Ordering number : EN7225B

CPH6122

Bipolar Transistor
−30V, −3A, Low V_{CE}(sat), PNP Single CPH6

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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

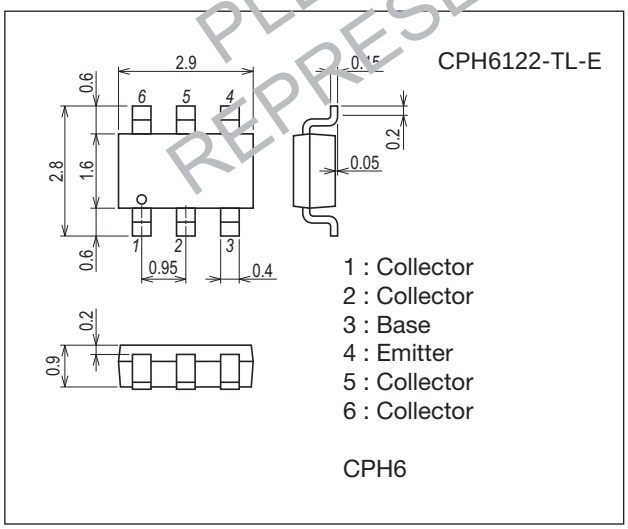
Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		-30	V
Collector-to-Emitter Voltage	V_{CEO}		-30	V
Emitter-to-Base Voltage	V_{EBO}		-5	V
Collector Current	I_C		-3	A
Collector Current (Pulse)	I_{CP}		-5	A
Base Current	I_B		-600	mA
Collector Dissipation	P_C	Mounted on a ceramic board (600mm²×0.8mm)	1.3	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-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.

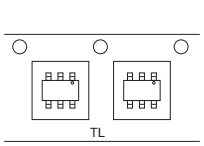
Package Dimensions
unit : mm (typ)
7018A-002



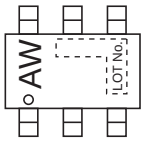
Product & Package Information

- Package : CPH6
- JEITA, JEDEC : SC-74, SOT-26, SOT-457
- Minimum Packing Quantity : 3,000 pcs./reel

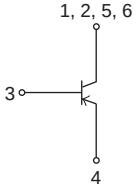
Packing Type: TL



Marking



Electrical Connection

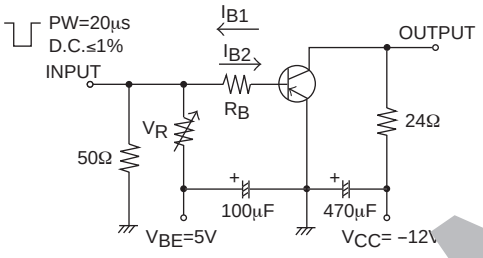


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Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	V_{CB}= -30V, I_E=0A			-0.1	μA
Emitter Cutoff Current	I_{EBO}	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	Cob	V_{CB}= -10V, f=1MHz		25		pF
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= -10μA, I_E=0A	-30			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C= -1mA, R_{BE}=∞	-30			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E= -10μA, I_C=0A	-5			V
Turn-On Time	t_{on}	See specified Test Circuit.		50		ns
Storage Time	t_{stg}			270		ns
Fall Time	t_f					ns

