



SANYO Semiconductors

DATA SHEET

An ON Semiconductor Company

CPH6122 — PNP Epitaxial Planar Silicon Transistor

DC / DC Converter Applications

Applications

- Relay drivers, lamp drivers, motor drivers, flash.

Features

- Adoption of MBIT process.
- High current capacitance.
- Low collector-to-emitter saturation voltage.
- High-speed switching.
- Ultrasmall package facilitates miniaturization in end products (mounting height : 0.9mm).
- High allowable power dissipation.

Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CB0}		-30	V
Collector-to-Emitter Voltage	V_{CE0}		-30	V
Emitter-to-Bass Voltage	V_{EB0}		-5	V
Collector Current	I_C		-3	A
Collector Current (Pulse)	I_{CP}		-5	A
Bass Current	I_B		-600	mA
Collector Dissipation	P_C	Mounted on ceramic board (600mm ² ×0.8mm)	1.3	W
Junction Temperature	T_j		150	°C
Storage Temperature	T_{stg}		-55 to +150	°C

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

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CB0}	$V_{CB}=-30V, I_E=0A$			-0.1	μA
Emitter Cutoff Current	I_{EB0}	$V_{EB}=-4V, I_C=0A$			-0.1	μA
DC Current Gain	h_{FE}	$V_{CE}=-2V, I_C=-500mA$	200		560	
Gain-Bandwidth Product	f_T	$V_{CE}=-10V, I_C=-500mA$		400		MHz
Output Capacitance	C_{ob}	$V_{CB}=-10V, f=1MHz$		25		pF

Marking : AW

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CPH6122

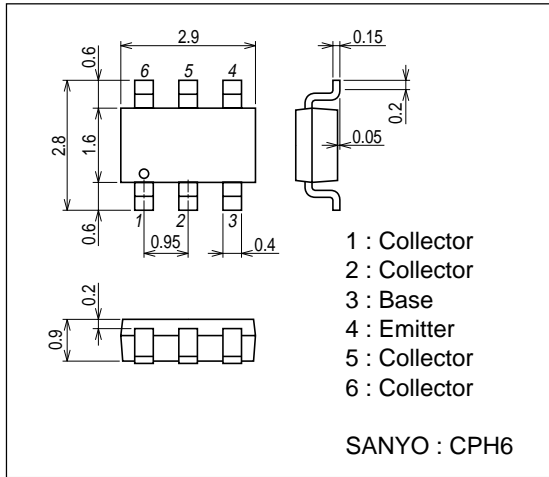
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)1}$	$I_C = -1.5A, I_B = -30mA$		-180	-270	mV
	$V_{CE(sat)2}$	$I_C = -1.5A, I_B = -75mA$		-120	-180	mV
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = -1.5A, I_B = -30mA$		-0.83	-1.2	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -10\mu A, I_E = 0A$	-30			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -1mA, R_{BE} = \infty$	-30			V
Emitter-to-Bass Breakdown Voltage	$V_{(BR)EBO}$	$I_E = -10\mu A, I_C = 0A$	-5			V
Turn-On Time	t_{on}	See specified Test Circuit.		50		ns
Storage Time	t_{stg}	See specified Test Circuit.		270		ns
Fall Time	t_f	See specified Test Circuit.		27		ns

