



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 _{CB0}		-30	V
Collector-to-Emitter Voltage	V _{CEO}		-30	V
Emitter-to-Base Voltage	V _{EBO}		-6	V
Collector Current	I _C		-2	A
Collector Current (Pulse)	I _{CP}		-5	A
Base Current	I _B		-400	mA
Collector Dissipation	P _C	Mounted on a ceramic board (450mm ² X0.8m)	1.3	W
		T _C =25°C	3.5	W
Junction Temperature	T _J		150	°C
Storage Temperature	T _{stg}		-55 to +150	°C

Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I _{CB0}	V _{CB} =-30V, I _E =0			-0.1	μA
Emitter Cutoff Current	I _{EBO}	V _{EB} =-4V, I _C =0			-0.1	μA
DC Current Gain	h _{FE} (1)	V _{CE} =-2V, I _C =-100mA	200		560	
	h _{FE} (2)	V _{CE} =-2V, I _C =-1.5A	65			
Gain-Bandwidth Product	f _T	V _{CE} =-10V, I _C =-300mA		440		MHz
Collector-to-Emitter Saturation Voltage	V _{CE(sat)}	I _C =-1.5A, I _B =-75mA		-0.2	-0.4	V
Base-to-Emitter Saturation Voltage	V _{BE(sat)}	I _C =-1.5V, I _B =-75mA		-0.95	-1.2	V

Marking : AX

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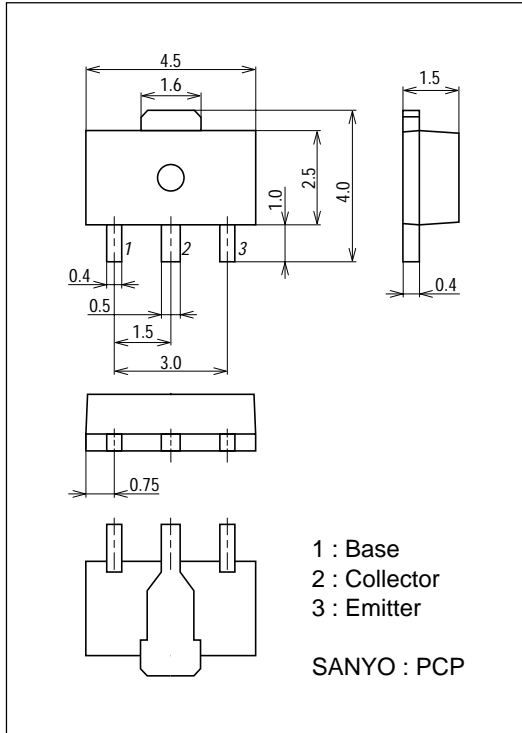
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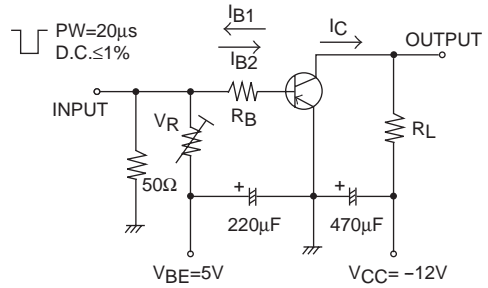
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -10\mu A, I_E = 0$	-30			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -1mA, R_{BE} = \infty$	-30			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = -10\mu A, I_C = 0$	-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