Switching Time Test Circuit

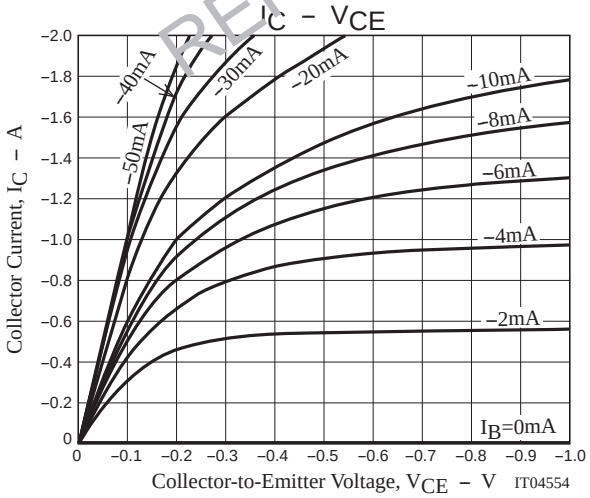


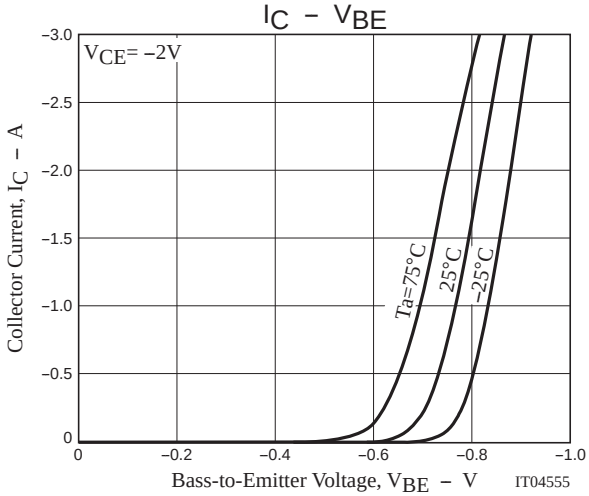
$-20I_B1=20I_B2=I_C=-5$

Ordering Information

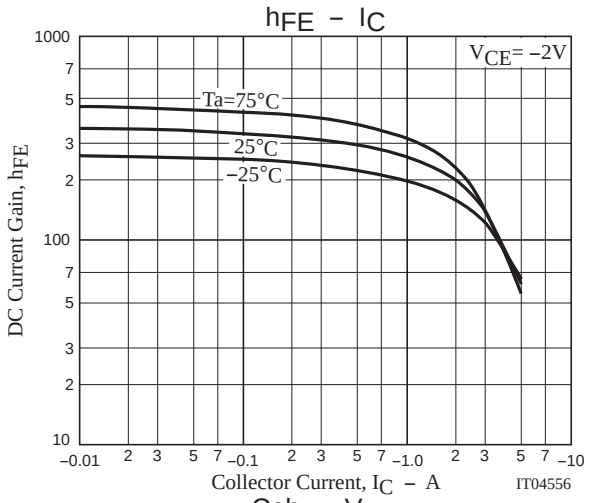
Device	Package	Shipping	memo
CPH61 TL	CPH6	3,000pcs./reel	Pb Free

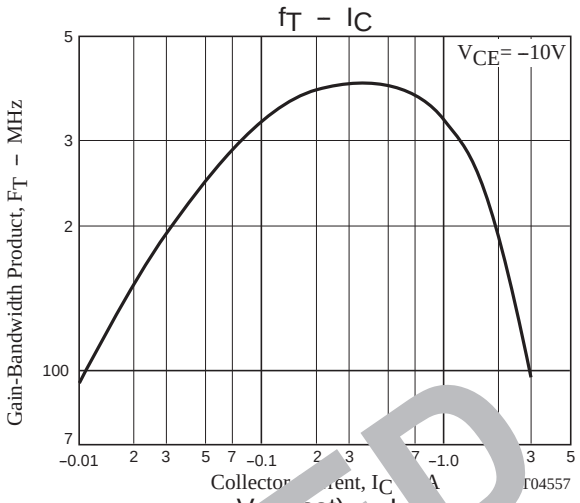
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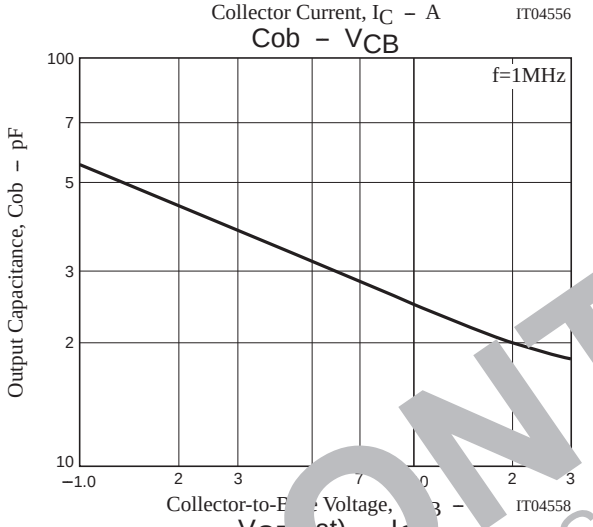


