



SANYO Semiconductors

DATA SHEET

An ON Semiconductor Company

CPH3107 — PNP Epitaxial Planar Silicon Transistor

DC / DC Converter Applications

Applications

- Relay drivers, lamp drivers, motor drivers, flash

Features

- Adoption of MBIT processes
- Large current capacity
- 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

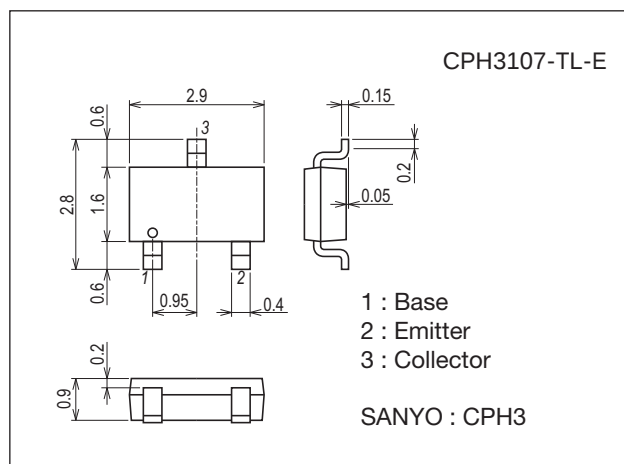
Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V _{CBO}		-15	V
Collector-to-Emitter Voltage	V _{CEO}		-15	V
Emitter-to-Base Voltage	V _{EBO}		-5	V
Collector Current	I _C		-6	A
Collector Current (Pulse)	I _{CP}		-9	A
Base Current	I _B		-1.2	A
Collector Dissipation	P _C	When mounted on ceramic substrate (600mm ² ×0.8mm)	0.9	W
Junction Temperature	T _J		150	°C
Storage Temperature	T _{stg}		-55 to +150	°C

Package Dimensions

unit : mm (typ)

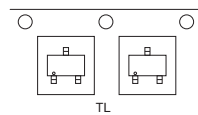
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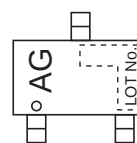
Product & Package Information

- Package : CPH3
- JEITA, JEDEC : SC-59, TO-236, SOT-23
- Minimum Packing Quantity : 3,000 pcs./reel

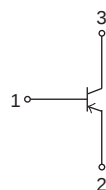
Packing Type: TL



Marking



Electrical Connection



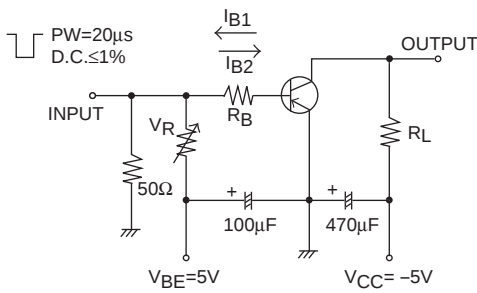
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<http://www.sanyosemi.com/en/network/>

Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	ICBO	VCE= -12V, IE=0A			-0.1	μA
Emitter Cutoff Current	IEBO	VEB= -4V, IC=0A			-0.1	μA
DC Current Gain	hFE	VCE= -2V, IC= -500mA	200		560	
Gain-Bandwidth Product	fT	VCE= -2V, IC= -500mA		140		MHz
Output Capacitance	Cob	VCE= -10V, f=1MHz		82		pF
Collector-to-Emitter Saturation Voltage	VCE(sat)	IC= -3A, IB= -60mA		-100	-150	mV
Base-to-Emitter Saturation Voltage	VBE(sat)	IC= -3A, IB= -60mA		-0.85	-1.2	V
Collector-to-Base Breakdown Voltage	V(BR)CBO	IC= -10μA, IE=0A	-15			V
Collector-to-Emitter Breakdown Voltage	V(BR)CEO	IC= -1mA, RBE=∞	-15			V
Emitter-to-Base Breakdown Voltage	V(BR)EBO	IE= -10μA, IC=0A	-5			V
Turn-ON Time	ton	See specified Test Circuit.		30		ns
Storage Time	tstg			120		ns
Fall Time	tf			14		ns

