter Voltage	V <sub>CEO</sub>		-30	V
Emitter-to-Base Voltage	V <sub>EBO</sub>		-6	V
Collector Current	I <sub>C</sub>		-2	A
Collector Current (Pulse)	I <sub>CP</sub>		-5	A
Base Current	I <sub>B</sub>		-400	mA
Collector Dissipation	P <sub>C</sub>	Mounted on a ceramic board (450mm <sup>2</sup> X0.8m)	1.3	W
		T <sub>c</sub> =25°C	3.5	W
Junction Temperature	T <sub>J</sub>		150	°C
Storage Temperature	T <sub>stg</sub>		-55 to +150	°C

Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I <sub>CB0</sub>	V <sub>CB</sub> =-30V, I <sub>E</sub> =0			-0.1	μA
Emitter Cutoff Current	I <sub>EBO</sub>	V <sub>EB</sub> =-4V, I <sub>C</sub> =0			-0.1	μA
DC Current Gain	hFE(1)	V <sub>CE</sub> =-2V, I <sub>C</sub> =-100mA	200		560	
	hFE(2)	V <sub>CE</sub> =-2V, I <sub>C</sub> =-1.5A	65			
Gain-Bandwidth Product	f <sub>T</sub>	V <sub>CE</sub> =-10V, I <sub>C</sub> =-300mA		440		MHz
Collector-to-Emitter Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =-1.5A, I <sub>B</sub> =-75mA	-0.2	-0.4		V
Base-to-Emitter Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =-1.5V, I <sub>B</sub> =-75mA	-0.95	-1.2		V

Marking : AX

Continued on next page.

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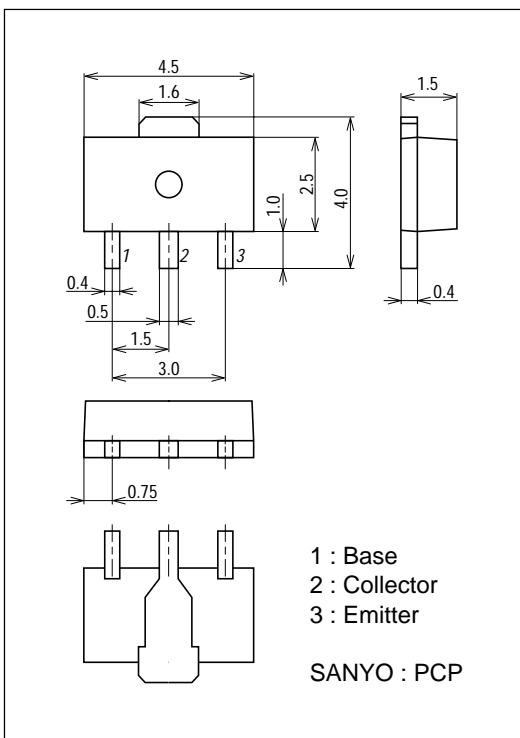
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -10\mu A, I_E = 0$	-30			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -1mA, R_{BE} = \infty$	-30			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = -10\mu A, I_C = 0$	-6			V
Output Capacitance	$C_{ob}$	$V_{CB} = -10V, f = 1MHz$		17		pF
Turn-On Time	$t_{on}$	See specified Test Circuit.		45		ns
Storage Time	$t_{stg}$	See specified Test Circuit.		200		ns
Fall Time	$t_f$	See specified Test Circuit.		23		ns

