



SANYO Semiconductors

DATA SHEET

An ON Semiconductor Company

PNP Epitaxial Planar Silicon Transistor

30A02CH — Low-Frequency General-Purpose Amplifier Applications

Applications

- Low-frequency Amplifier, high-speed switching, small motor drive

Features

- Large current capacitance
- Low collector-to-emitter saturation voltage (resistance) $R_{CE(sat)}$ typ.=580m Ω [$I_C=0.7A$, $I_B=35mA$]
- Small ON-resistance (R_{on})

Specifications

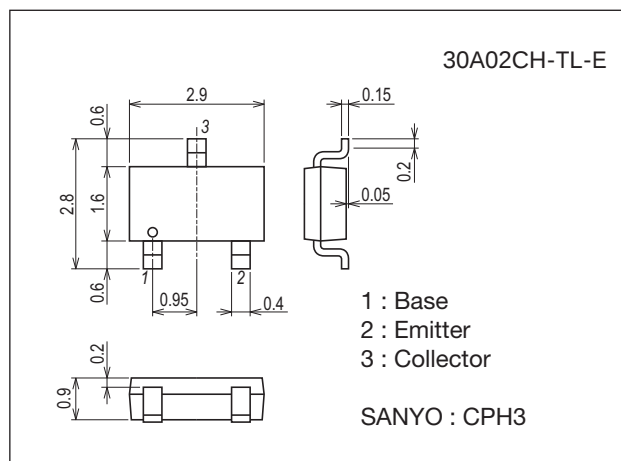
Absolute Maximum Ratings at $T_a=25^\circ C$

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		-700	mA
Collector Current (Pulse)	I_{CP}		-1.4	A
Collector Dissipation	P_C	Mounted on a ceramic board (600mm ² ×0.8mm)	700	mW
Junction Temperature	T_j		150	°C
Storage Temperature	T_{stg}		-55 to +150	°C

Package Dimensions

unit : mm (typ)

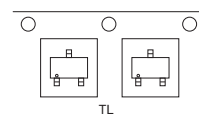
7015A-003



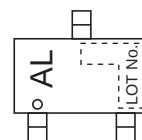
Product & Package Information

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

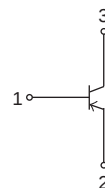
Packing Type: TL



Marking



Electrical Connection



SANYO Semiconductor Co., Ltd.

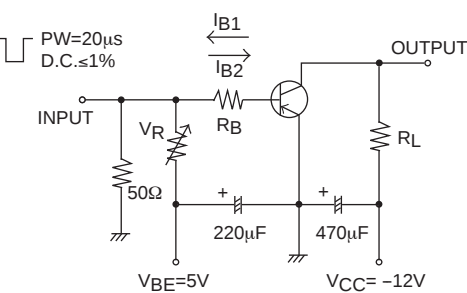
<http://semicon.sanyo.com/en/network>

30A02CH

Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	ICBO	VCE= -30V, IE=0A			-100	nA
Emitter Cutoff Current	IEBO	VEB= -4V, IC=0A			-100	nA
DC Current Gain	hFE	VCE= -2V, IC= -10mA	200		500	
Gain-Bandwidth Product	fT	VCE= -10V, IC= -50mA		520		MHz
Output Capacitance	Cob	VCE= -10V, f=1MHz		4.7		pF
Collector-to-Emitter Saturation Voltage	VCE(sat)	IC= -200mA, IB= -10mA		-110	-220	mV
Base-to-Emitter Saturation Voltage	VBE(sat)	IC= -200mA, IB= -10mA		-0.9	-1.2	V
Collector-to-Base Breakdown Voltage	V(BR)CBO	IC= -10μA, IE=0A	-30			V
Collector-to-Emitter Breakdown Voltage	V(BR)CEO	IC= -1mA, RBE=∞	-30			V
Emitter-to-Base Breakdown Voltage	V(BR)EBO	IE= -10μA, IC=0A	-5			V
Turn-On Time	ton	See specified Test Circuit.		35		ns
Storage Time	tstg			125		ns
Fall Time	tf			25		ns

