


SANYO Semiconductors

DATA SHEET

An ON Semiconductor Company

2SA2124 — PNP Epitaxial Planar Silicon Transistor

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	VCBO		-30	V
Collector-to-Emitter Voltage	VCEO		-30	V
Emitter-to-Base Voltage	VEBO		-6	V
Collector Current	IC		-2	A
Collector Current (Pulse)	ICP		-5	A
Base Current	IB		-400	mA
Collector Dissipation	PC	Mounted on a ceramic board (450mm ² ×0.8m)	1.3	W
		Tc=25°C	3.5	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Marking : AX

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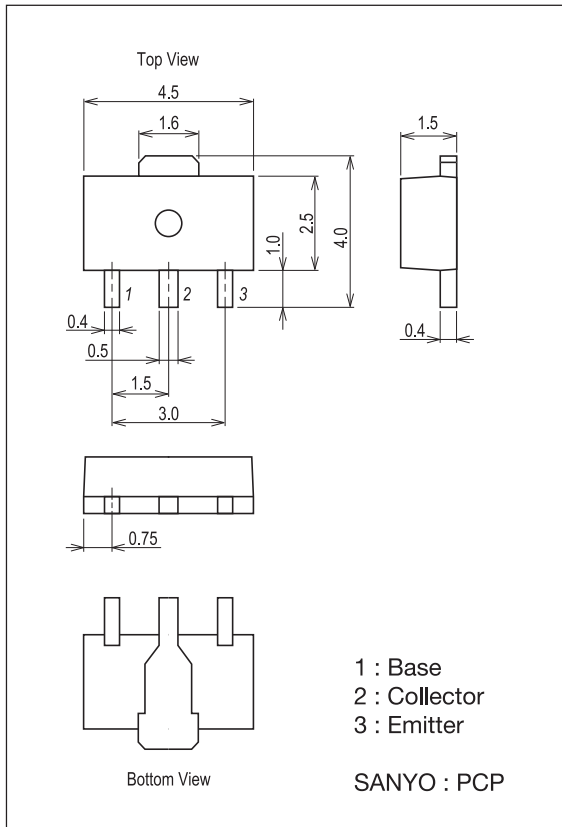
Electrical Characteristics at $T_a=25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB}=-30\text{V}, I_E=0\text{A}$			-0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=-4\text{V}, I_C=0\text{A}$			-0.1	μA
DC Current Gain	$h_{FE}(1)$	$V_{CE}=-2\text{V}, I_C=-100\text{mA}$	200		560	
	$h_{FE}(2)$	$V_{CE}=-2\text{V}, I_C=-1.5\text{A}$	65			
Gain-Bandwidth Product	f_T	$V_{CE}=-10\text{V}, I_C=-300\text{mA}$		440		MHz
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-1.5\text{A}, I_B=-75\text{mA}$		-0.2	-0.4	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=-1.5\text{V}, I_B=-75\text{mA}$		-0.95	-1.2	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=-10\mu\text{A}, I_E=0\text{A}$	-30			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=-1\text{mA}, R_{BE}=\infty$	-30			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=-10\mu\text{A}, I_C=0\text{A}$	-6			V
Output Capacitance	C_{ob}	$V_{CB}=-10\text{V}, f=1\text{MHz}$		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

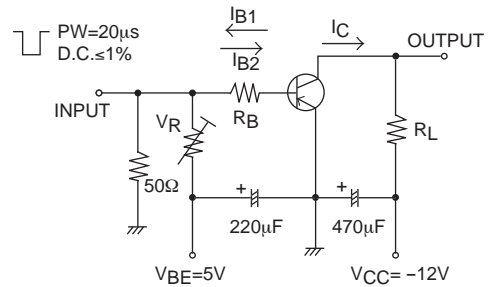
Package Dimensions

unit : mm (typ)

