



# CPH5505

## Bipolar Transistor -30V, -3A, Low VCE(sat), PNP Dual CPH5

ON Semiconductor®

<http://onsemi.com>

### Applications

- Relay drivers, lamp drivers, motor drivers, flash

### Features

- Composite type with two PNP transistors contained in a single package facilitating high-density mounting
- The CPH5505 consists of two chips which are equivalent to the CPH3109 encapsulated in a package
- Ultrasmall package facilitates miniaturization in end products (mounting height : 0.9mm)

### Specifications

#### Absolute Maximum Ratings at Ta=25°C

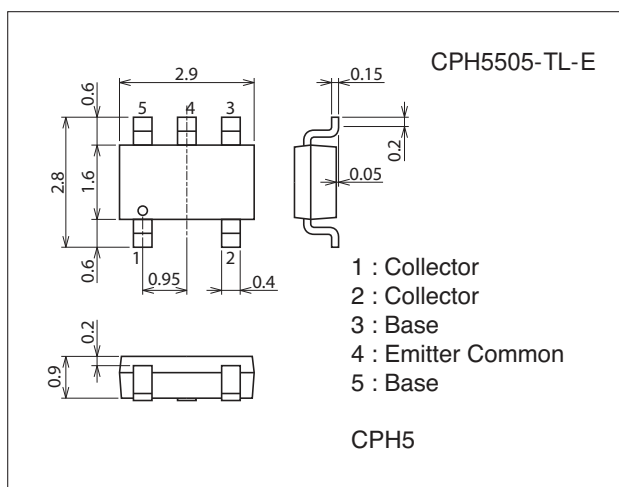
Parameter	Symbol	Conditions	Ratings	Unit
Collector to Base Voltage	V <sub>CBO</sub>		-30	V
Collector to Emitter Voltage	V <sub>CEO</sub>		-30	V
Emitter to Base Voltage	V <sub>EBO</sub>		-5	V
Collector Current	I <sub>C</sub>		-3	A
Collector Current (Pulse)	I <sub>CP</sub>		-5	A
Base Current	I <sub>B</sub>		-600	mA
Collector Dissipation	P <sub>C</sub>	When mounted on ceramic substrate (600mm <sup>2</sup> ×0.8mm)	0.9	W
Total Dissipation	P <sub>T</sub>	When mounted on ceramic substrate (600mm <sup>2</sup> ×0.8mm)	1.2	W
Junction Temperature	T <sub>J</sub>		150	°C
Storage Temperature	T <sub>stg</sub>		-55 to +150	°C

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

### Package Dimensions

unit : mm (typ)

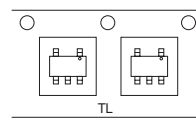
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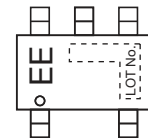
### Product & Package Information

- Package : CPH5
- JEITA, JEDEC : SC-74A, SOT-25
- Minimum Packing Quantity : 3,000 pcs./reel

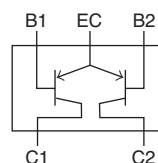
### Packing Type : TL



### Marking



### Electrical Connection

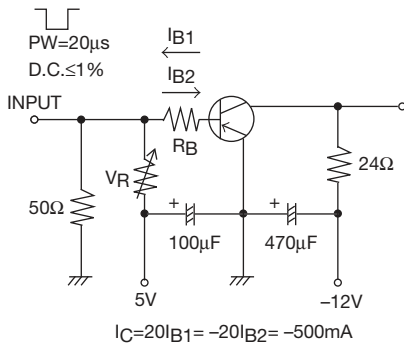


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## Electrical Characteristics at Ta=25°C