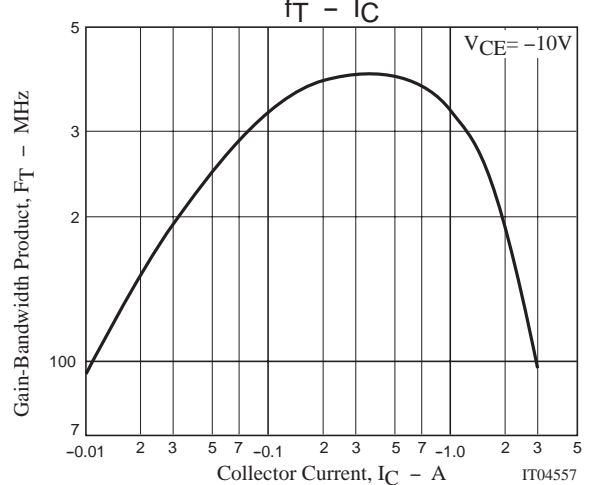
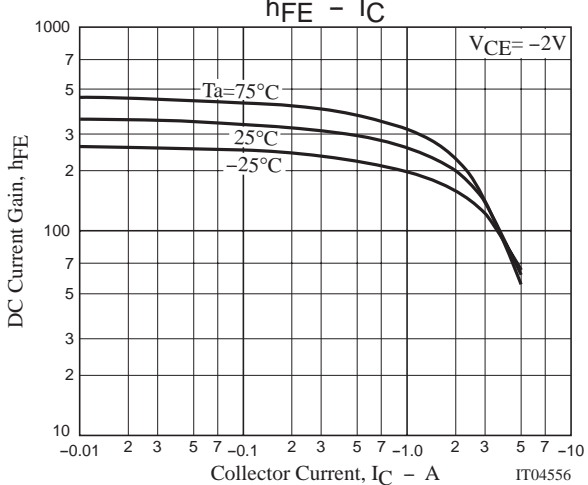
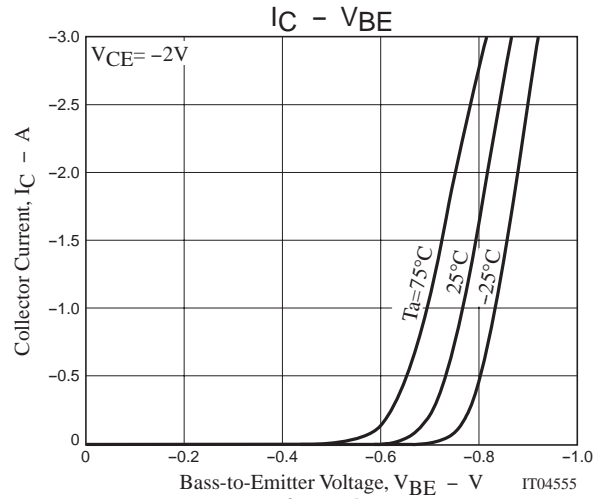
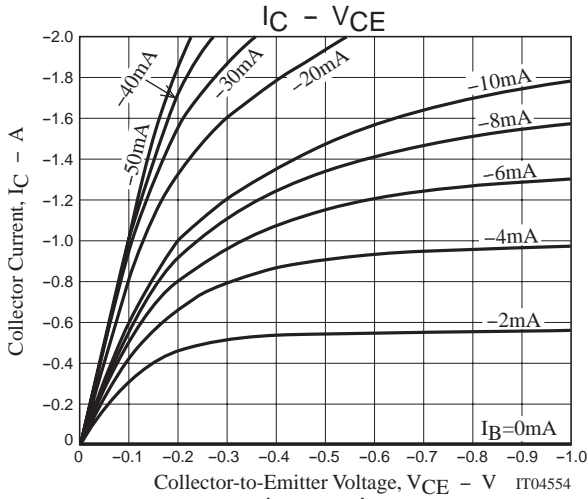
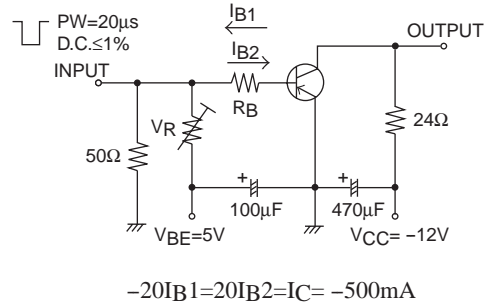
Package Dimensions