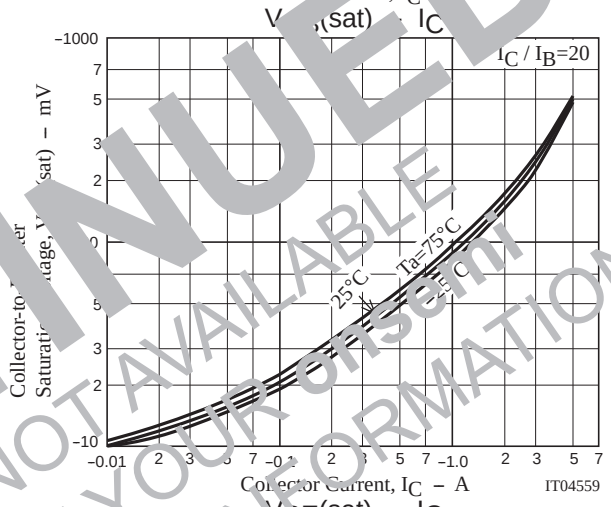


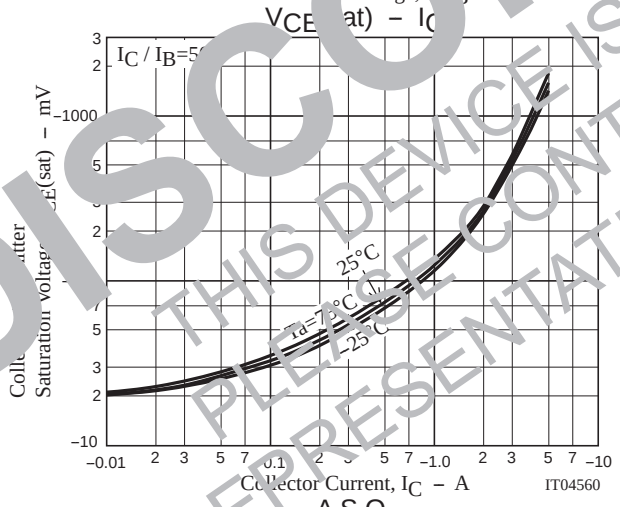
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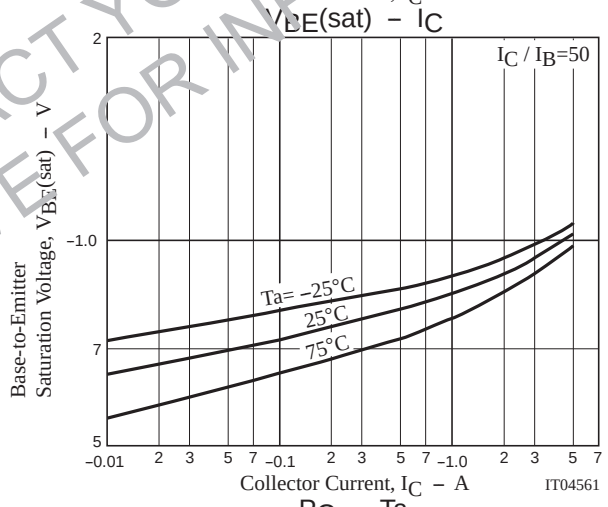