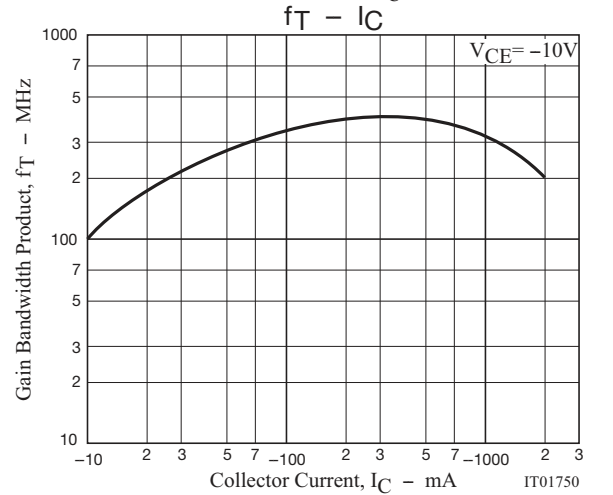
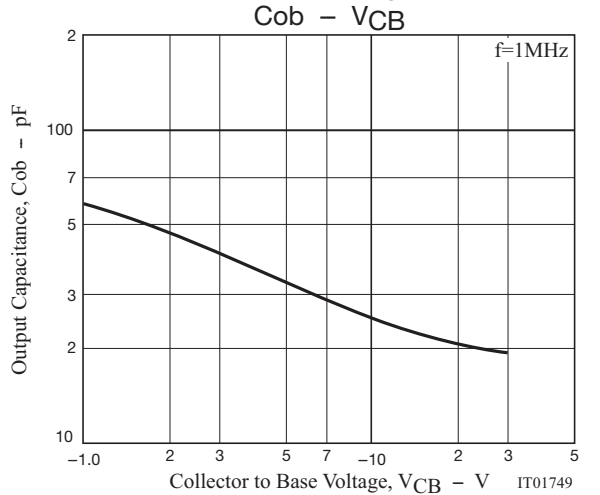
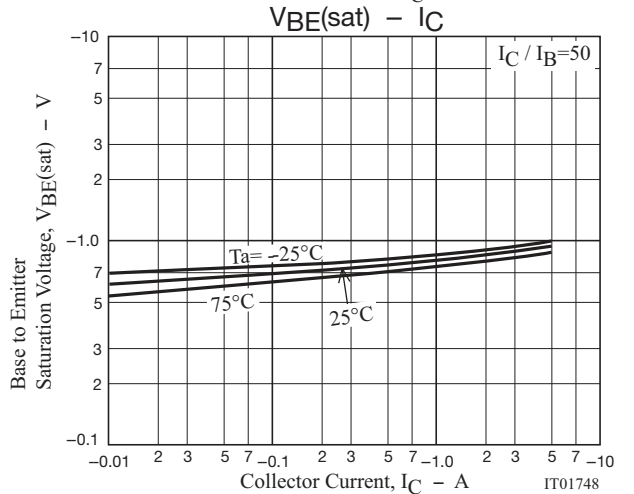
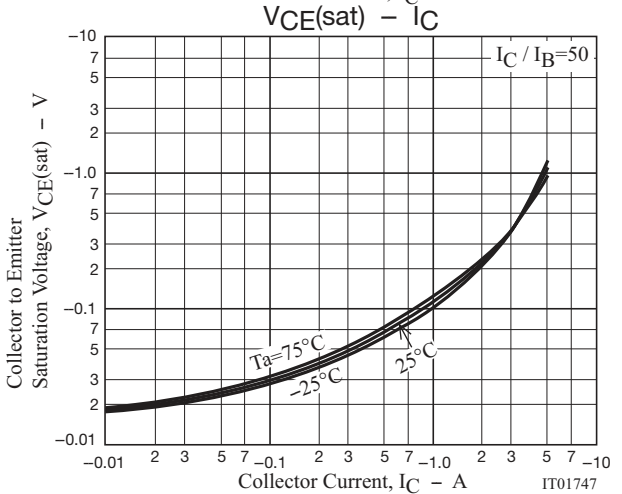
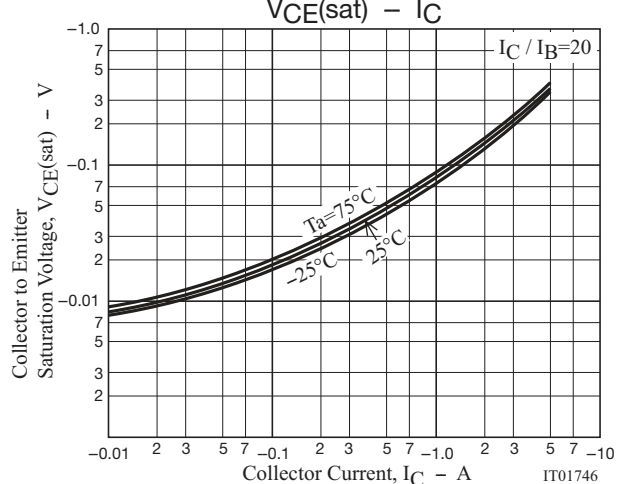
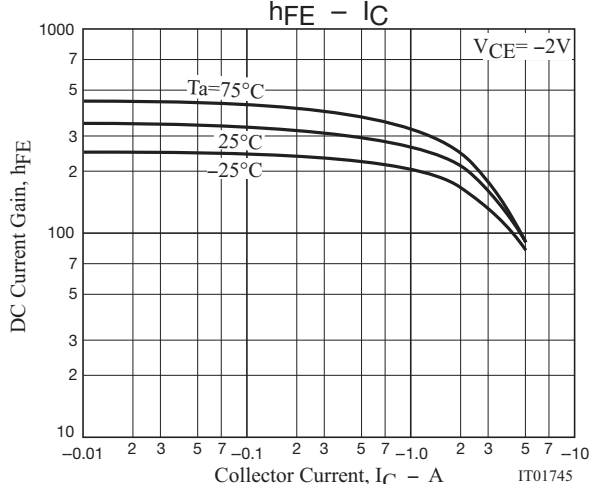
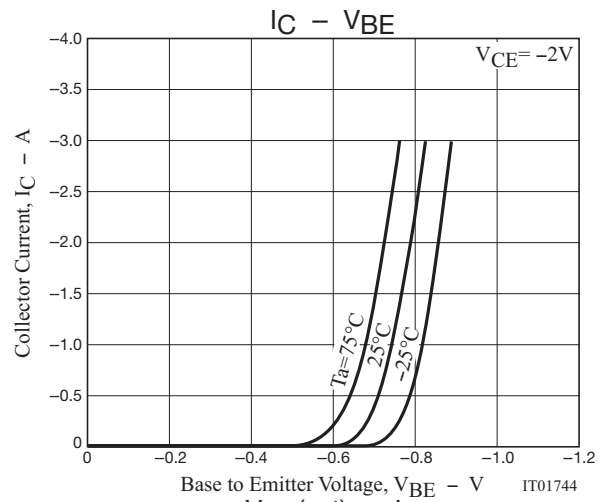
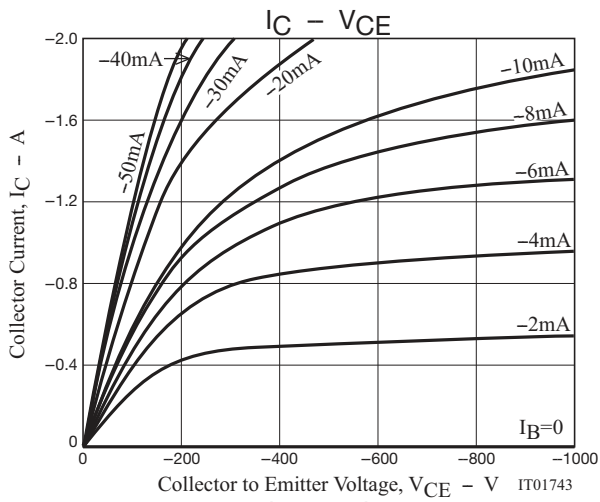
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	$I_{CBO}$	$V_{CB} = -30V, I_E = 0A$			-0.1	$\mu A$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = -4V, I_C = 0A$			-0.1	$\mu A$
DC Current Gain	$h_{FE}$	$V_{CE} = -2V, I_C = -500mA$	200		560	
Gain-Bandwidth Product	$f_T$	$V_{CE} = -10V, I_C = -500mA$		380		MHz
Output Capacitance	Cob	$V_{CB} = -10V, f = 1MHz$		25		pF
Collector to Emitter Saturation Voltage	$V_{CE(sat)1}$	$I_C = -1.5A, I_B = -30mA$		-155	-230	mV
	$V_{CE(sat)2}$	$I_C = -1.5A, I_B = -75mA$		-105	-155	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 Base 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	$t_{stg}$			270		ns
Turn-OFF Time	$t_f$			25		ns