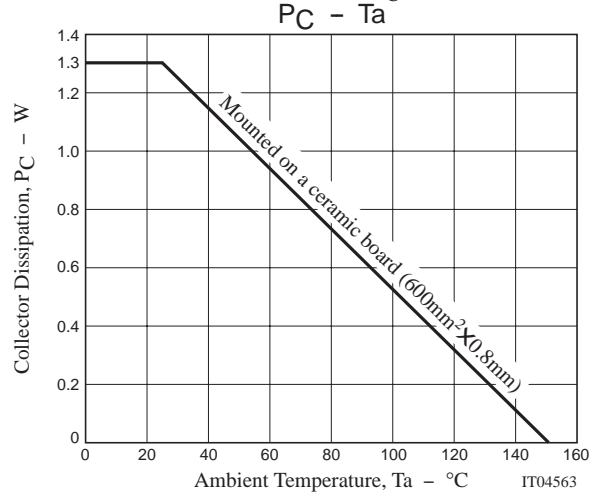
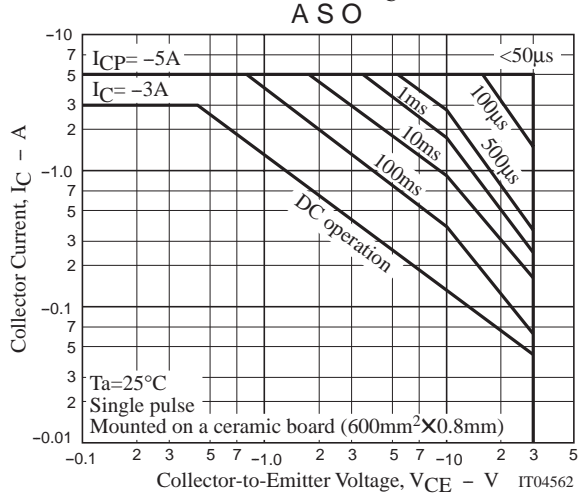
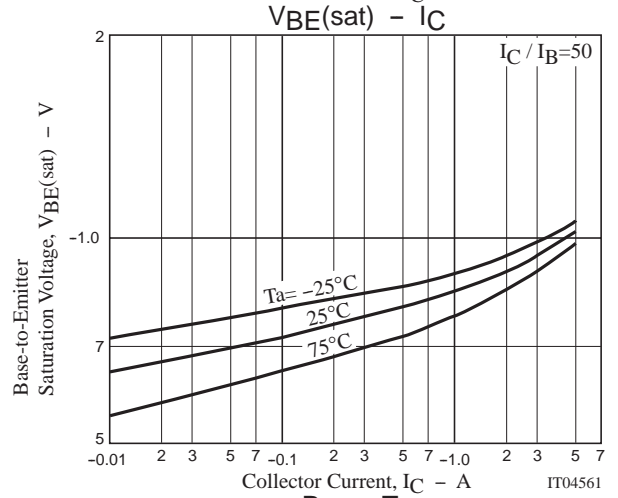
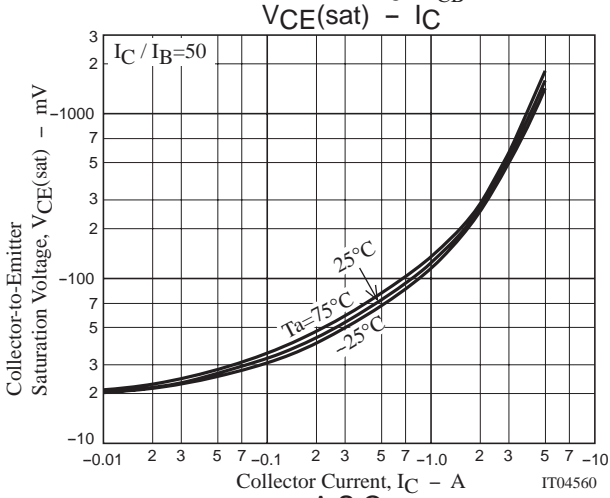
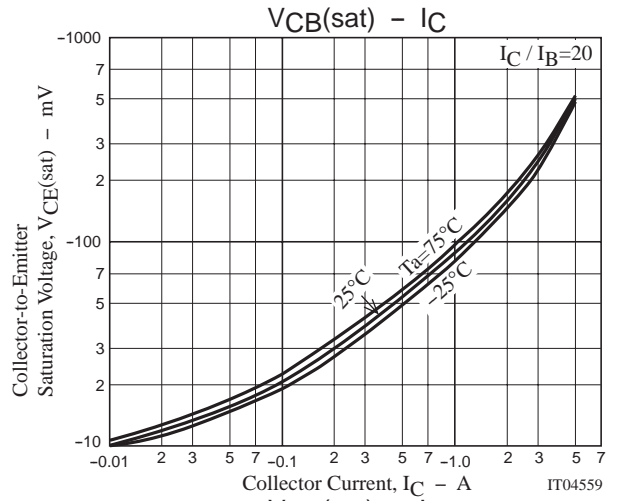
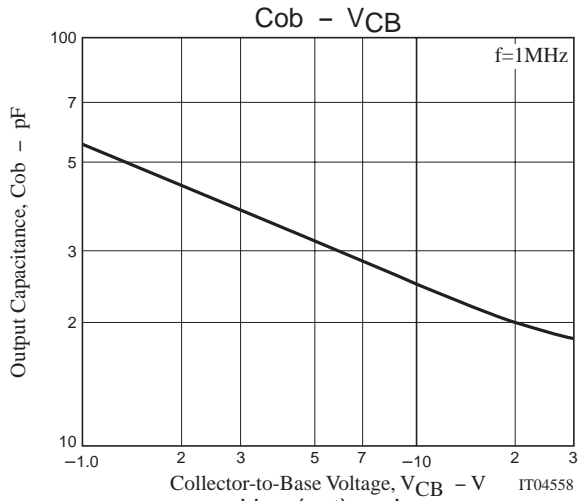
unit : mm (typ)

7018A-002



Switching Time Test Circuit





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