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CPH6532

Bipolar Transistor 50V, 1A, Low $V_{CE(sat)}$ NPN Dual CPH6

Applications

- Relay drivers, lamp drivers, motor drivers, flash

Features

- Composite type with two NPN transistors contained in one package facilitating high-density mounting
- The two chips contained are equivalent to the CPH3216
- Ultrasmall package permitting applied sets to be small and slim

Specifications

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

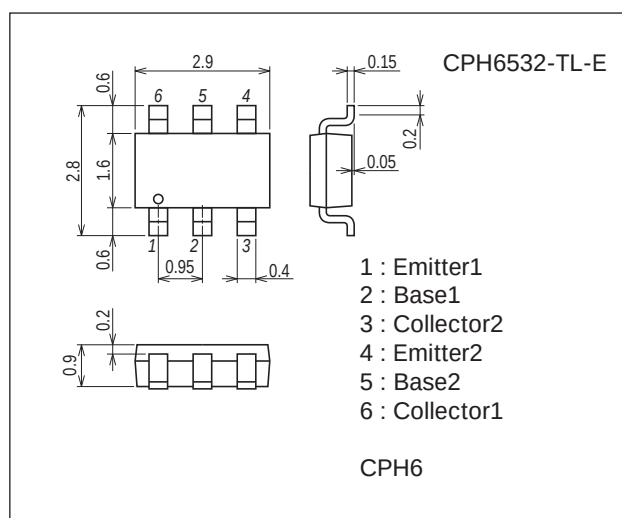
Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		80	V
Collector-to-Emitter Voltage	V_{CES}		80	V
Collector-to-Emitter Voltage	V_{CEO}		50	V
Emitter-to-Base Voltage	V_{EBO}		5	V
Collector Current	I_C		1.0	A
Collector Current (Pulse)	I_{CP}		2	A
Base Current	I_B		200	mA
Collector Dissipation	P_C	When mounted on ceramic substrate (600mm ² ×0.8mm) 1unit	0.9	W
Total Power Dissipation	P_T	When mounted on ceramic substrate (600mm ² ×0.8mm)	1.1	W
Junction Temperature	T_j		150	°C
Storage Temperature	T_{stg}		-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)

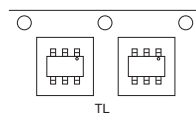
7018A-006



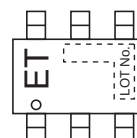
Product & Package Information

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

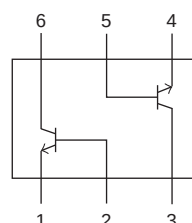
Packing Type: TL



Marking



Electrical Connection

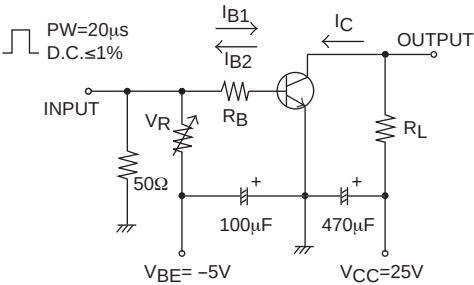


CPH6532

Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	ICBO	V _{CB} =40V, I _E =0A			0.1	μA
Emitter Cutoff Current	IEBO	V _{EB} =4V, I _C =0A			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		420		MHz
Output Capacitance	Cob	V _{CB} =10V, f=1MHz		6		pF
Collector-to-Emitter Saturation Voltage	V _{CE(sat)1}	I _C =500mA, I _B =10mA		130	190	mV
	V _{CE(sat)2}	I _C =300mA, I _B =6mA		90	135	mV
Base-to-Emitter Saturation Voltage	V _{BE(sat)}	I _C =500mA, I _B =10mA		0.81	1.2	V
Collector-to-Base Breakdown Voltage	V(BR)CBO	I _C =10μA, I _E =0A	80			V
Collector-to-Emitter Breakdown Voltage	V(BR)CES	I _C =100μA, R _{BE} =0Ω	80			V
Collector-to-Emitter Breakdown Voltage	V(BR)CEO	I _C =1mA, R _{BE} =∞	50			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.		38		ns
Storage Time	t _{stg}			332		ns
Fall Time	t _f			40		ns