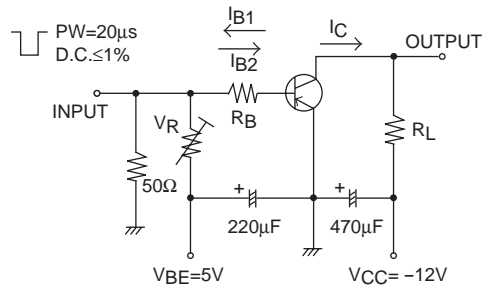
## Package Dimensions

unit : mm

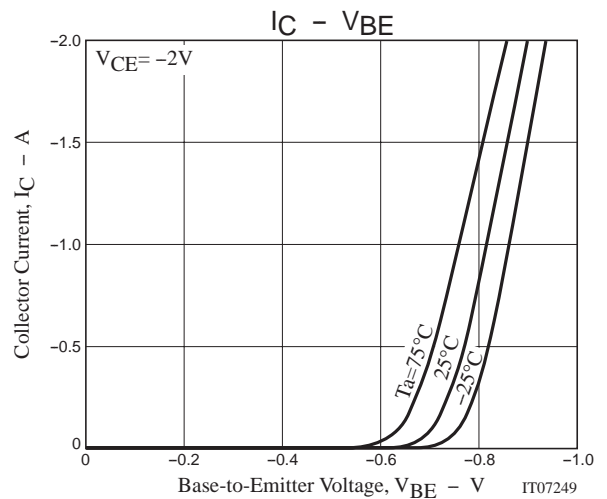
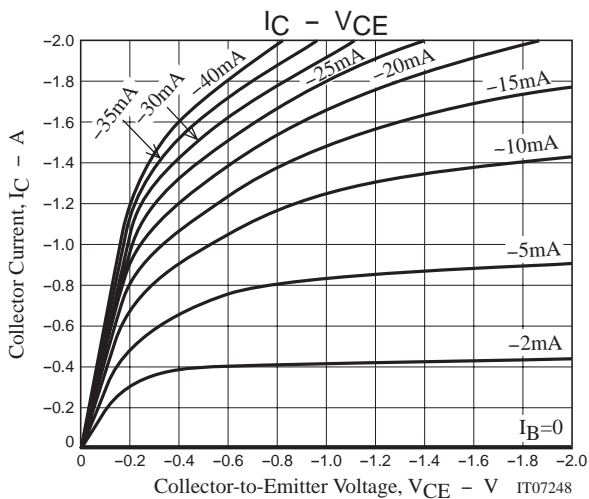
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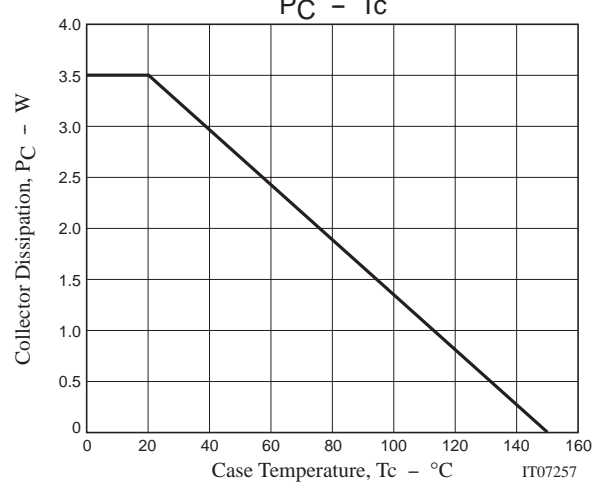
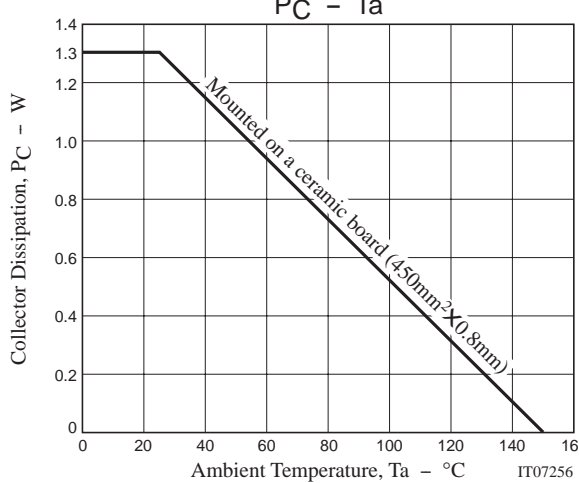
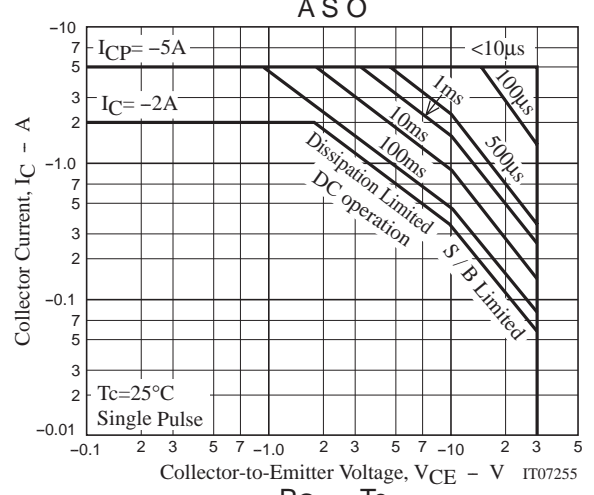