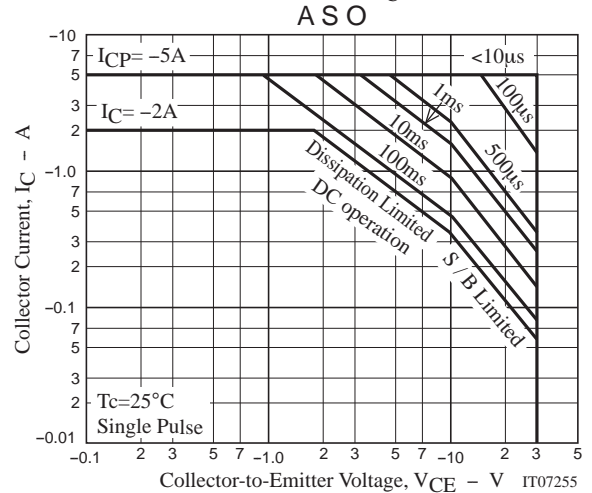
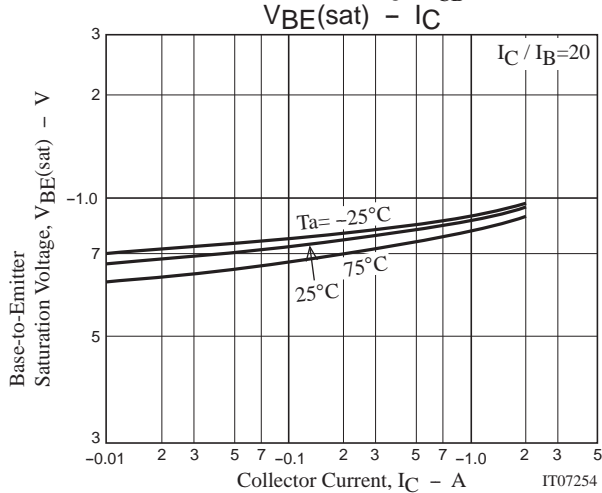
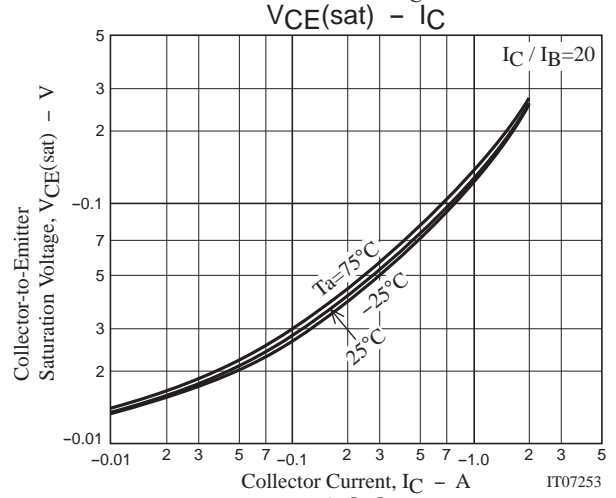
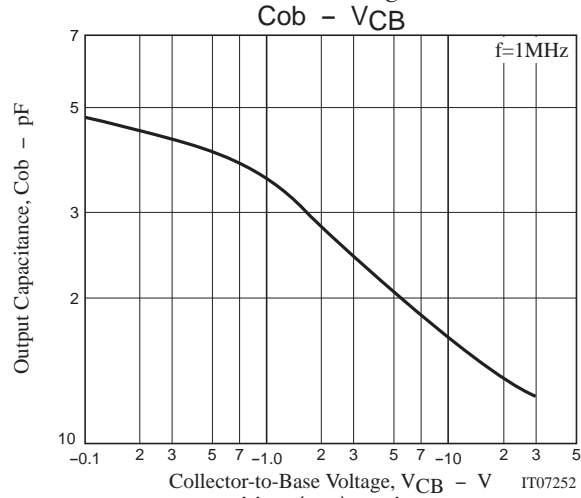
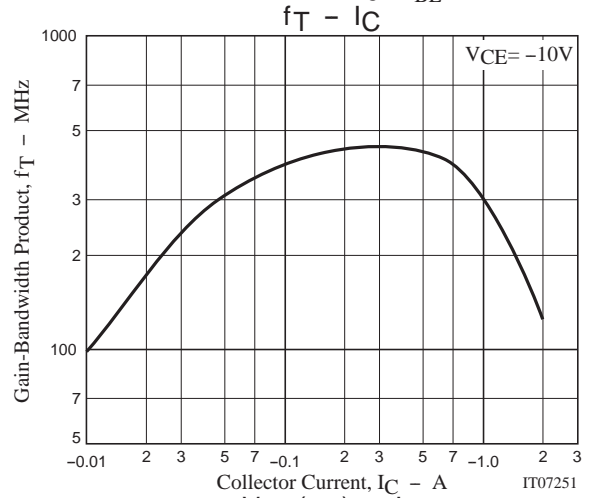
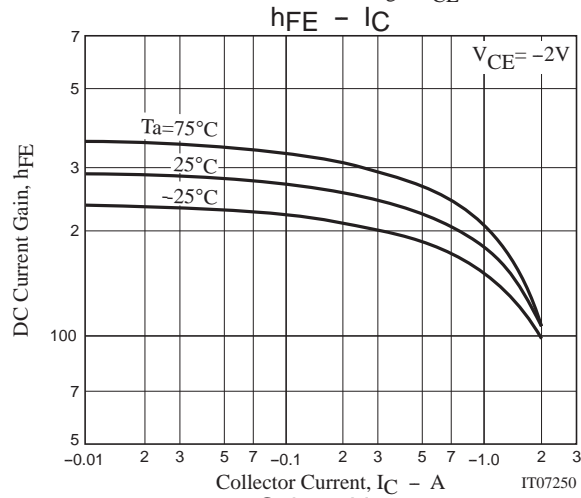
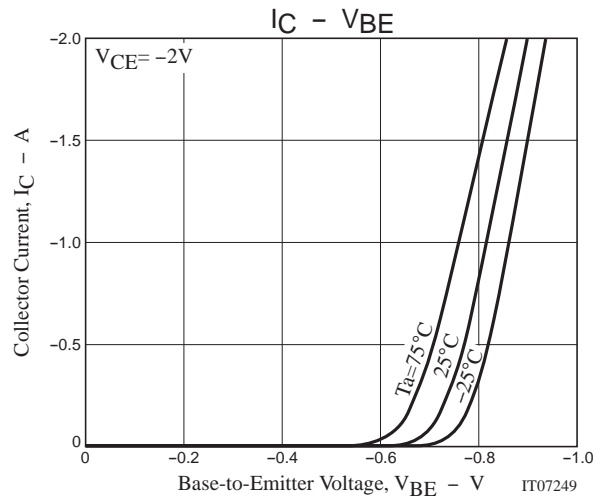