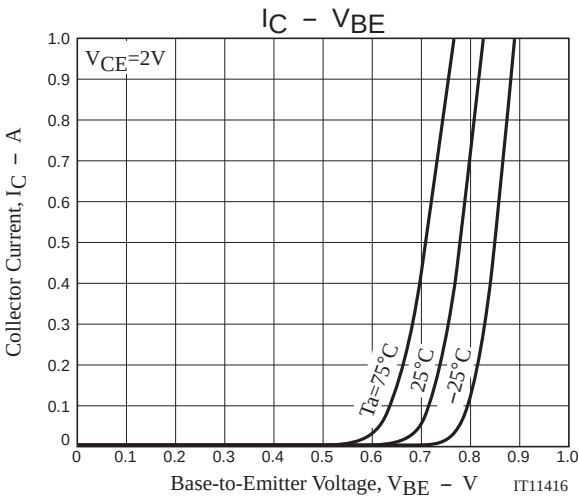
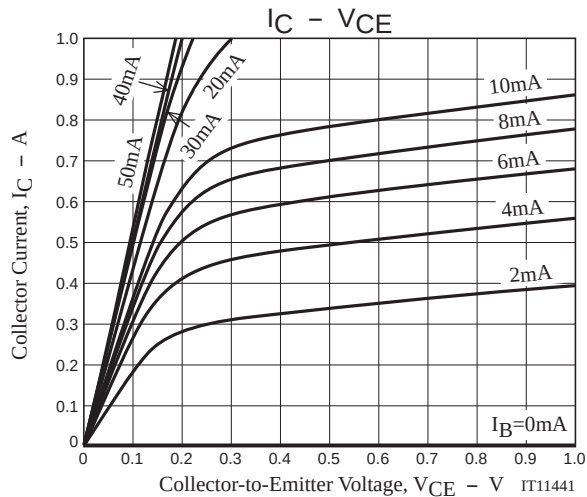
Switching Time Test Circuit

