



SANYO Semiconductors

DATA SHEET

An ON Semiconductor Company

MCH6101 — PNP Epitaxial Planar Silicon Transistor

DC / DC Converter Applications

Applications

- Relay drivers, lamp drivers, motor drivers, flash

Features

- Adoption of MBIT processes
- Low collector-to-emitter saturation voltage
- Ultrasmall package facilitates miniaturization in end products (mounting height : 0.85mm)
- High allowable power dissipation
- Large current capacity
- High-speed switching

Specifications

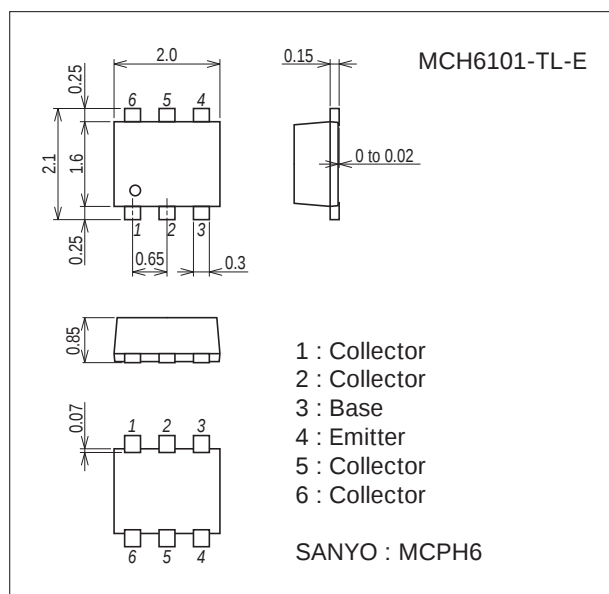
Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	VCBO		-15	V
Collector-to-Emitter Voltage	VCEO		-15	V
Emitter-to-Base Voltage	VEBO		-5	V
Collector Current	IC		-1.5	A
Collector Current (Pulse)	ICP		-3	A
Base Current	IB		-300	mA
Collector Dissipation	PC	When mounted on ceramic substrate (600mm ² ×0.8mm)	1.0	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Package Dimensions

unit : mm (typ)

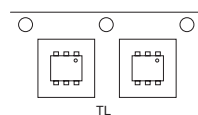
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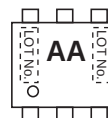
Product & Package Information

- Package : MCPH6
- JEITA, JEDEC : SC-88, SC-70-6, SOT-363
- Minimum Packing Quantity : 3,000 pcs./reel

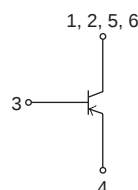
Packing Type : TL



Marking



Electrical Connection



SANYO Semiconductor Co., Ltd.

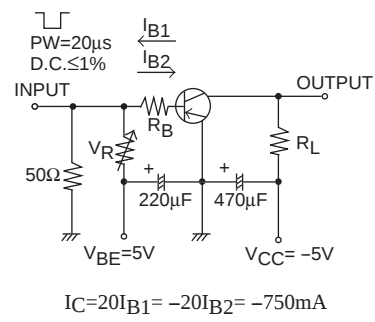
<http://www.sanyosemi.com/en/network/>

MCH6101

Electrical Characteristics at Ta=25°C

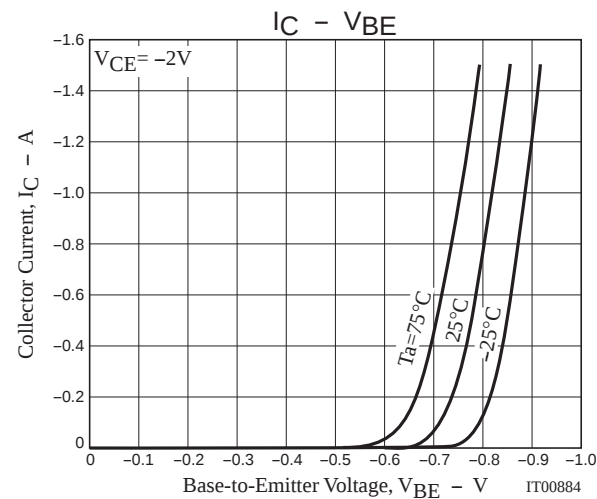
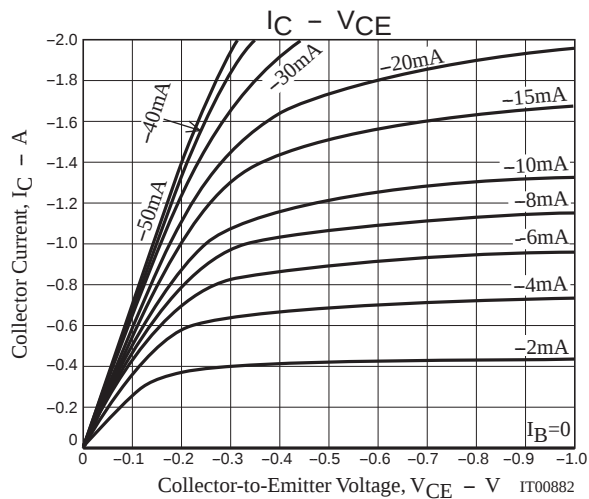
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	ICBO	VCE= -12V, IE=0A			-0.1	μA
Emitter Cutoff Current	IEBO	VEB= -4V, IC=0A			-0.1	μA
DC Current Gain	hFE	VCE= -2V, IC= -100mA	200		560	
Gain-Bandwidth Product	fT	VCE= -2V, IC= -300mA		430		MHz
Output Capacitance	Cob	VCE= -10V, f=1MHz		15		pF
Collector-to-Emitter Saturation Voltage	VCE(sat)	IC= -750mA, IB= -15mA		-110	-180	mV
Base-to-Emitter Saturation Voltage	VBE(sat)	IC= -750mA, IB= -15mA		-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			90		ns
Fall Time	tf			12		ns

