



CPH5506

DC / DC Converter Applications

Applications

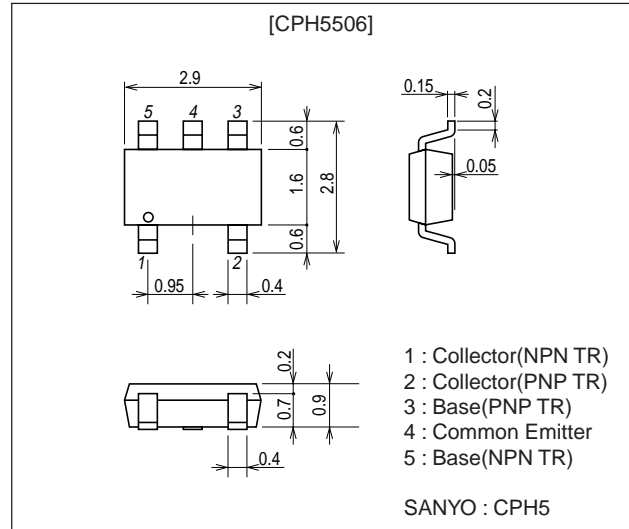
- Relay drivers, Lamp drivers, Motor drivers.

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 Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V _{CBO}		(-30)40	V
Collector-to-Emitter Voltage	V _{CEO}		(-30)	V
Emitter-to-Base Voltage	V _{EBO}		(-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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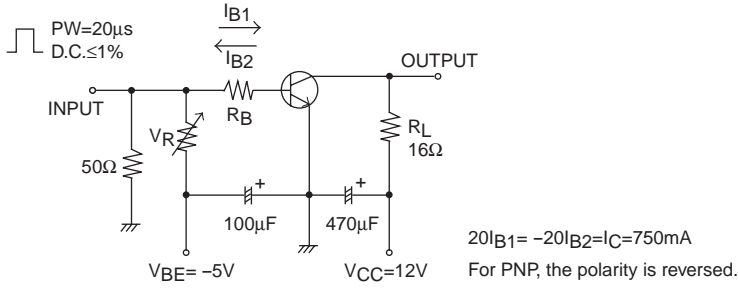
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Electrical Characteristics at $T_a=25^\circ\text{C}$