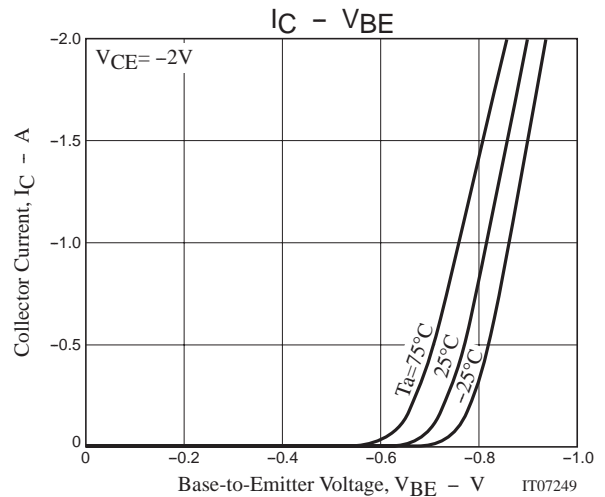
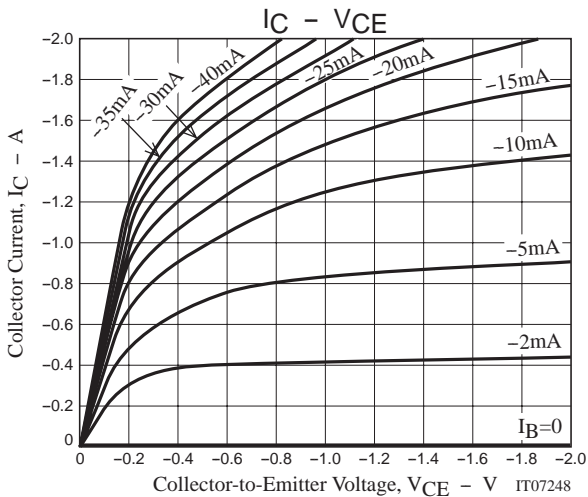
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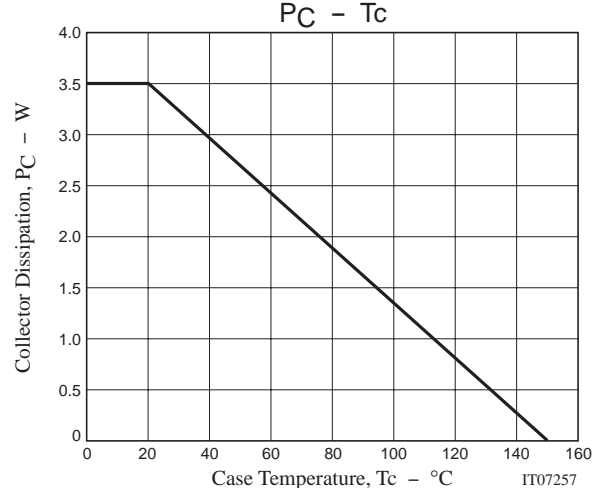
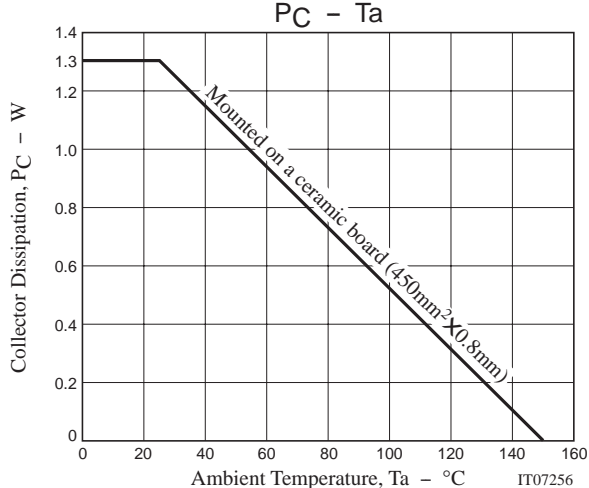
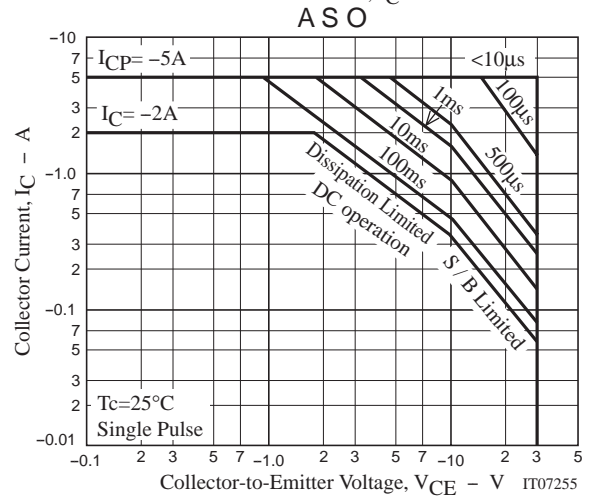
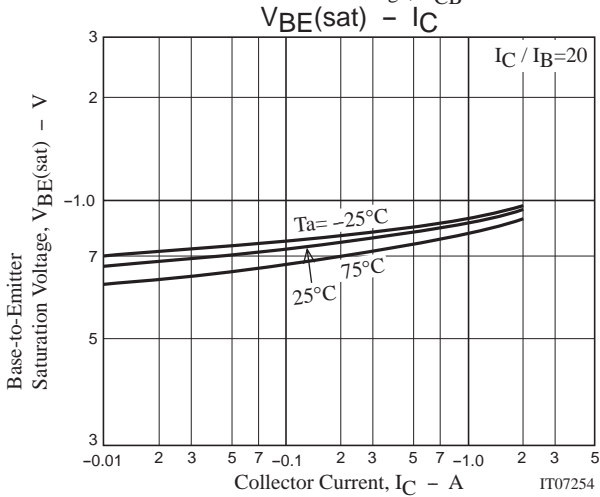