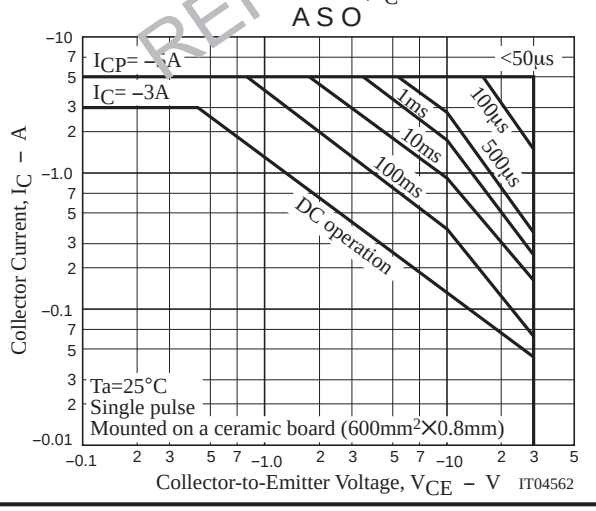


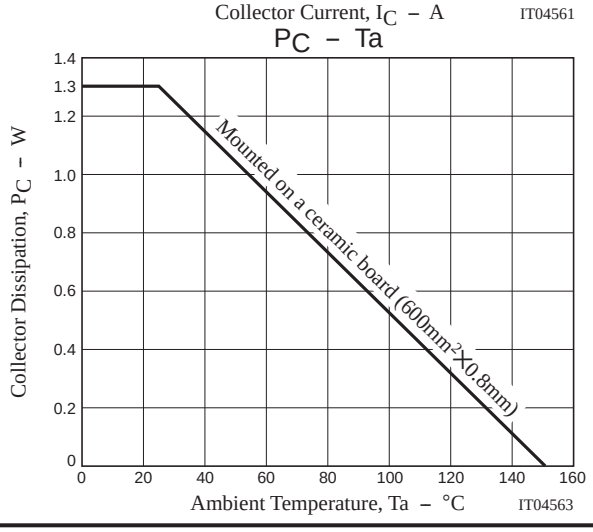












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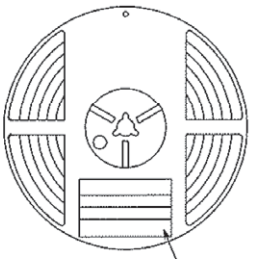
Embossed Taping Specification

CPH6122-TL-E

1. Packing Format

Package Name	Carrier Tape Type	Maximum Number of devices contained (pcs)			Packing format	
		Reel	Inner box	Outer box	Inner BOX (C-1)	Outer BOX (A-7)
CPH6	CPH6	3,000	15,000	90,000	5 reels contained Dimensions:mm (external) 183×72×185	6 inner boxes contained Dimensions:mm (external) 440×195×210

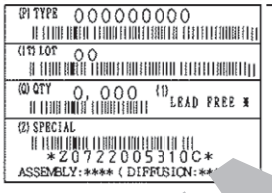
Packing method



Reel label

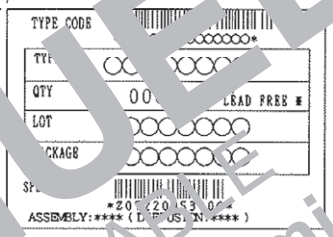
Reel label, Inner box label

(unit:mm)



Outer box label

It is a label at the time of factory shipment. The form of a label may change in the physical distribution process.



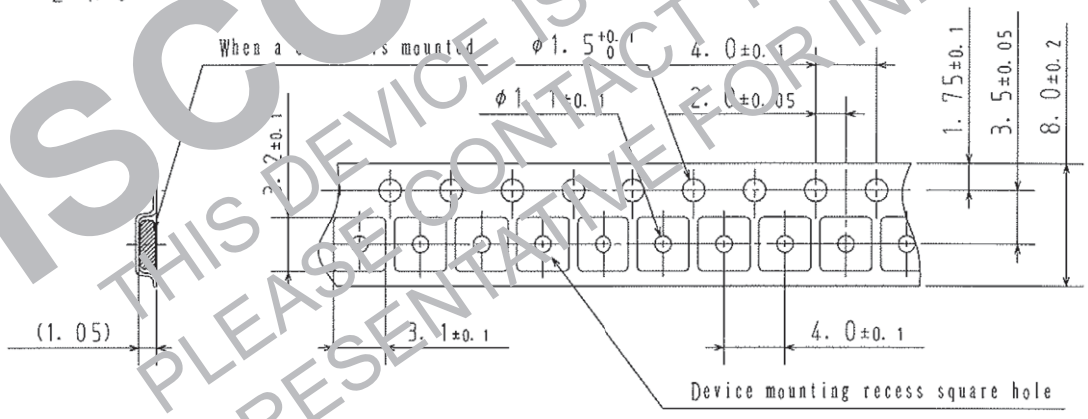
NOTE (1)

The LEAD FREE ※ description shows that the surface treatment of the terminal is lead free.