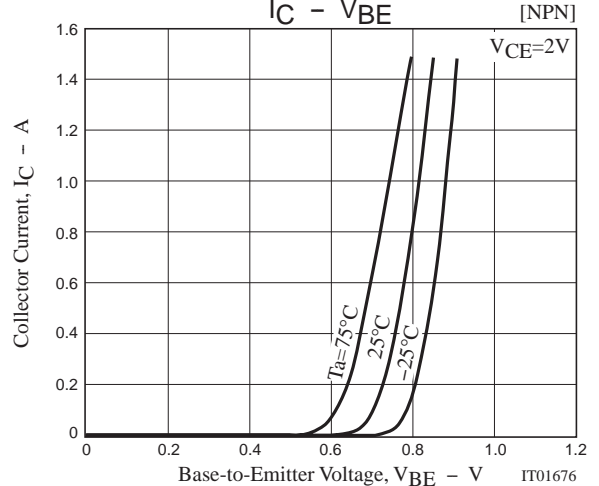
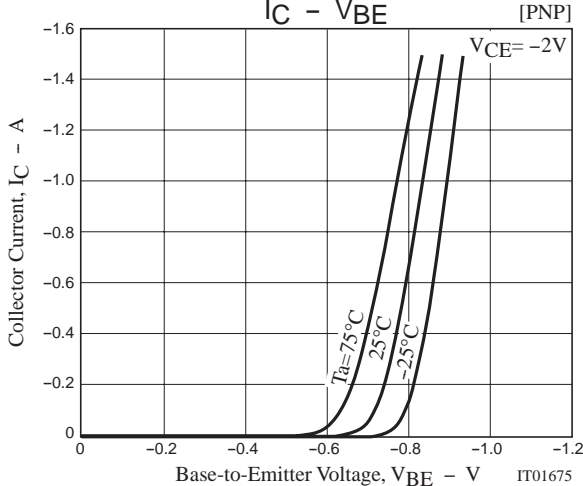
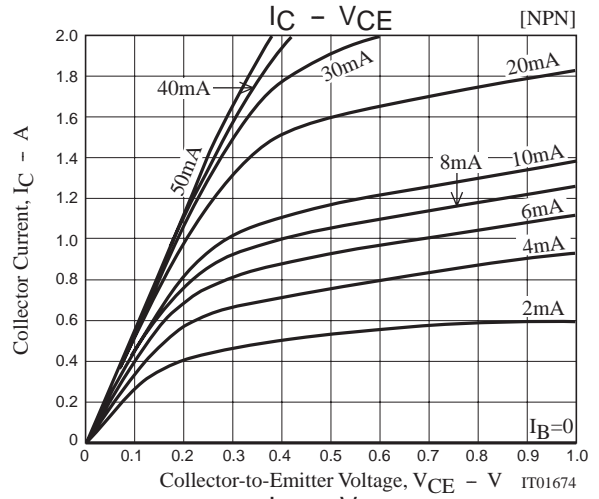
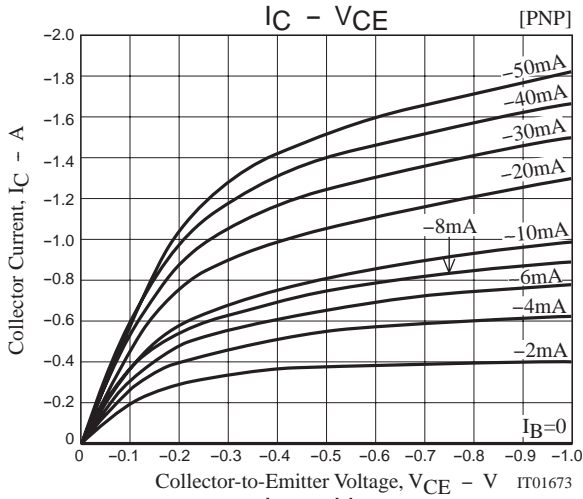
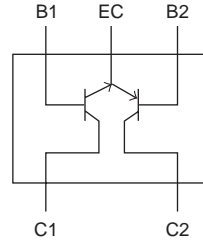
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB}=-30\text{V}, I_E=0$			(-)0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=-4\text{V}, I_C=0$			(-)0.1	μA
DC Current Gain	h_{FE}	$V_{CE}=-2\text{V}, I_C=-100\text{mA}$	200		560	
Gain Bandwidth Product	f_T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