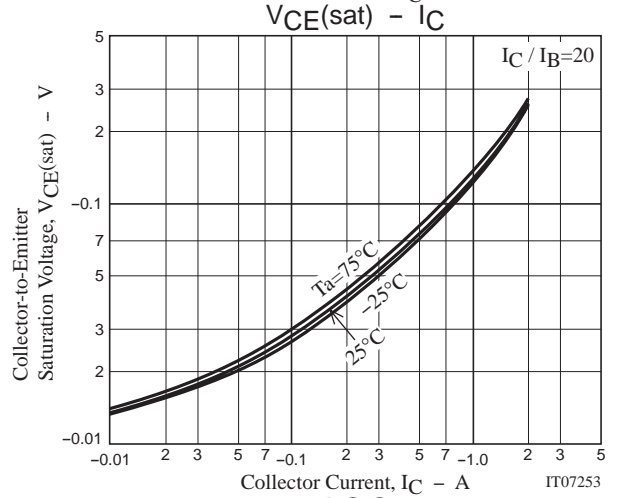
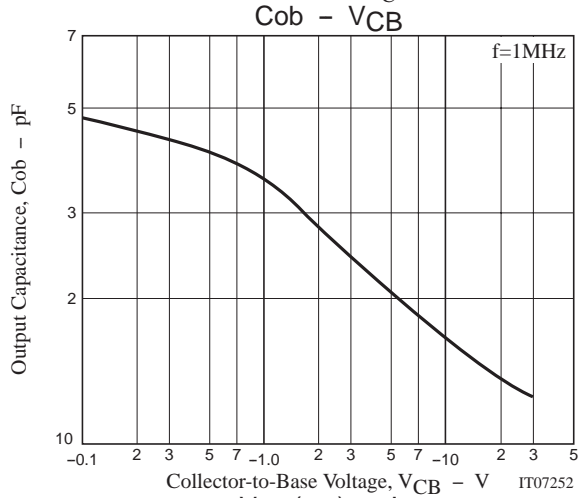
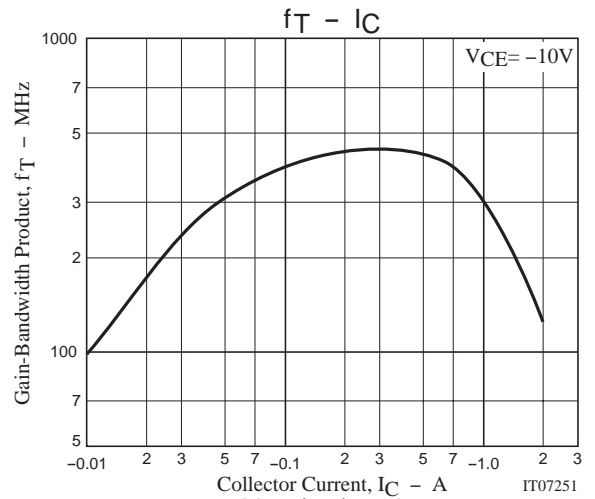
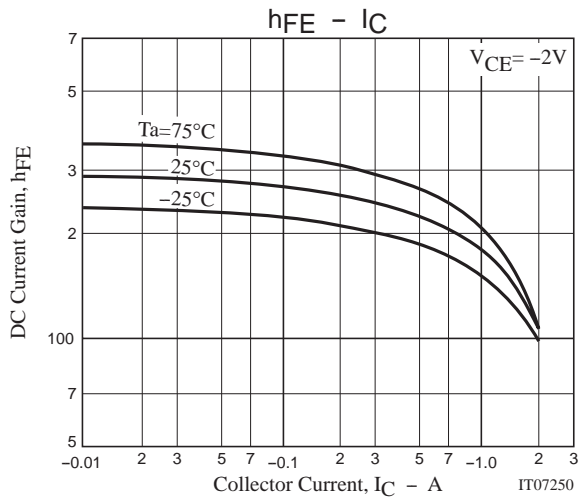


Switching Time Test Circuit



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





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