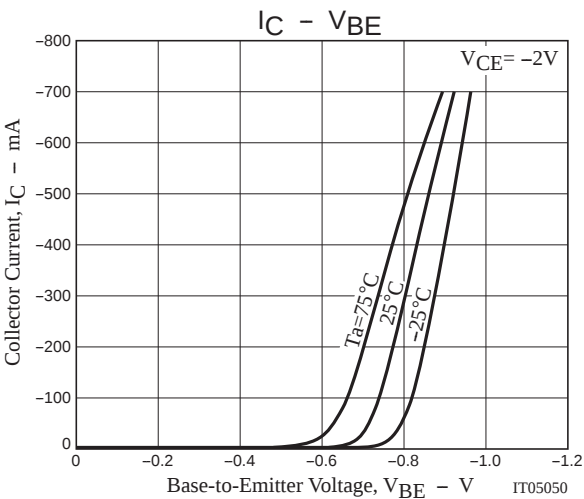
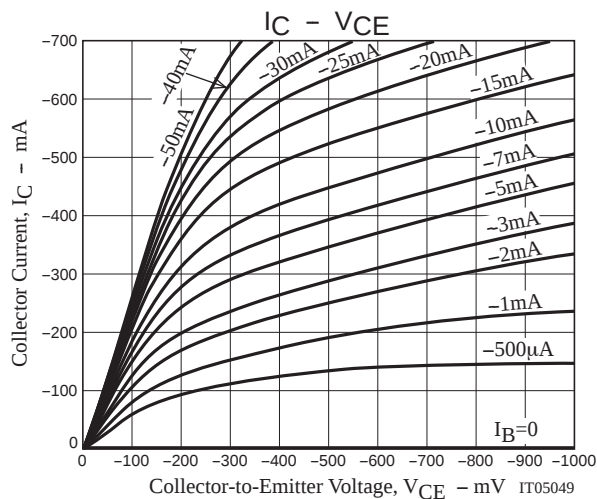
Switching Time Test Circuit