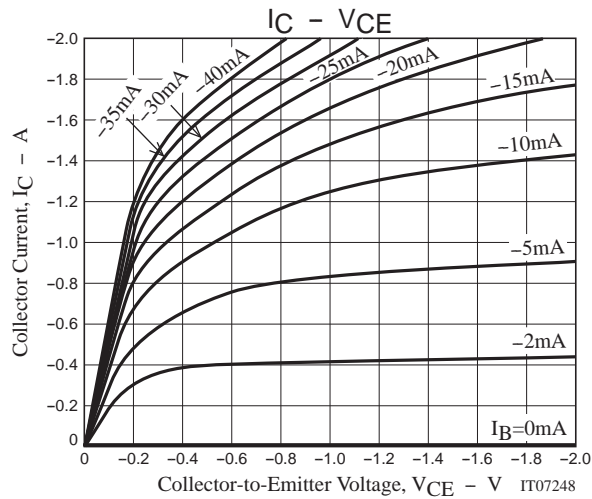
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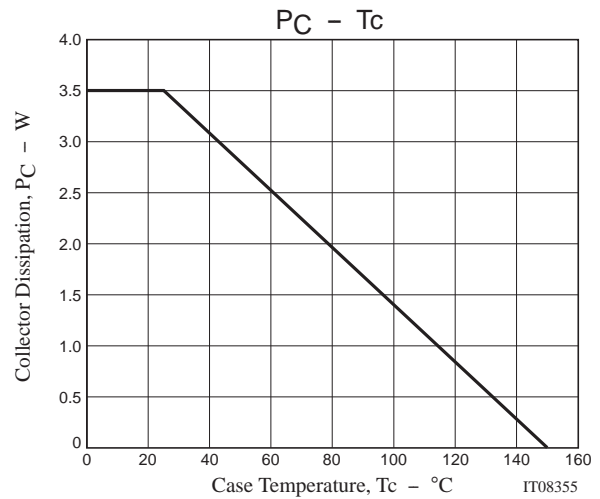
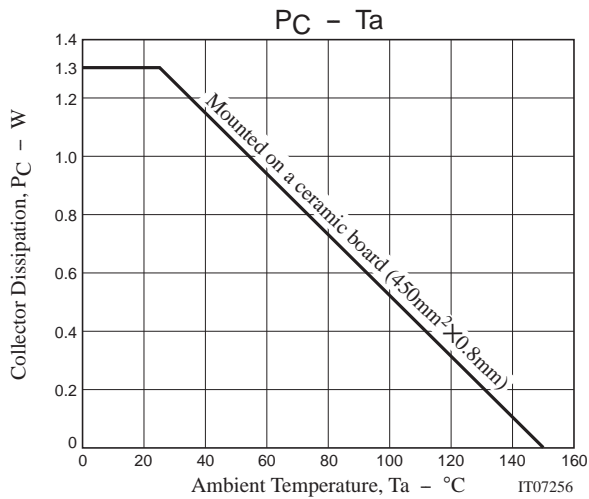


Switching Time Test Circuit



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





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