



SANYO Semiconductors

DATA SHEET

PCP1101

PNP Epitaxial Planar Silicon Transistor

High-Voltage Switching Applications

Applications

- DC / DC converters, relay drivers, lamp drivers, motor drivers.

Features

- Adoption of FBET, MBIT processes.
- Large current capacitance.
- Low collector-to-emitter saturation voltage.
- High-speed switching.
- High allowable power dissipation.

Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V _{CBO}		-120	V
Collector-to-Emitter Voltage	V _{CES}		-120	V
Collector-to-Emitter Voltage	V _{CEO}		-120	V
Emitter-to-Base Voltage	V _{EBO}		-7	V
Collector Current	I _C		-2.5	A
Collector Current (Pulse)	I _{CP}		-4	A
Base Current	I _B		-500	mA
Collector Dissipation	P _C	When mounted on ceramic substrate (450mm ² ×0.8mm)	1.3	W
		T _C =25°C	3.5	W
Junction Temperature	T _J		150	°C
Storage Temperature	T _{stg}		-55 to +150	°C

Marking : RD

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SANYO Semiconductor Co., Ltd.

TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

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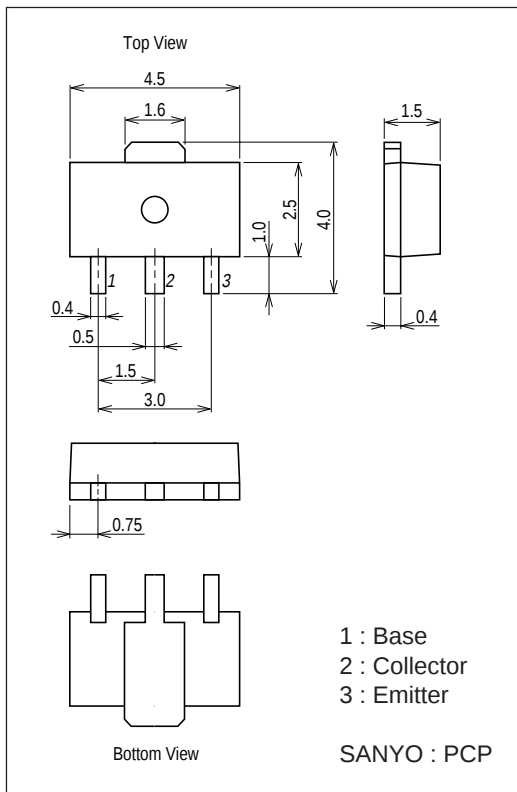
Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB}=-80V, I_E=0A$			-1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=-5V, I_C=0A$			-1	μA
DC Current Gain	h_{FE}	$V_{CE}=-5V, I_C=-100mA$	200		560	
Gain-Bandwidth Product	f_T	$V_{CE}=-10V, I_C=-100mA$		75		MHz
Output Capacitance	C_{ob}	$V_{CB}=-10V, f=1MHz$		21		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-1A, I_B=-100mA$		-150	-270	mV
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=-1A, I_B=-100mA$		-0.85	-1.2	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=-10\mu A, I_E=0A$	-120			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CES}$	$I_C=-100\mu A, R_{BE}=0\Omega$	-120			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=-1mA, R_{BE}=\infty$	-120			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=-10\mu A, I_C=0A$	-7			V
Turn-ON Time	t_{on}	See specified Test Circuit.		55		ns
Storage Time	t_{stg}	See specified Test Circuit.		840		ns
Fall Time	t_f	See specified Test Circuit.		40		ns