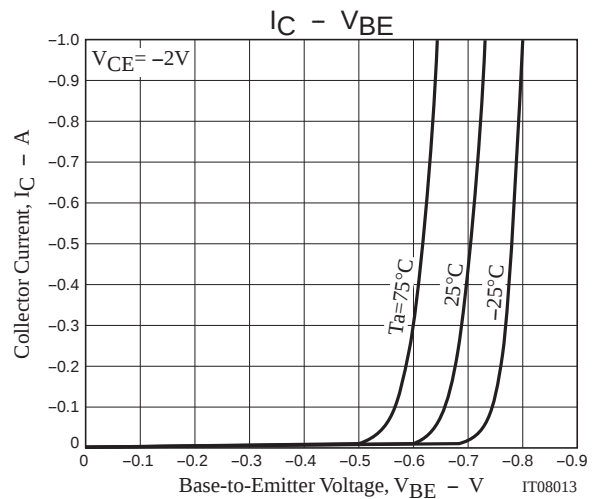
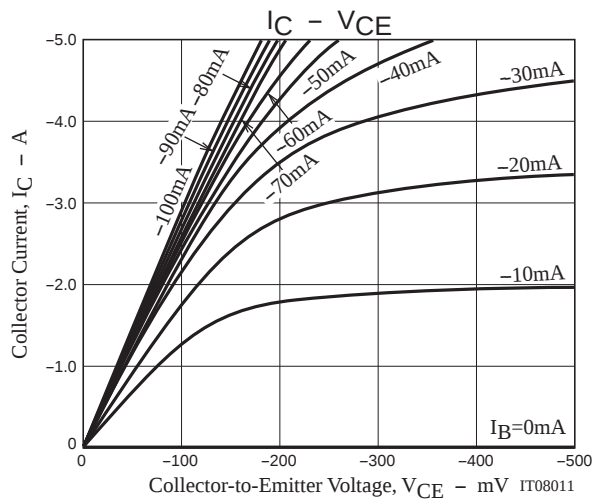
Switching Time Test Circuit