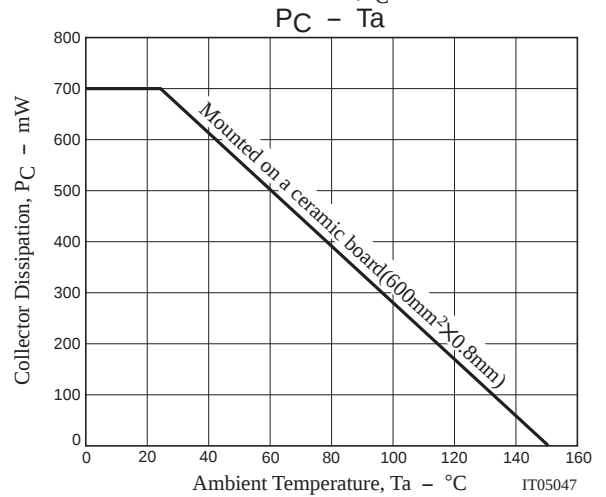
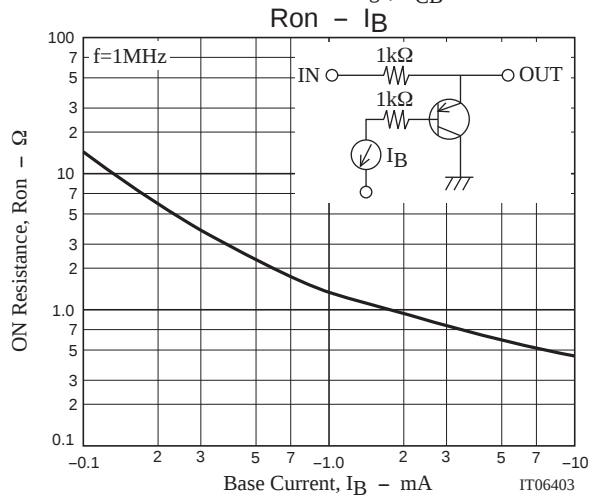
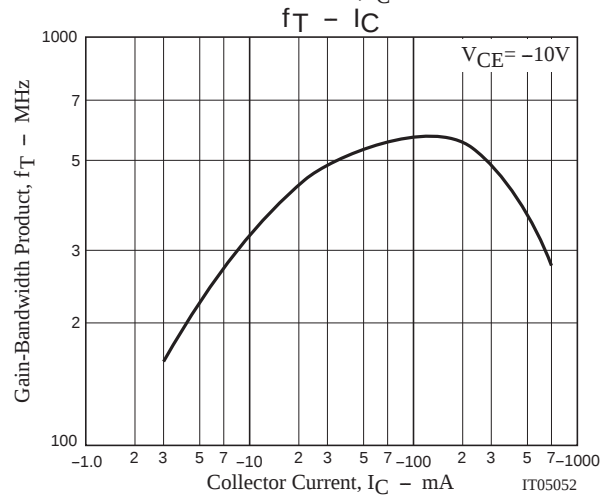
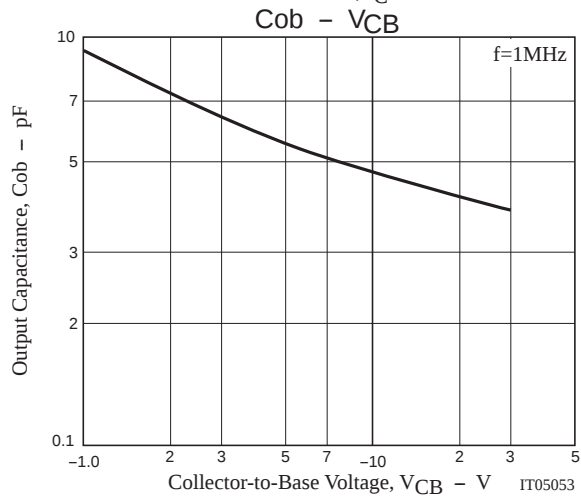
