

SANYO**CPH5506****DC / DC Converter Applications****Applications**

- Relay drivers, Lamp drivers, Motor drivers.

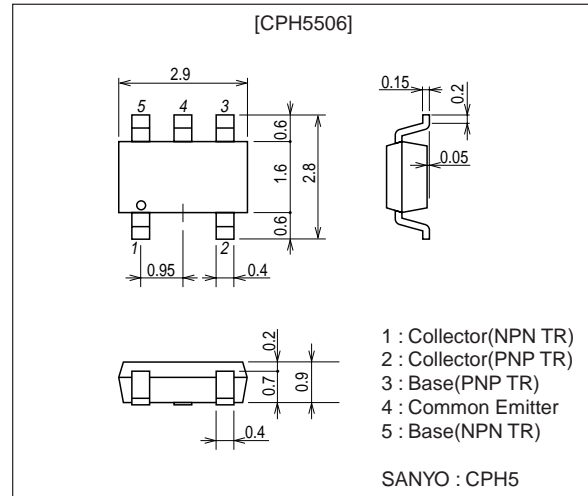
Features

- Composite type with a PNP transistor and an NPN transistor contained in one package, facilitating high-density mounting.
- The CPH5506 consists of two chips encapsulated in a package which are equivalent to the CPH3115 and the CPH3215, respectively.
- Ultrasmall package facilitate miniaturization in end products. (0.9mm mounting height)

Package Dimensions

unit : mm

2186

**Specifications**

():PNP

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

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CB0}		(-30)40	V
Collector-to-Emitter Voltage	V_{CEO}		(-30)	V
Emitter-to-Base Voltage	V_{EB0}		(-5)	V
Collector Current	I_C		(-1.5)	A
Collector Current (Pulse)	I_{CP}		(-5)	A
Base Current	I_B		(-300)	mA
Collector Dissipation	P_C	Mounted on a ceramic board (600mm ² X0.8mm)	0.9	W
Total Dissipation	P_T	Mounted on a ceramic board (600mm ² X0.8mm)	1.2	W
Junction Temperature	T_J		150	°C
Storage Temperature	T_{stg}		-55 to +150	°C

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SANYO Electric Co.,Ltd. Semiconductor Company

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

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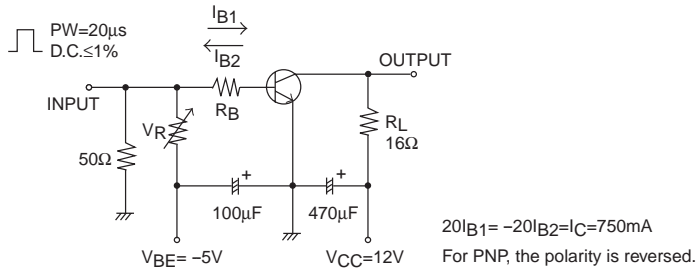
CPH5506