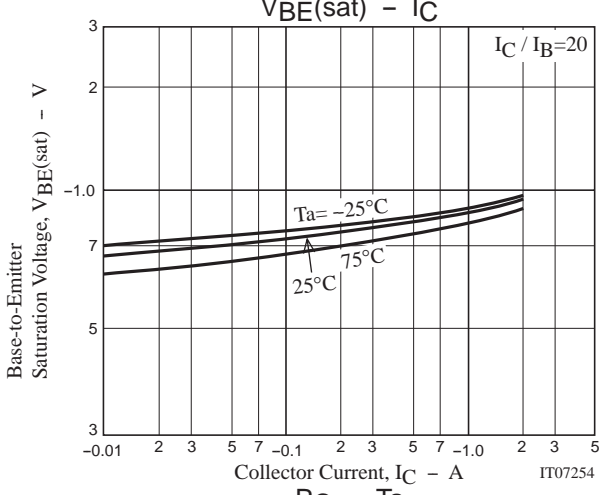
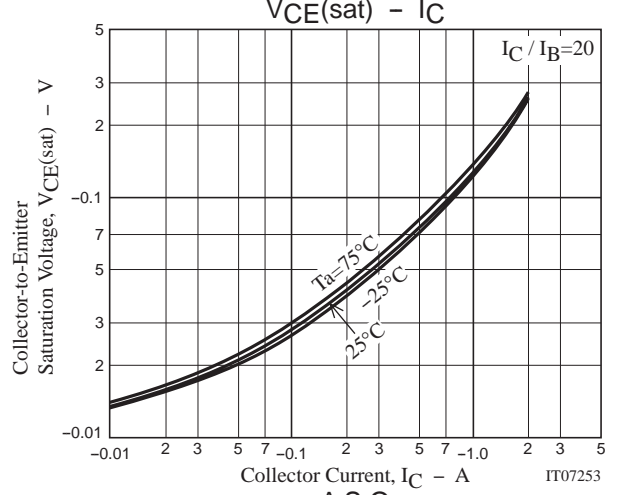
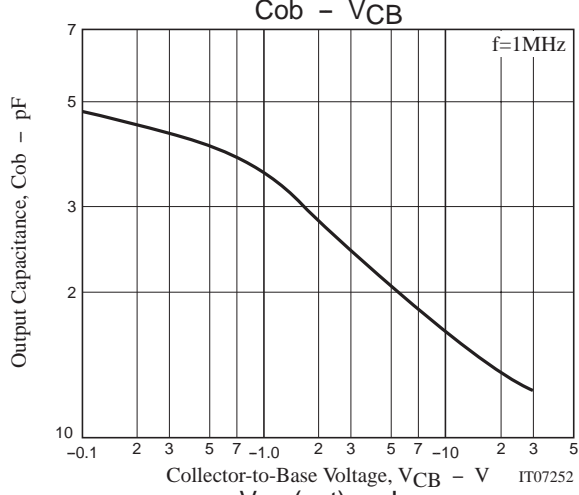
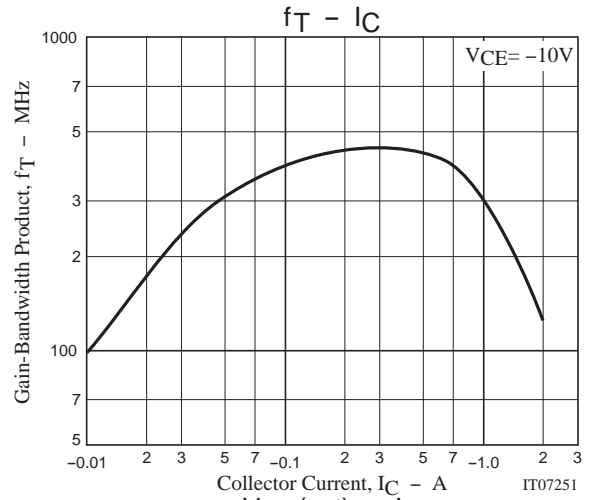
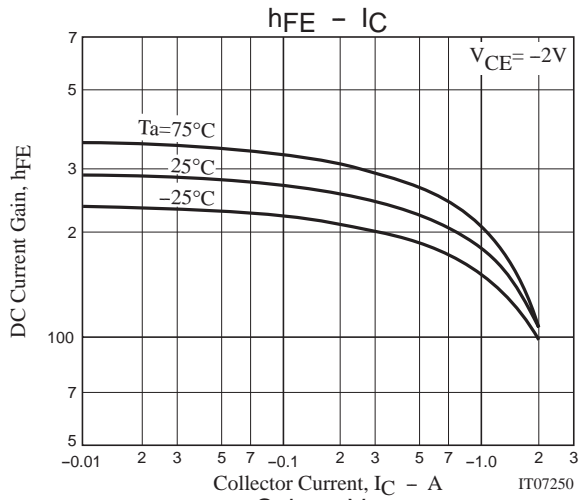
## Switching Time Test Circuit



$$I_C = -20I_{B1} = 20I_{B2} = -0.5A$$



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