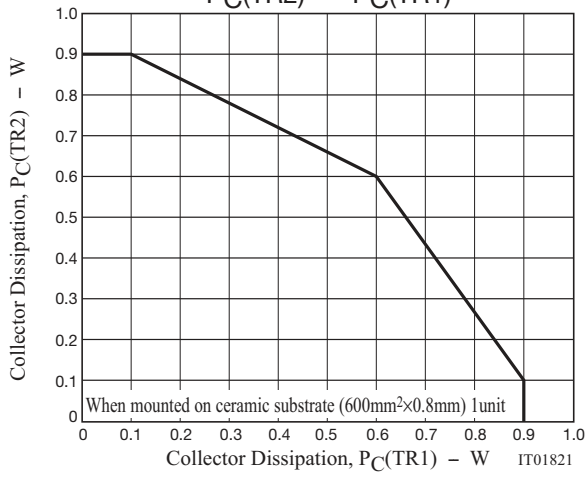
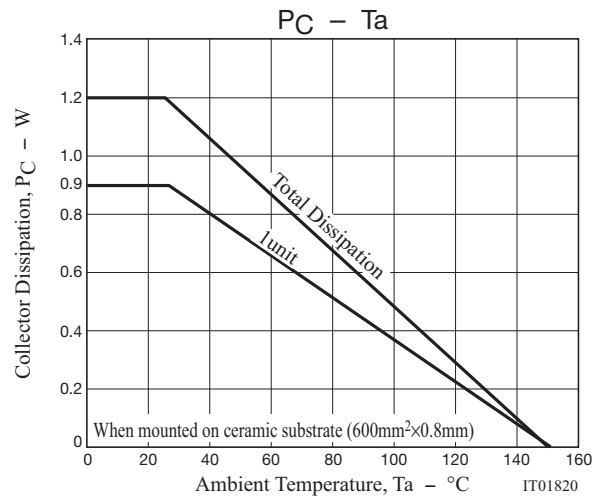
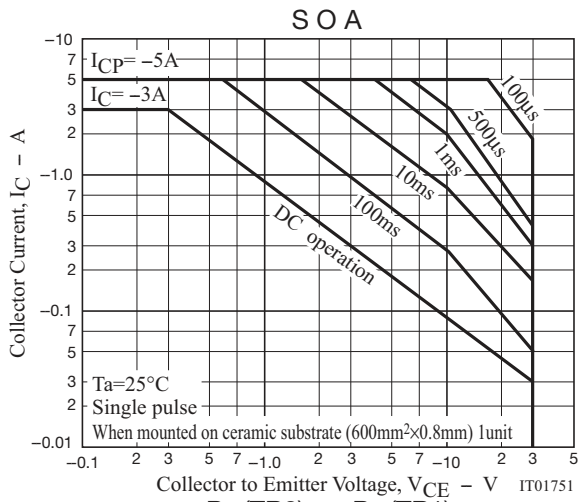
## Switching Time Test Circuit