Electrical Characteristics at Ta=25°C

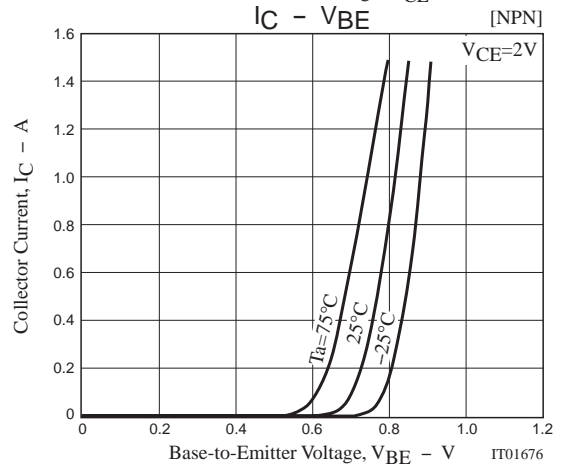
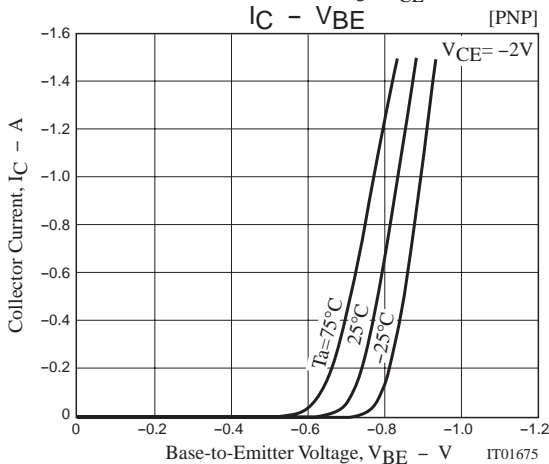
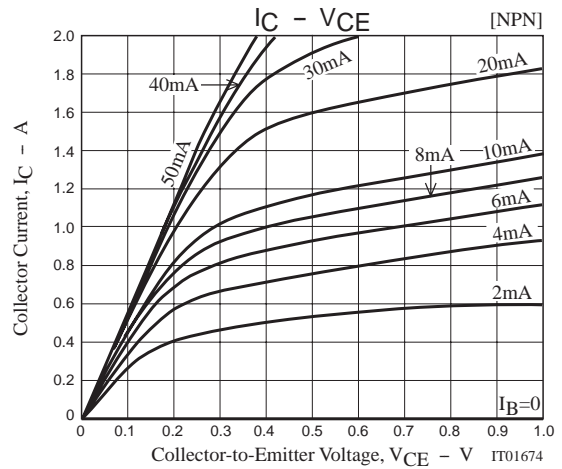
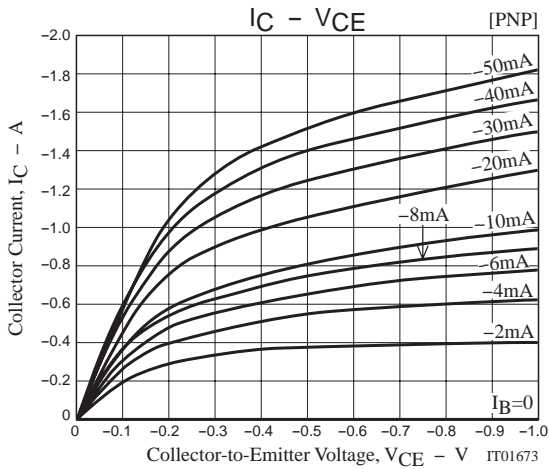
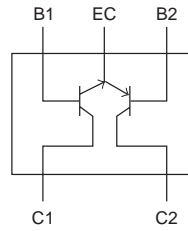
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB}=(-)30V, I_E=0$			(-)0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=(-)4V, I_C=0$			(-)0.1	μA
DC Current Gain	h_{FE}	$V_{CE}=(-)2V, I_C=(-)100mA$	200		560	
Gain Bandwidth Product	f_T	$V_{CE}=(-)10V, I_C=(-)300mA$		(450)500		MHz
Output Capacitance	C_{ob}	$V_{CB}=(-)10V, f=1MHz$		(9)8		pF
Collector-to-Emitter Saturation Voltage	$V_{CE}(sat)$	$I_C=(-)750mA, I_B=(-)15mA$		(-250)150	(-375)225	mV
Base-to-Emitter Saturation Voltage	$V_{BE}(sat)$	$I_C=(-)750mA, I_B=(-)15mA$		(-)0.85	(-)1.2	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=(-)10\mu A, I_E=0$	(-30)40			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=(-)1mA, R_{BE}=\infty$	(-)30			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=(-)10\mu A, I_C=0$	(-)5			V
Turn-ON Time	t_{on}	See specified Test Circuit		35		ns
Storage Time	t_{stg}	See specified Test Circuit		(115)205		ns
Fall Time	t_f	See specified Test Circuit		30		ns