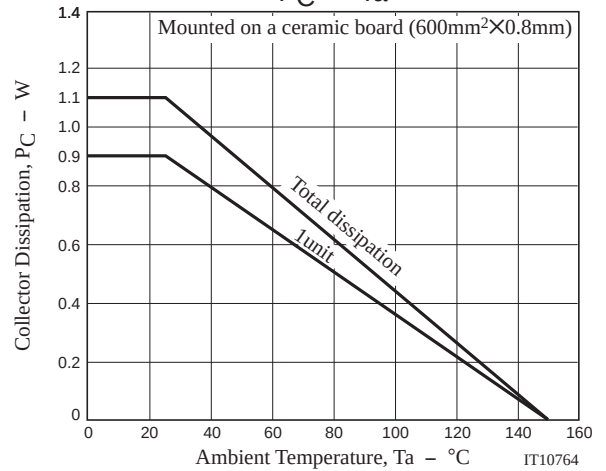
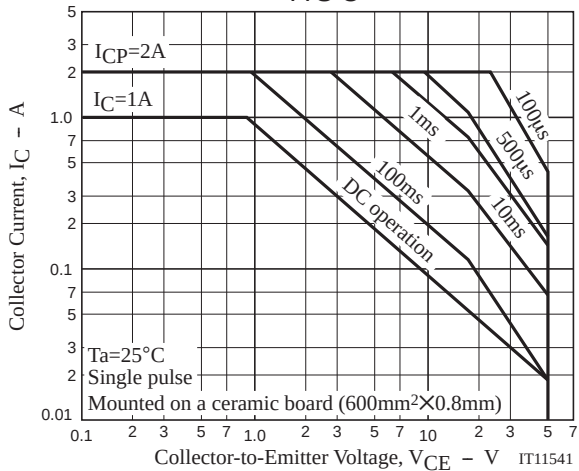
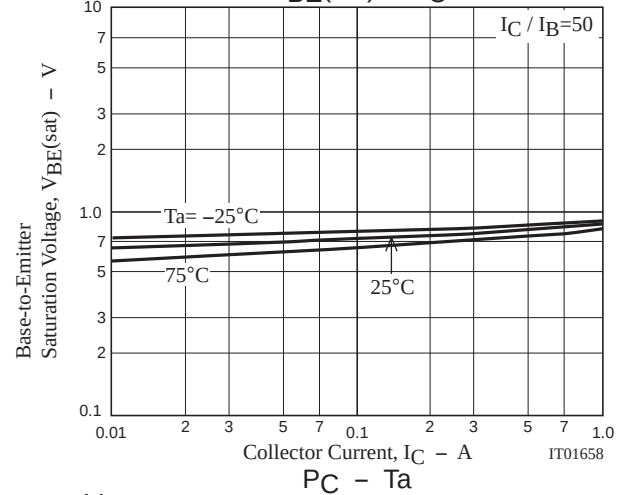
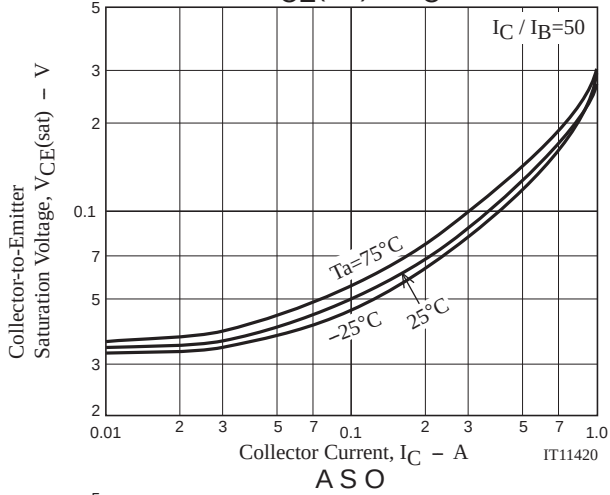
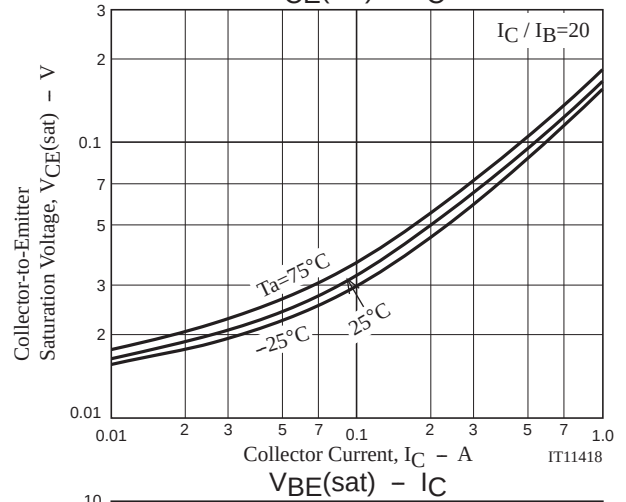
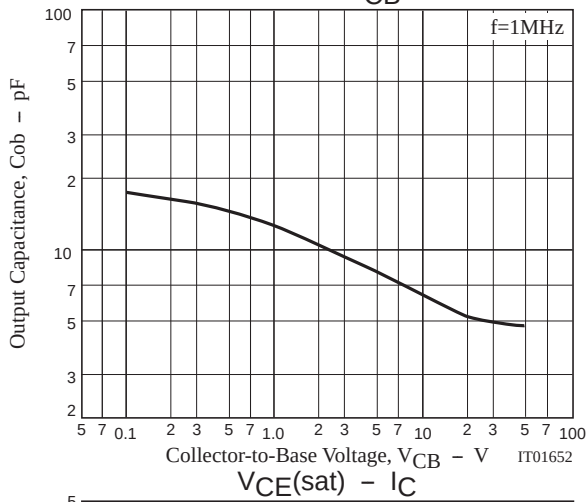
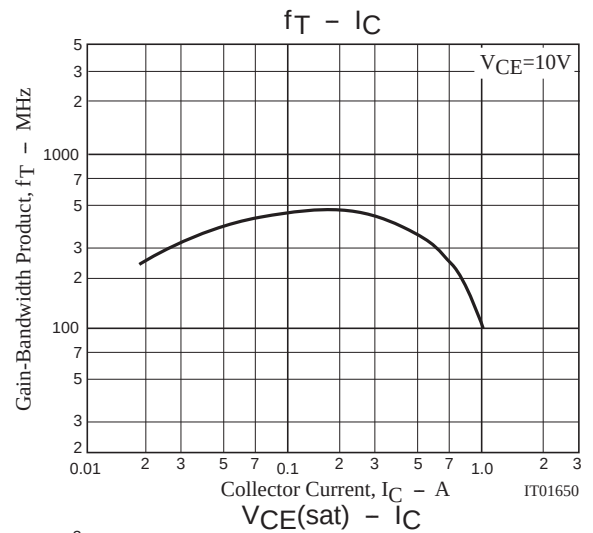
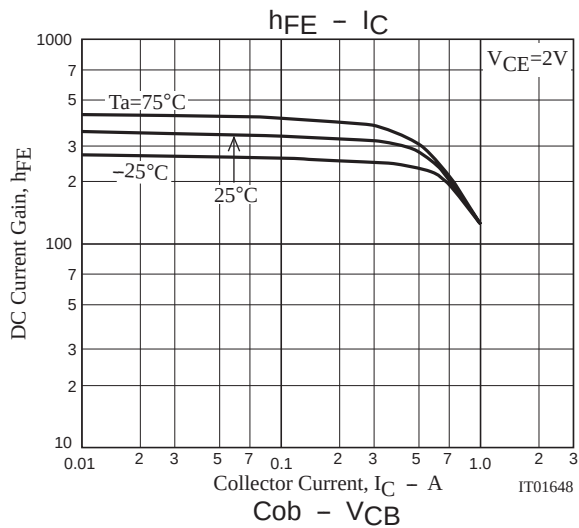