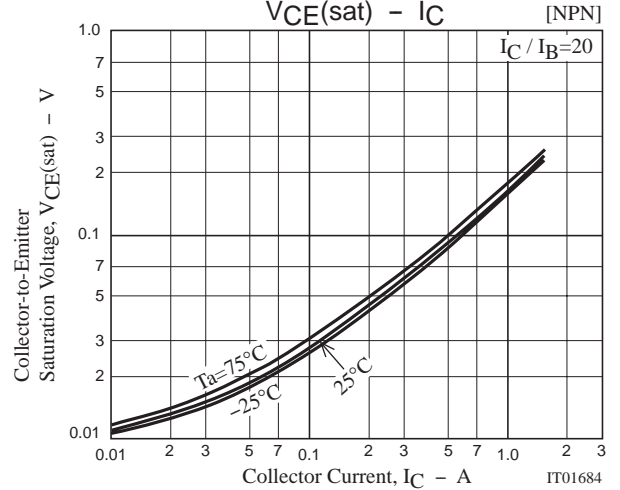
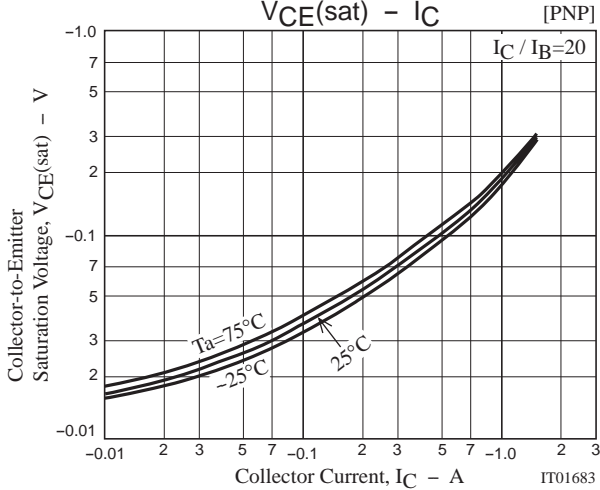
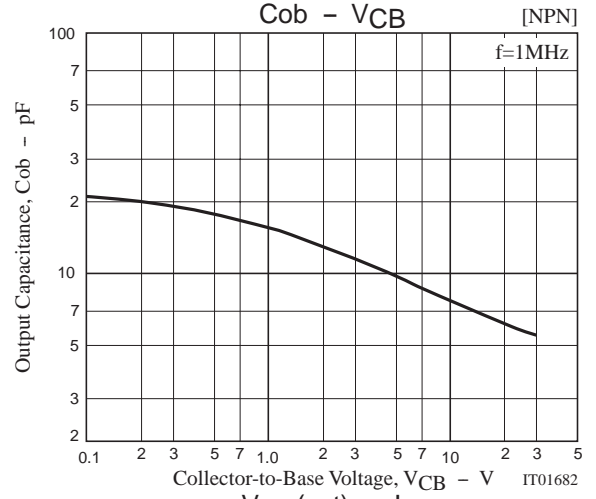
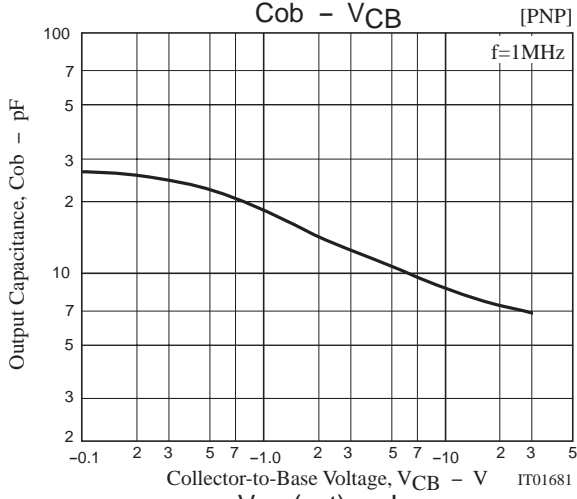