Marking : EF

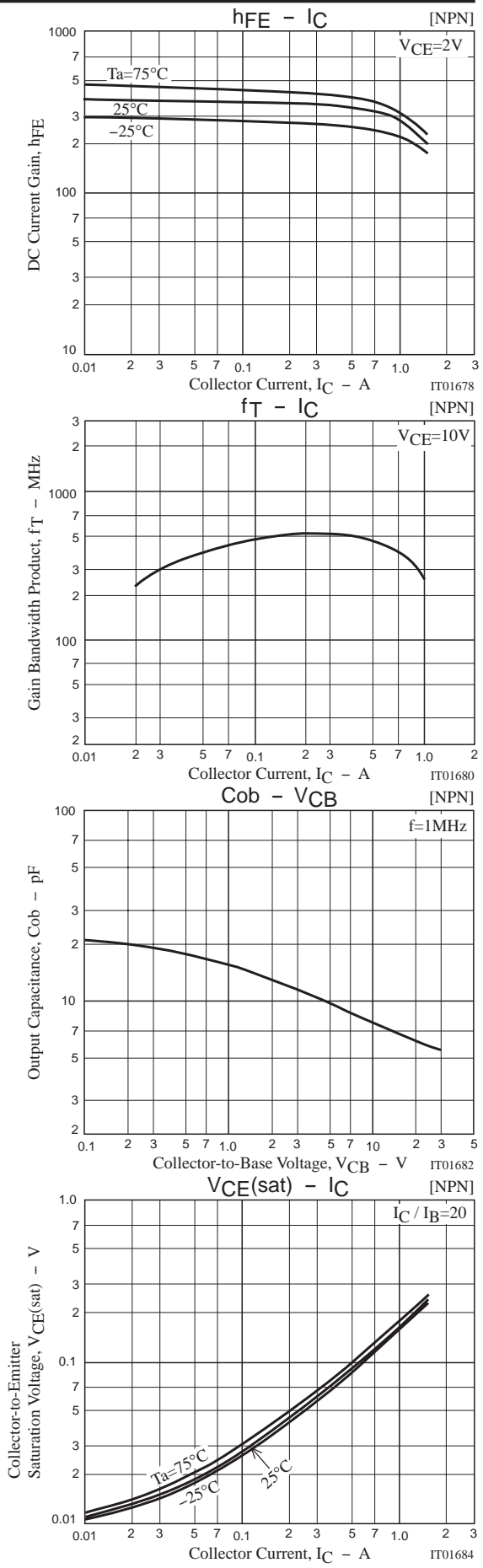
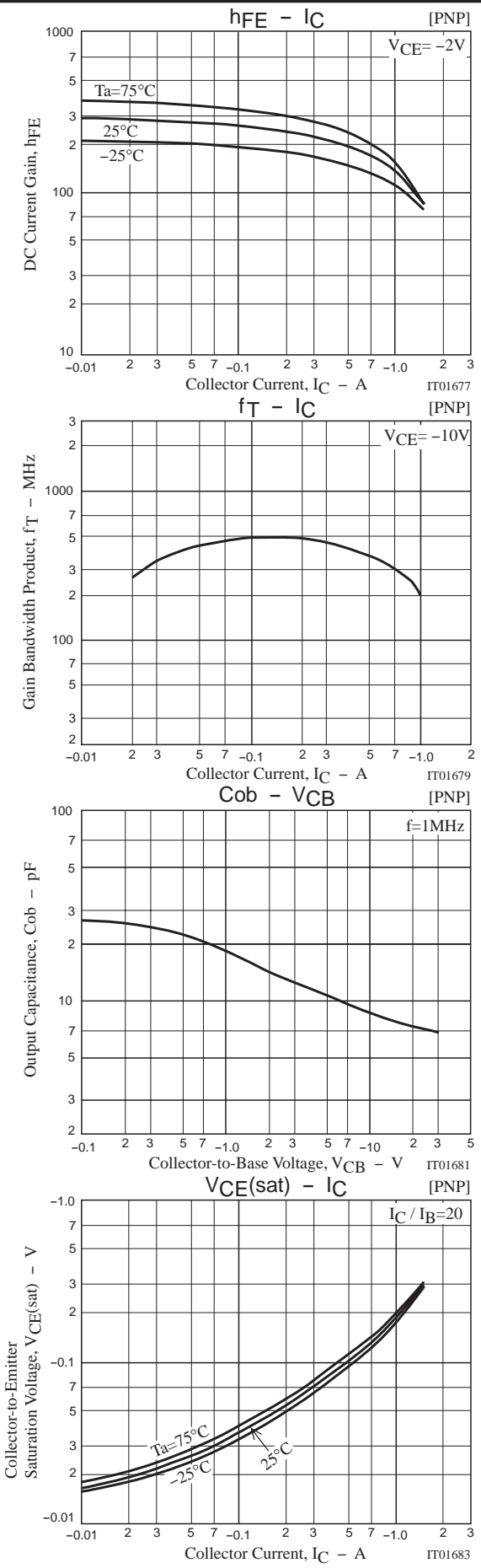
Switching Time Test Circuit