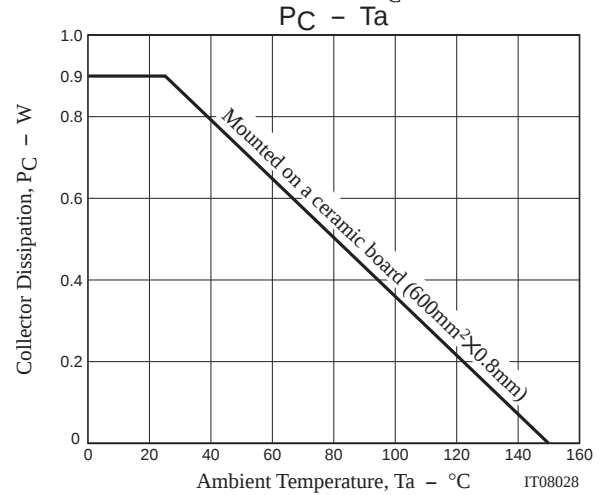
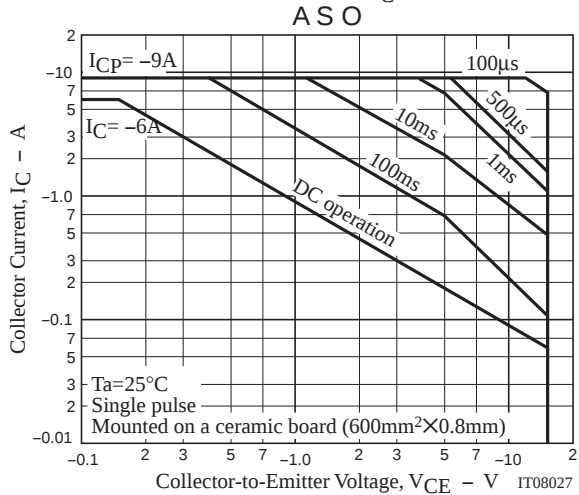
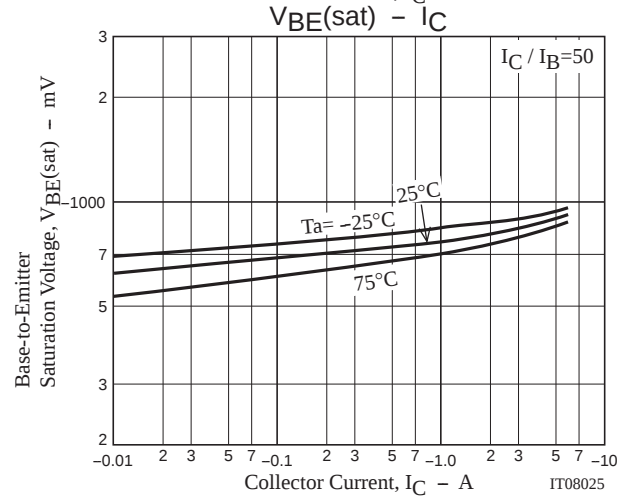
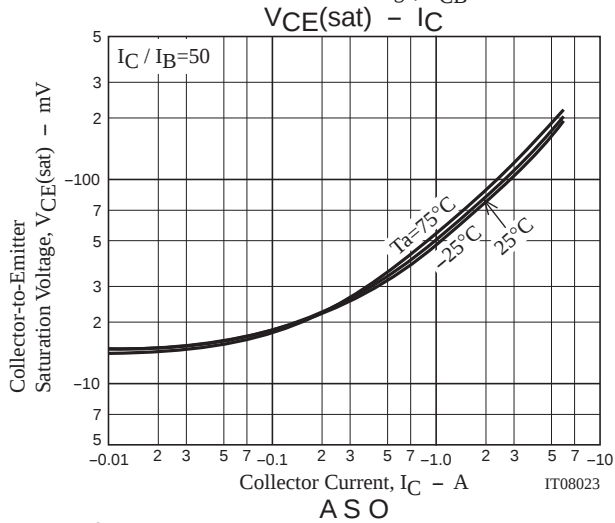
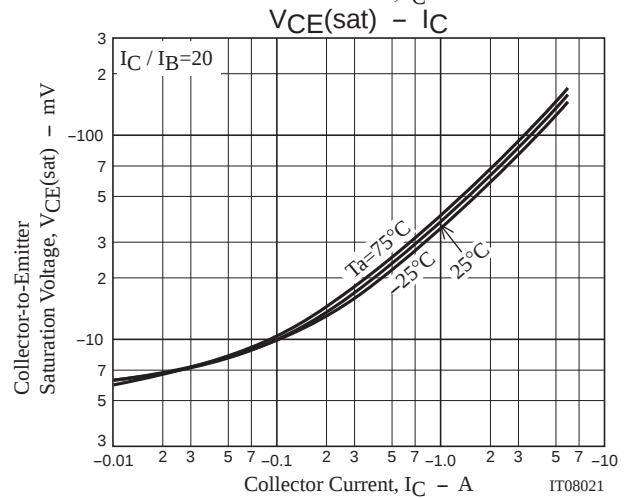
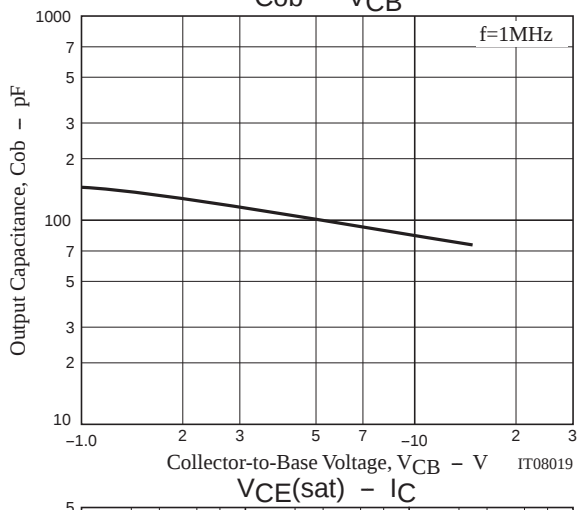
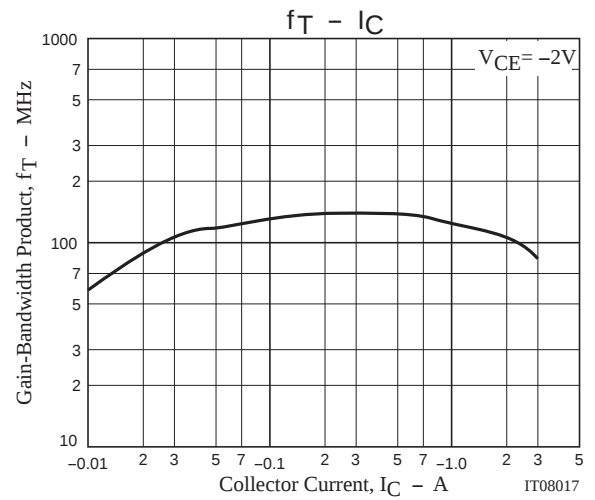
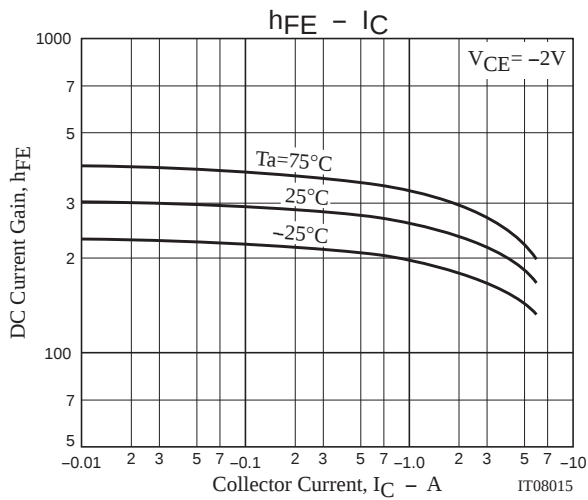