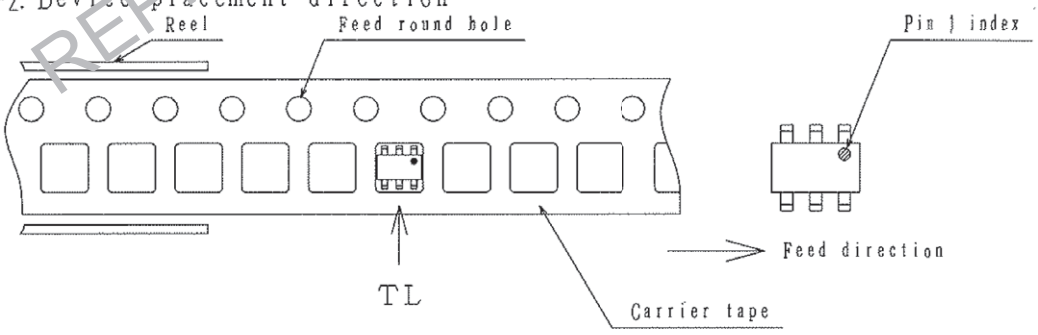
Label	JEITA Phase
LEAD FREE	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

2. Taping configuration

2-1. Carrier tape size (unit:mm)



2-2. Device placement direction



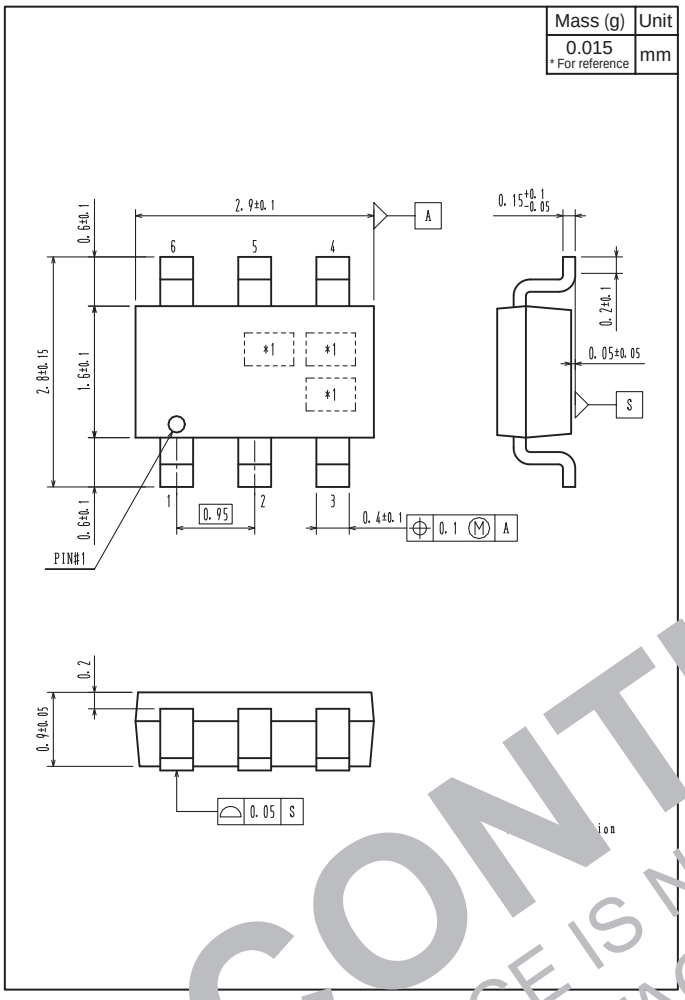
Those with pin 1 index on the feed hole side·····TL

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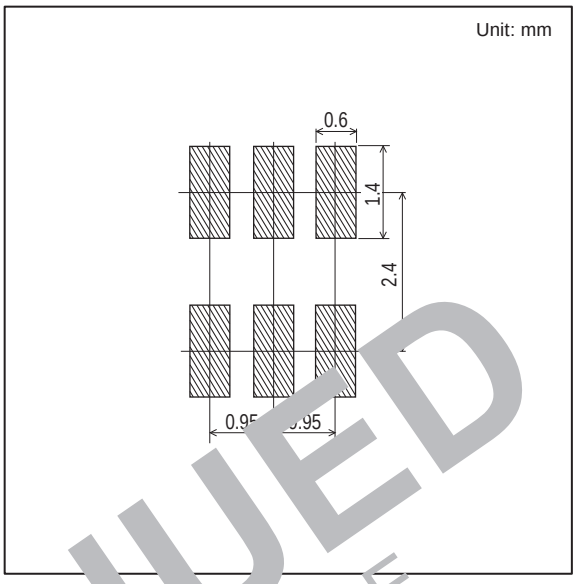
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Outline Drawing

CPH6122-TL-E



Land Pattern Example



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