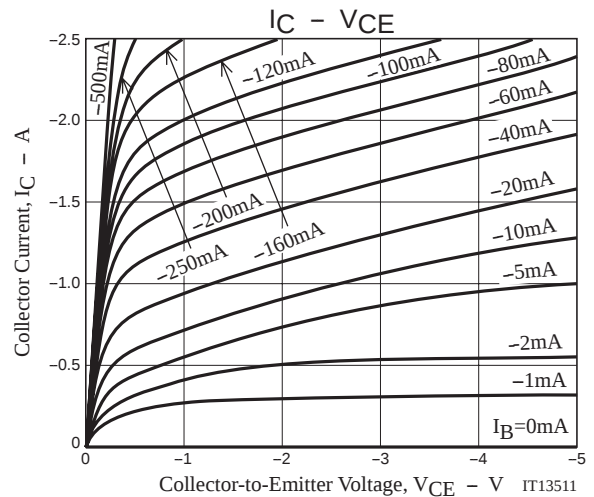
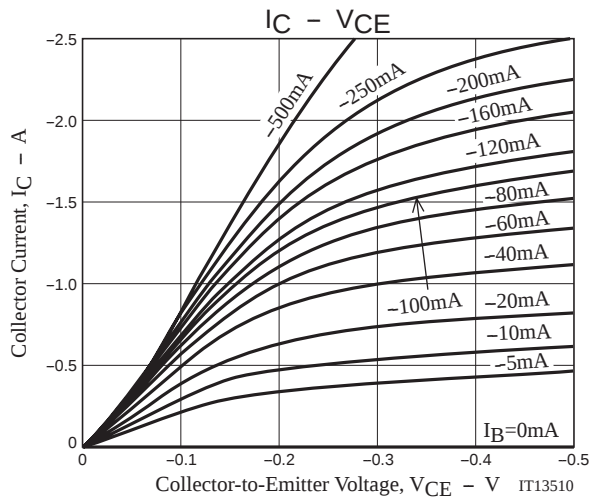
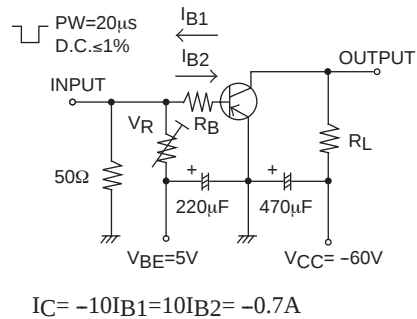
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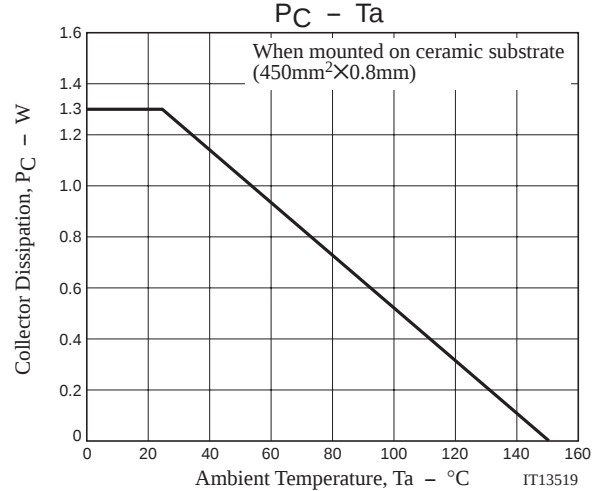
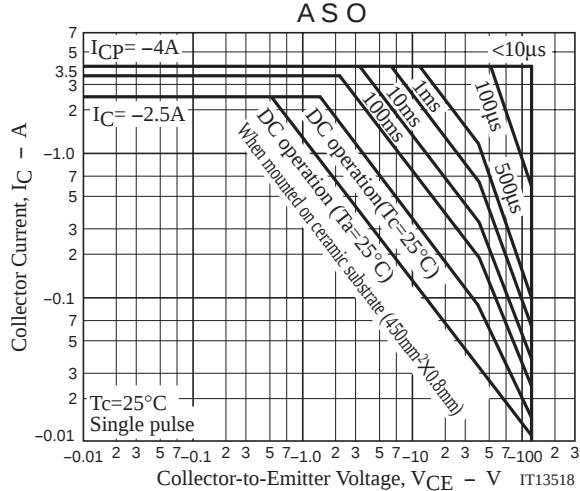
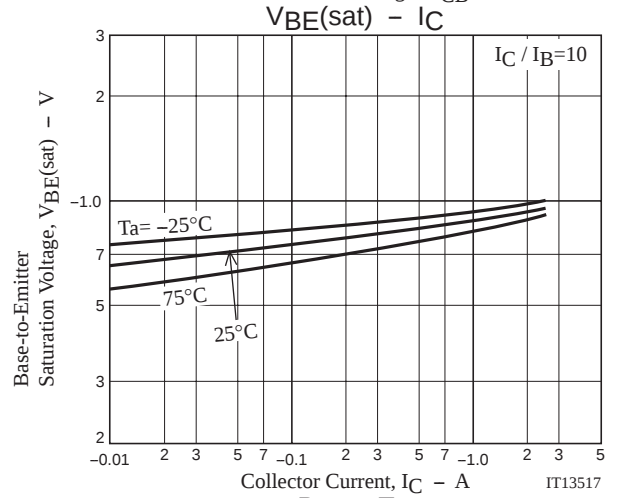
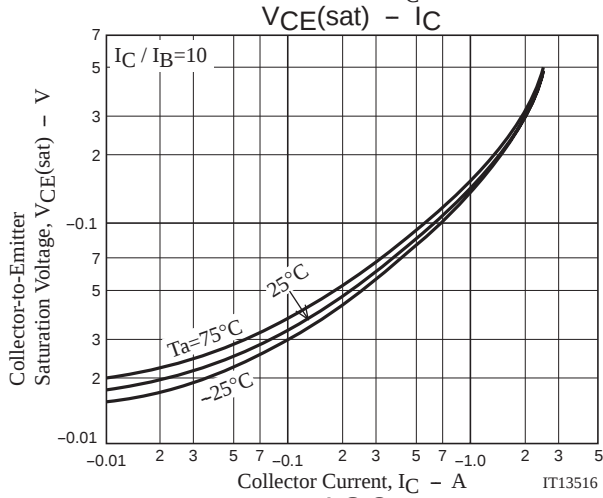
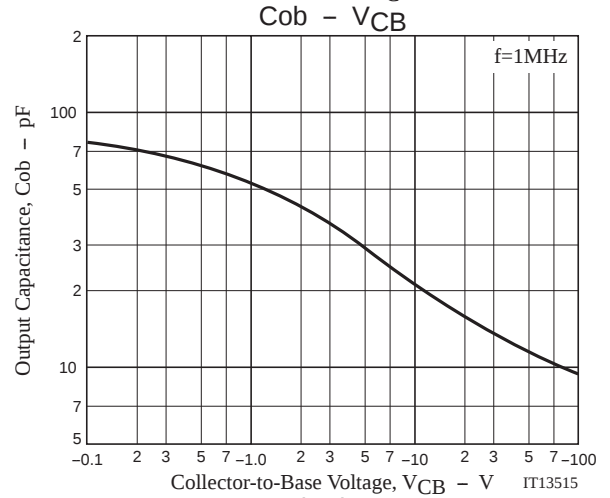