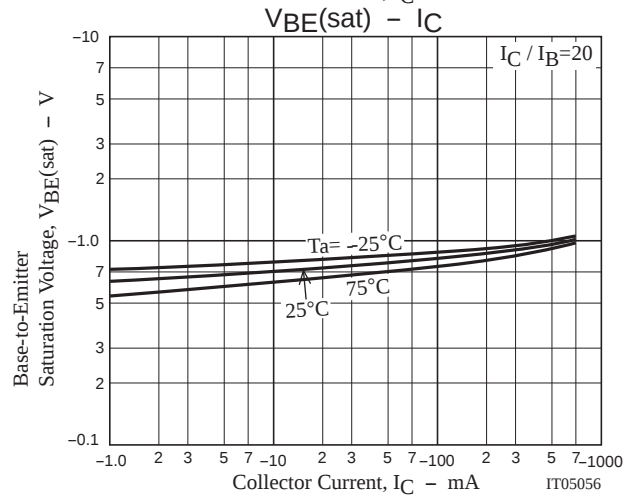
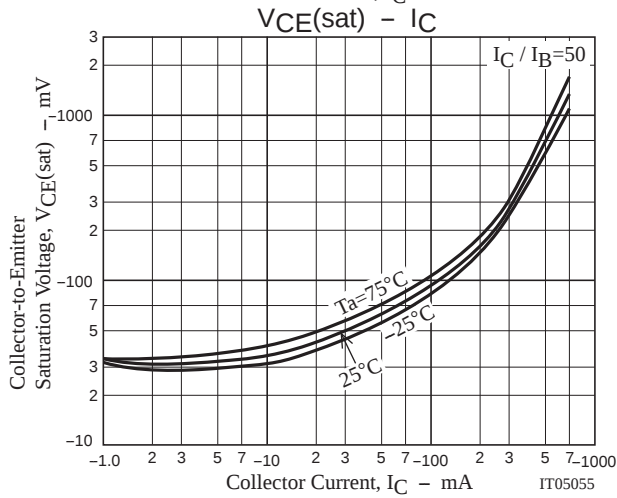
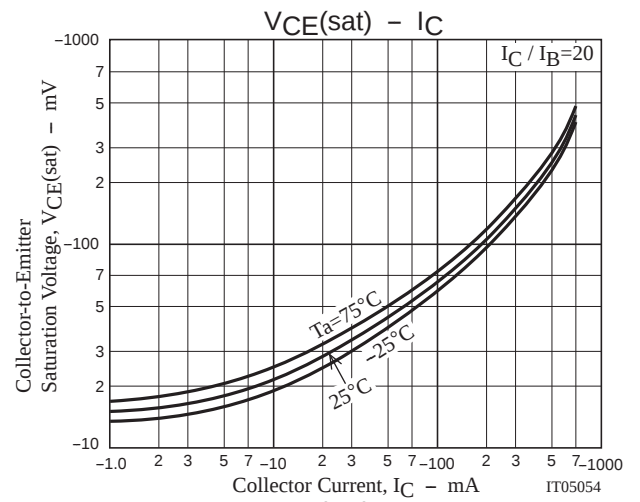
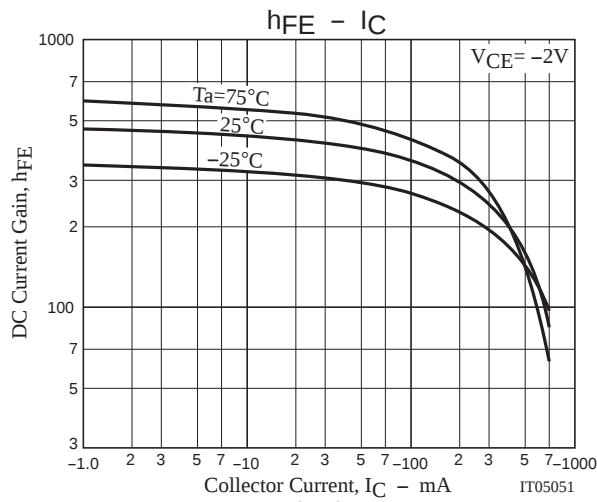