$20I_{B1} = -20I_{B2} = I_C = 500\text{mA}$

Ordering Information

Device	Package	Shipping	memo
CPH6532-TL-E	CPH6	3,000pcs./reel	Pb Free





Embossed Taping Specification

CPH6532-TL-E

1. Packing Format

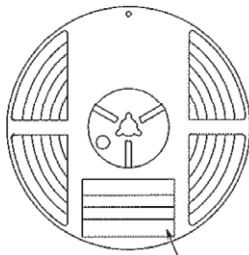
Package Name	Carrier Tape Type	Maximum Number of devices contained (pcs)			Packing format	
		Reel	Inner box	Outer box	Inner BOX (C-1)	Outer BOX (A-7)
CPH6	CPH6	3,000	15,000	90,000	5 reels contained Dimensions:mm (external) 183×72×185	6 inner boxes contained Dimensions:mm (external) 440×195×210

Reel label, Inner box label
(unit:mm)

Outer box label

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

Packing method



Reel label

Type No.
LOT No.
Quantity
Origin

PI TYPE	000000000
LOT	00
QTY	0,000 (1) LEAD FREE *
SPECIAL	*20722005310C*
ASSEMBLY	**** (DIFFUSION:****)

TYPE CODE	*****
TYPE	*****
QTY	0,000 PCS (1) LEAD FREE *
LOT	*****
PACKAGE	*****
SPECIAL	*20722005310C*
ASSEMBLY	**** (DIFFUSION:****)

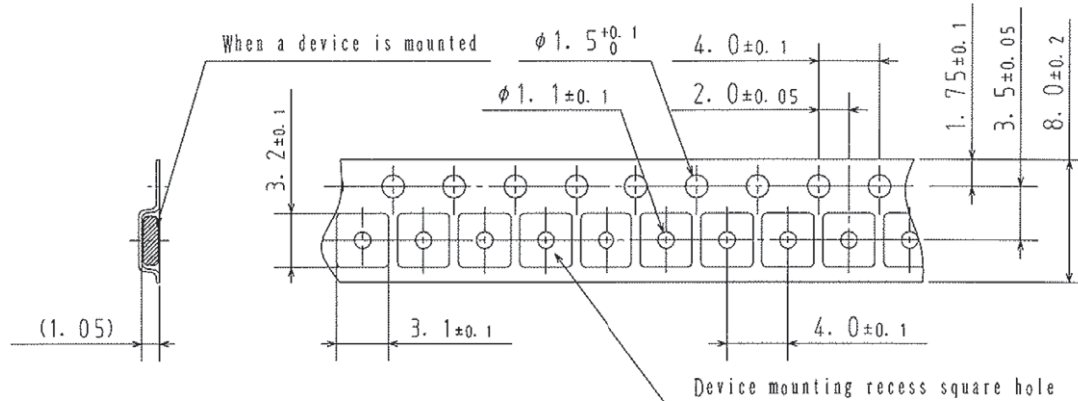
NOTE (1)