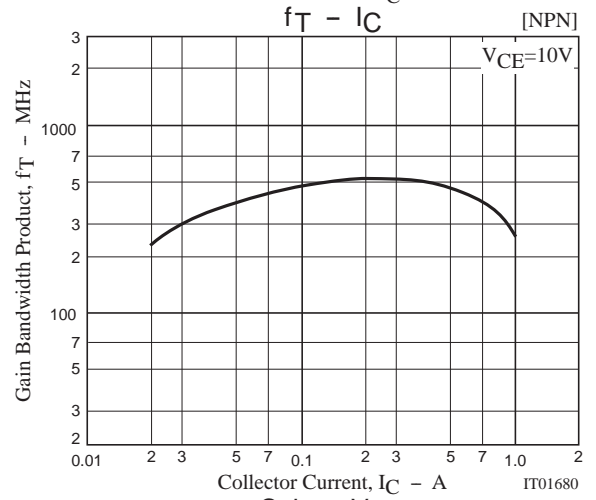
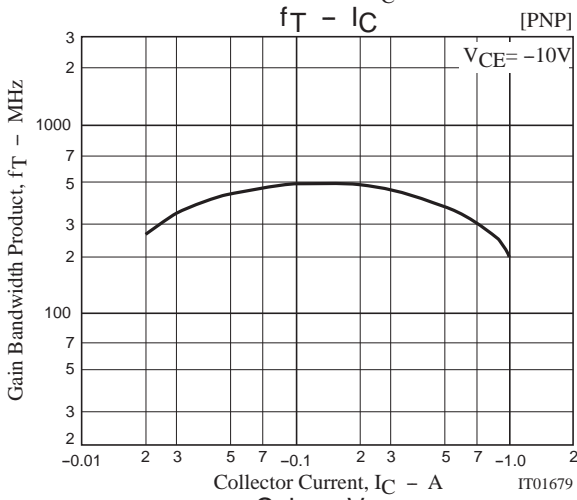
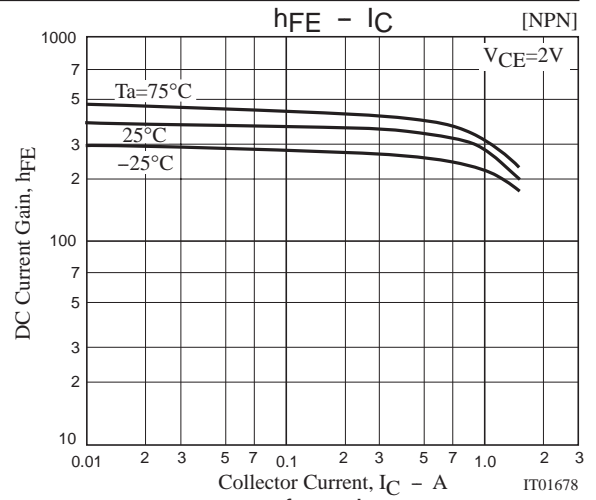
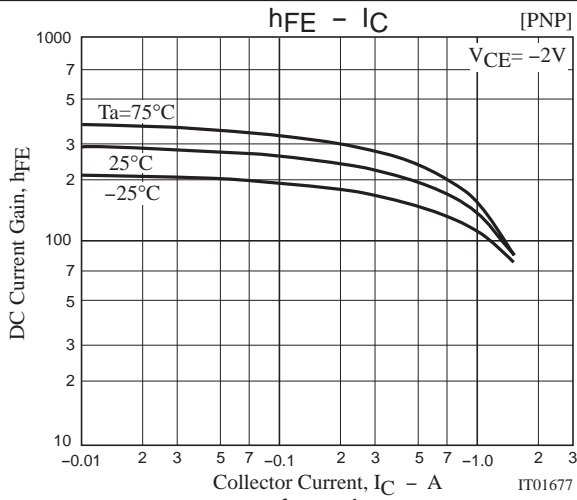
Switching Time Test Circuit