$I_C=20I_{B1}= -20I_{B2}= -300mA$

Ordering Information

Device	Package	Shipping	memo
30A02CH-TL-E	CPH3	3,000pcs./reel	Pb Free





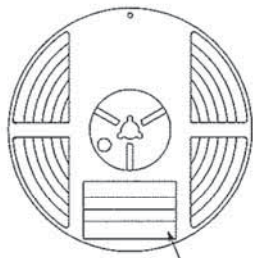
Embossed Taping Specification

30A02CH-TL-E

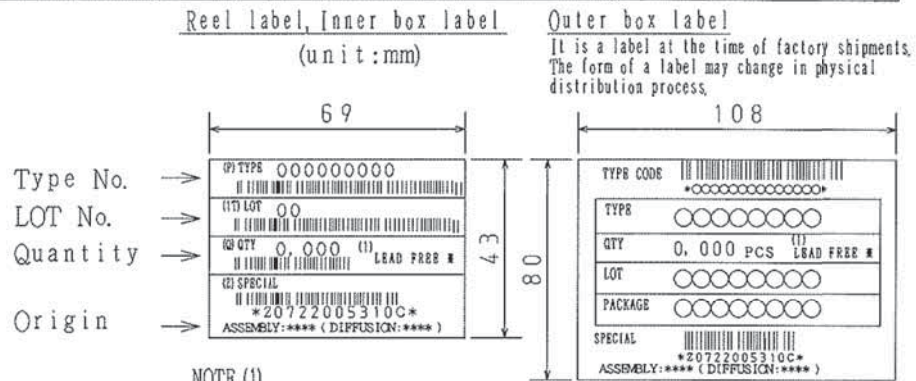
1. Packing Format

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

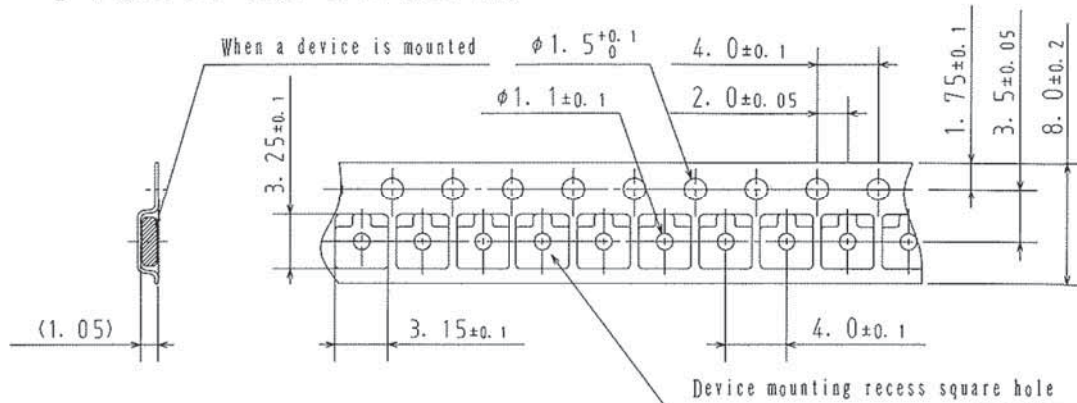


Reel label

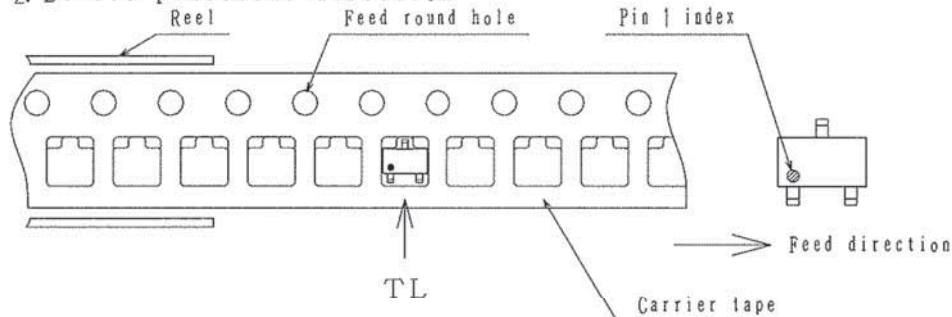


2. Taping configuration

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

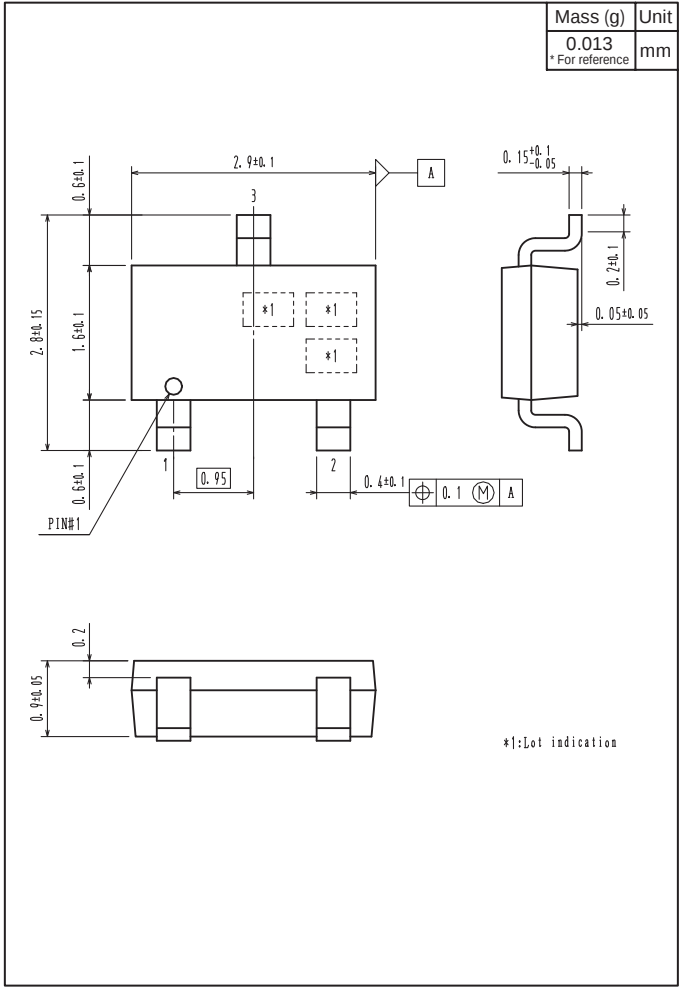


2-2. Device placement direction

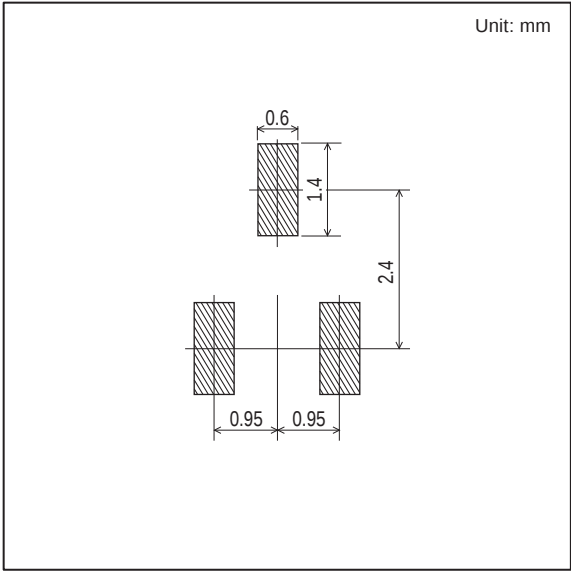


Those with one electrode terminal on the feed hole side.....TL

Outline Drawing
30A02CH-TL-E



Land Pattern Example



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