$I_C=20I_{B1}=-20I_{B2}=-3A$

Ordering Information

Device	Package	Shipping	memo
CPH3107-TL-E	CPH3	3,000pcs./reel	Pb Free





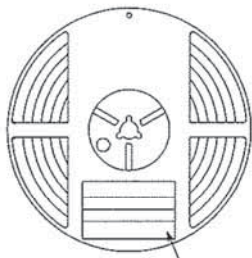
Embossed Taping Specification

CPH3107-TL-E

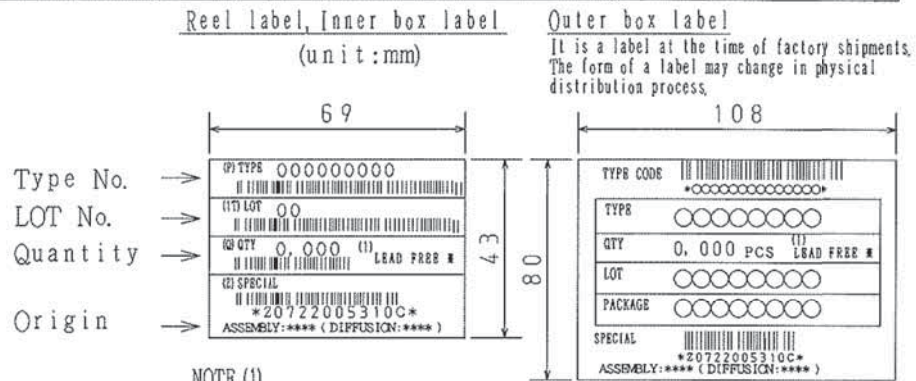
1. Packing Format

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)
CPH3	CPH3	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

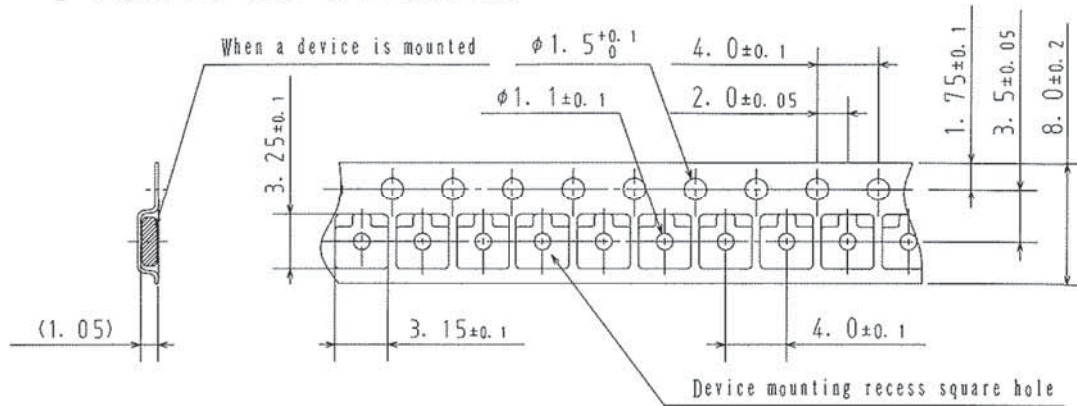


Reel label

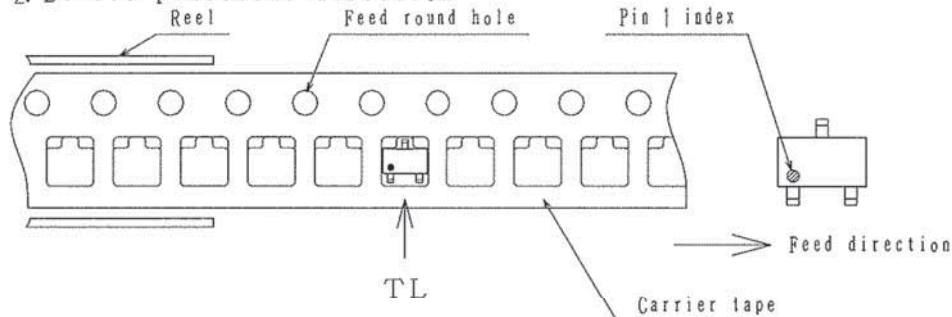


2. Taping configuration

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



2-2. Device placement direction



Those with one electrode terminal on the feed hole side.....TL

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