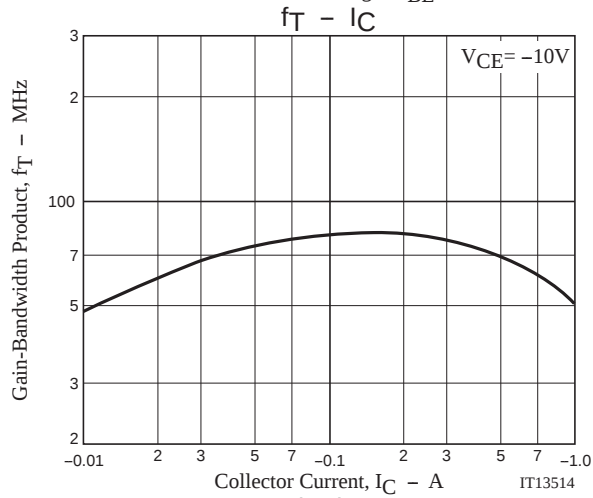
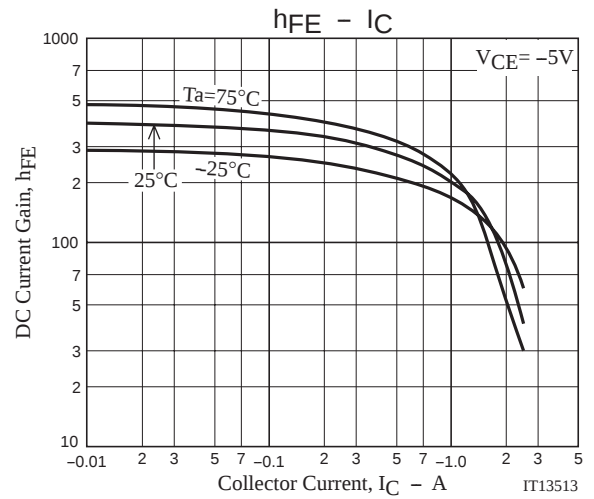
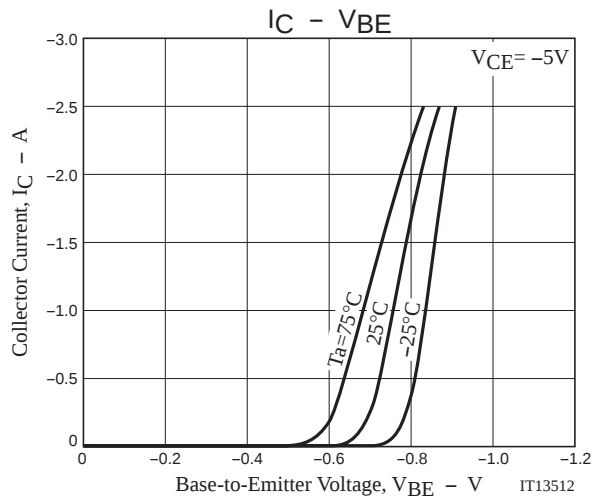
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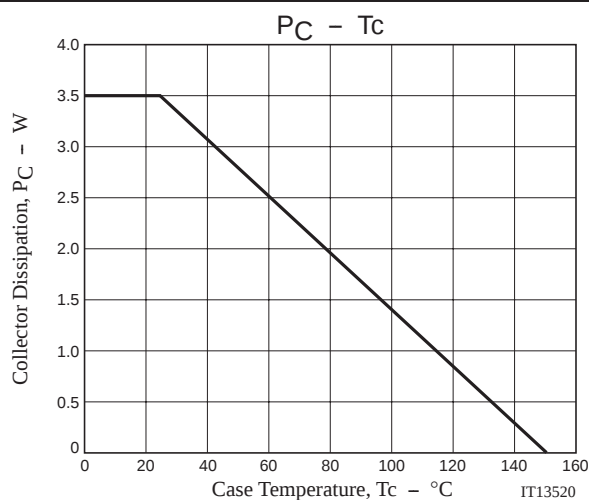
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Switching Time Test Circuit







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