## Ordering Information

Device	Package	Shipping	memo
CPH5505-TL-E	CPH5	3,000pcs./reel	Pb Free

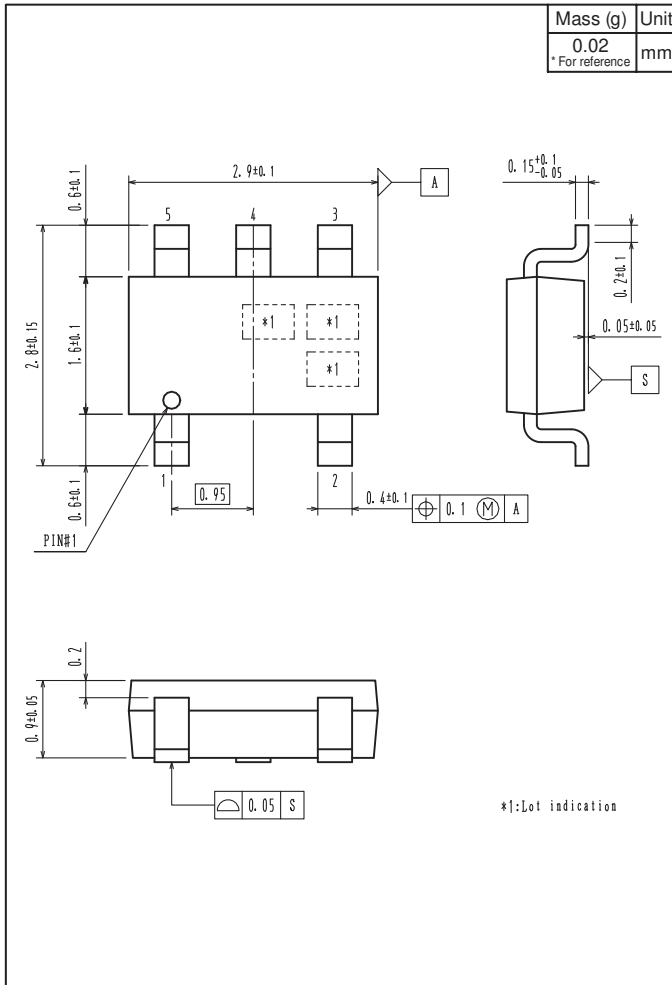




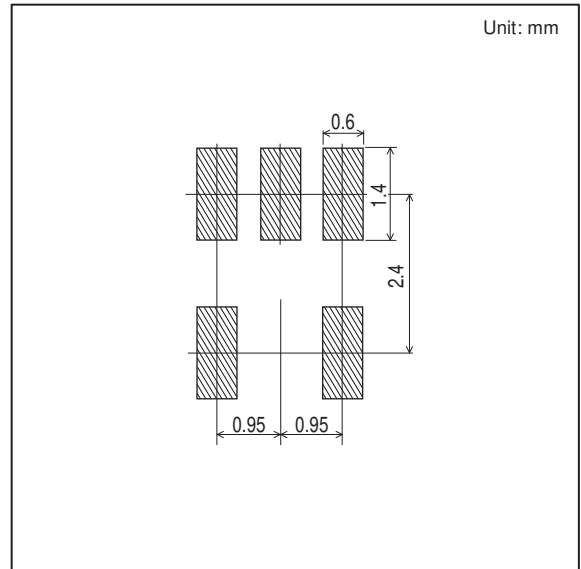
# CPH5505

## Outline Drawing

CPH5505-TL-E



## Land Pattern Example



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