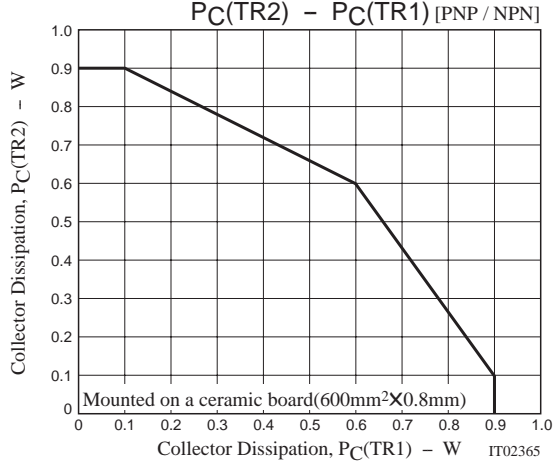
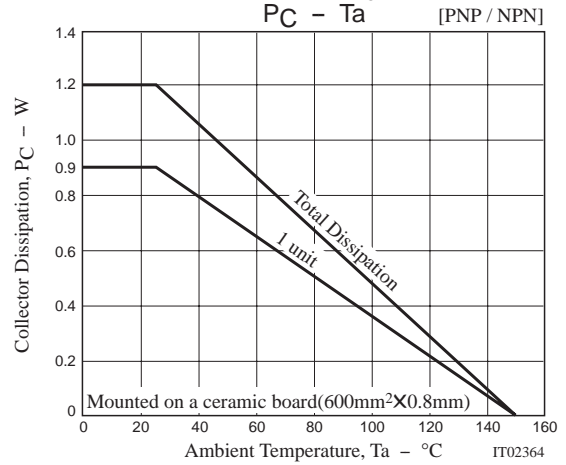
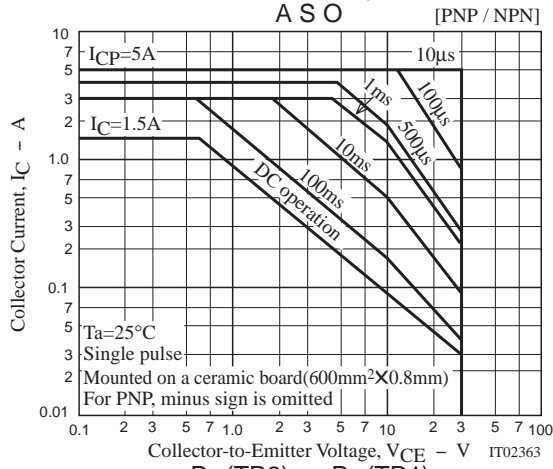
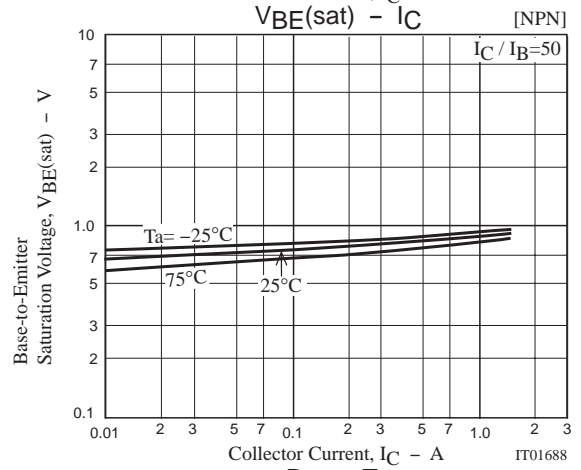
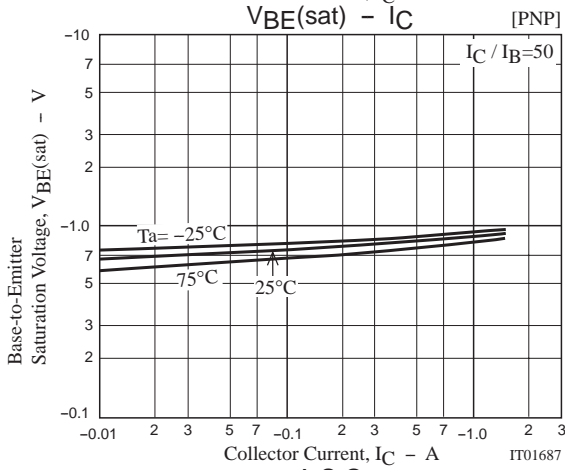
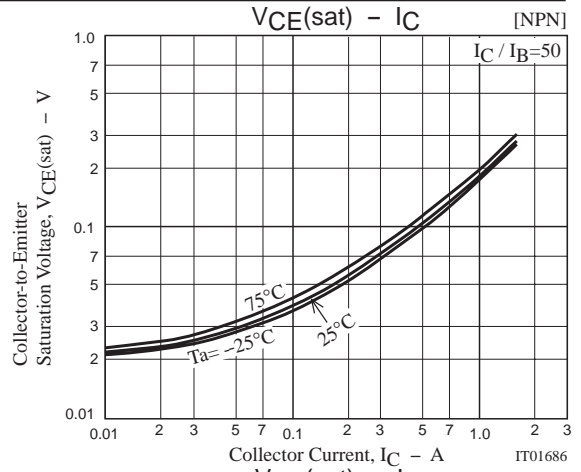
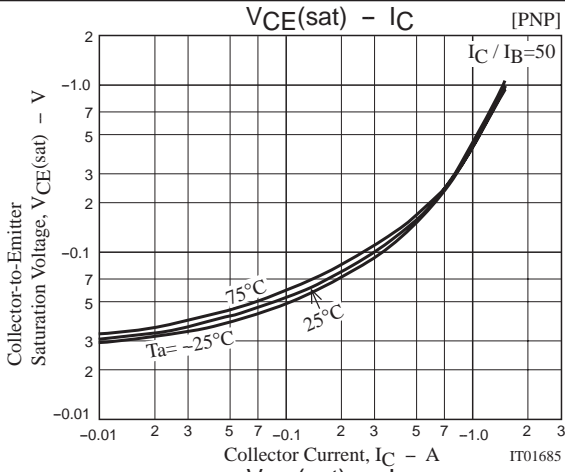
Electrical Connection



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