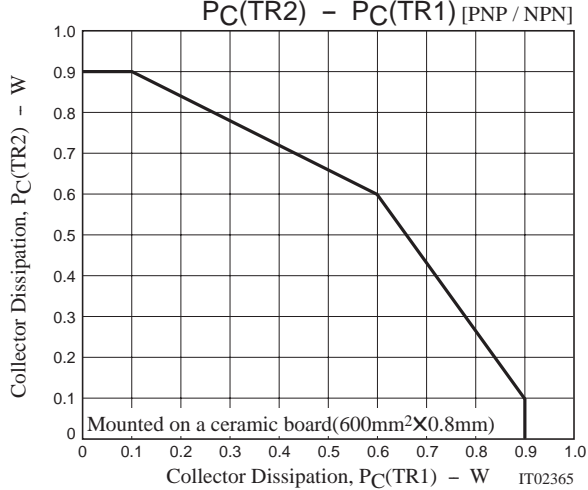
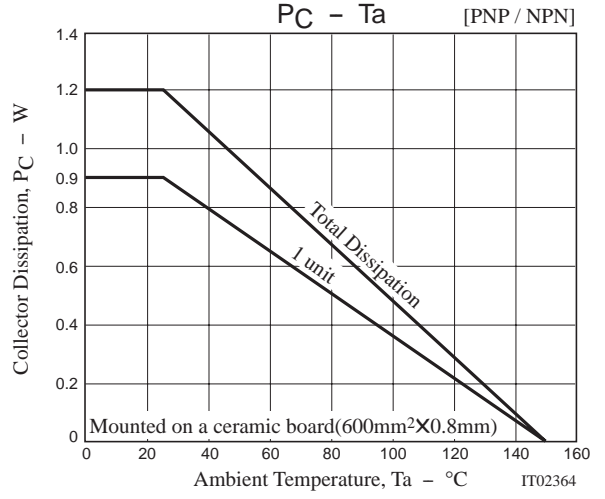
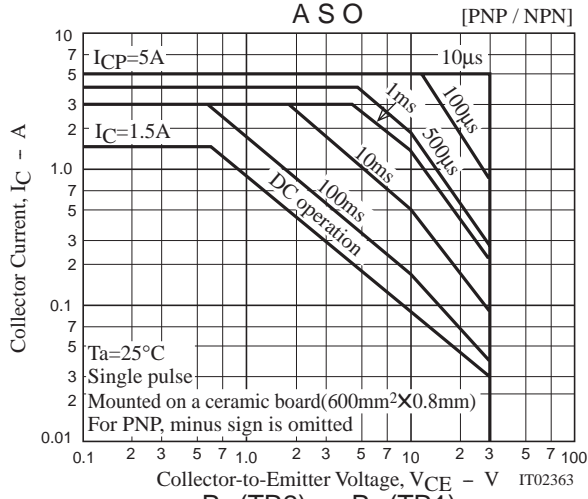
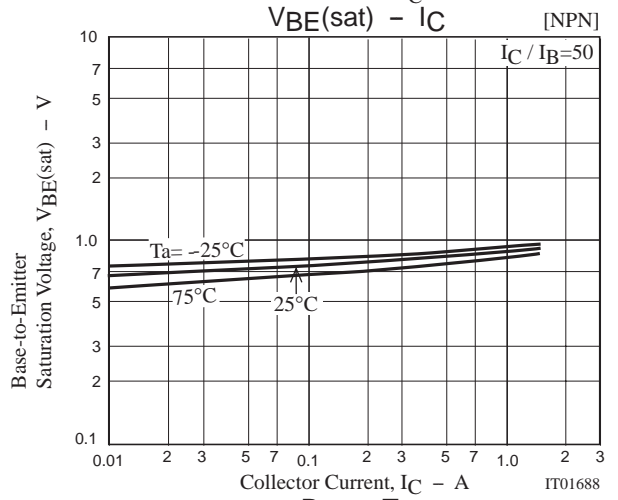
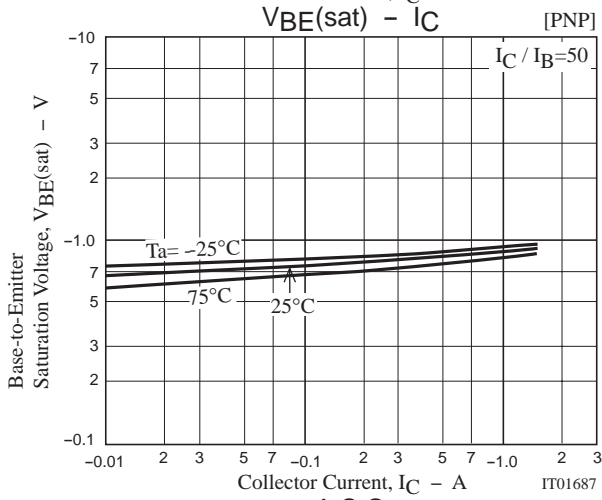
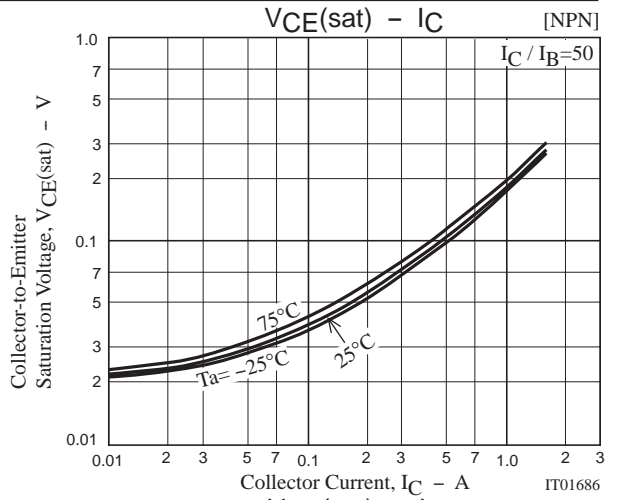
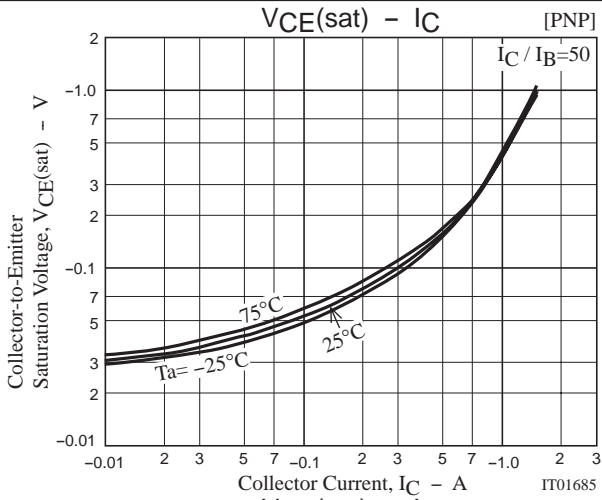
Electrical Connection



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