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

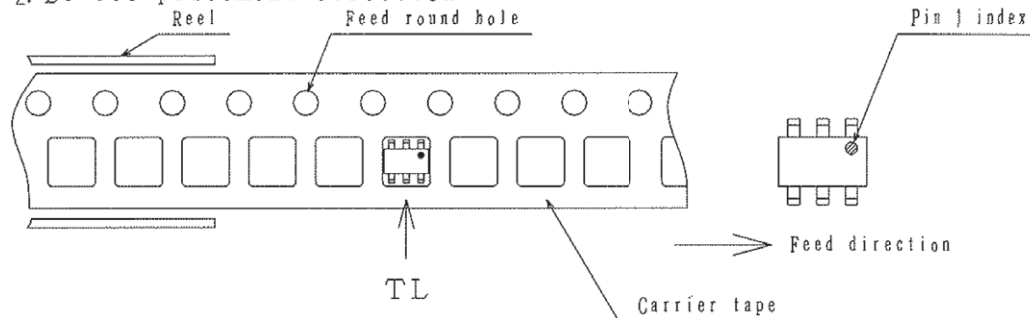
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

2. Taping configuration

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



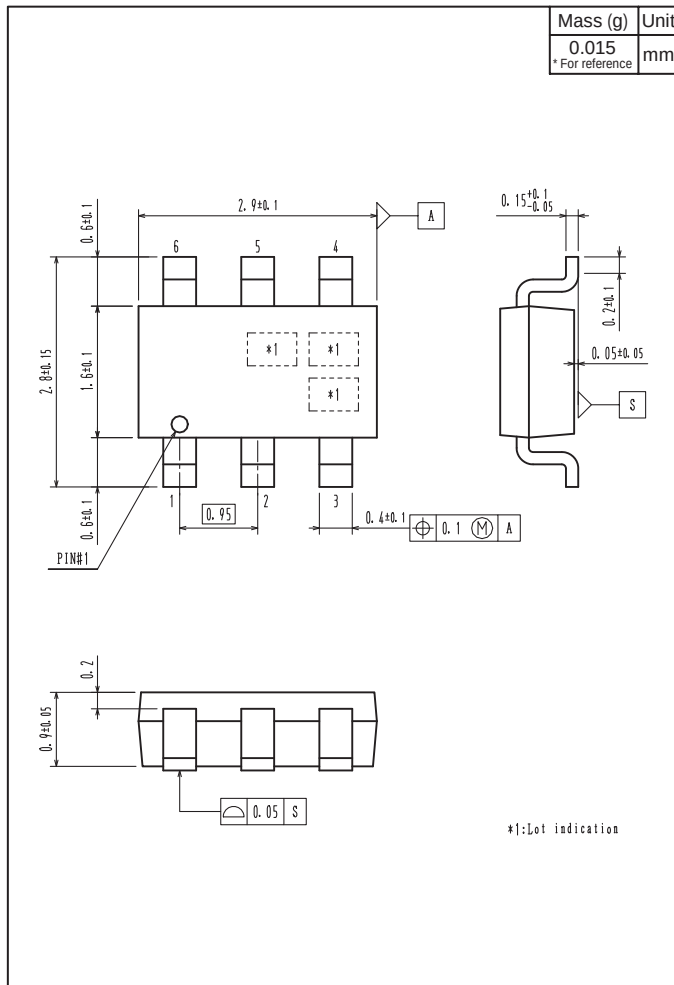
2-2. Device placement direction



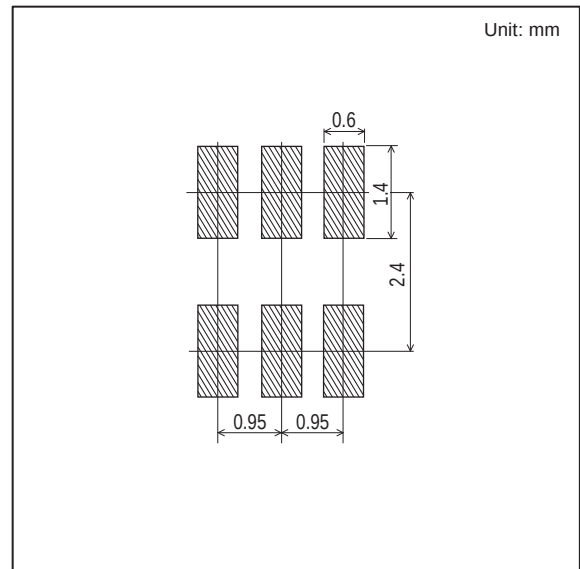
Those with pin 1 index on the feed hole side.....TL

Outline Drawing

CPH6532-TL-E



Land Pattern Example



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