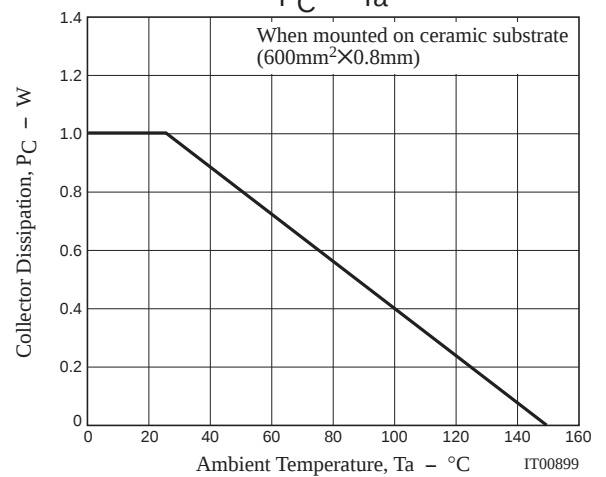
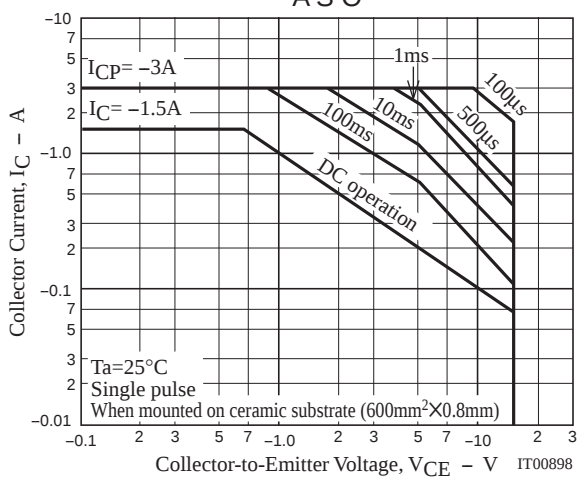
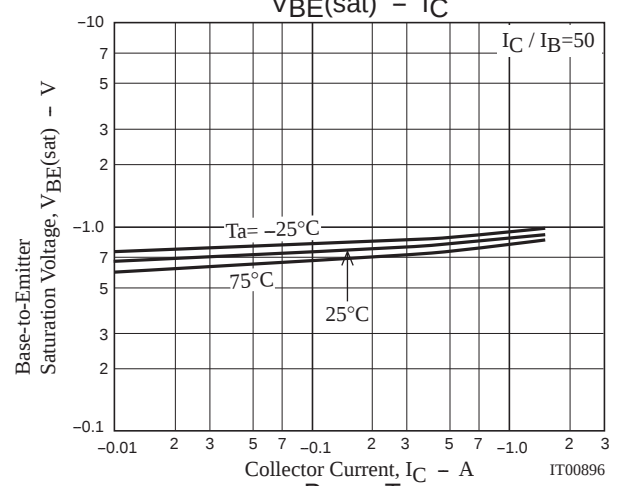
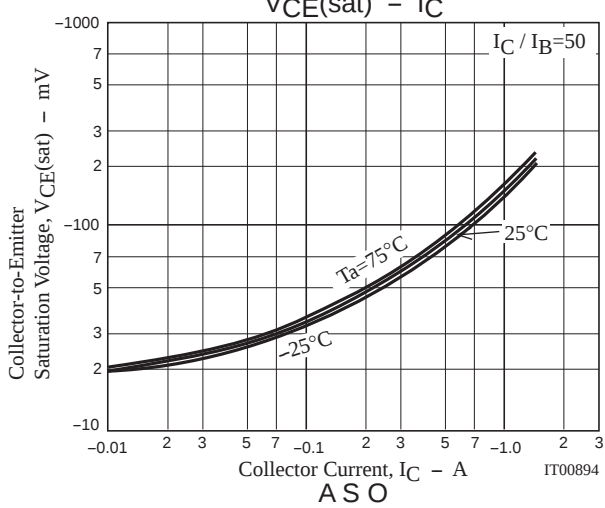
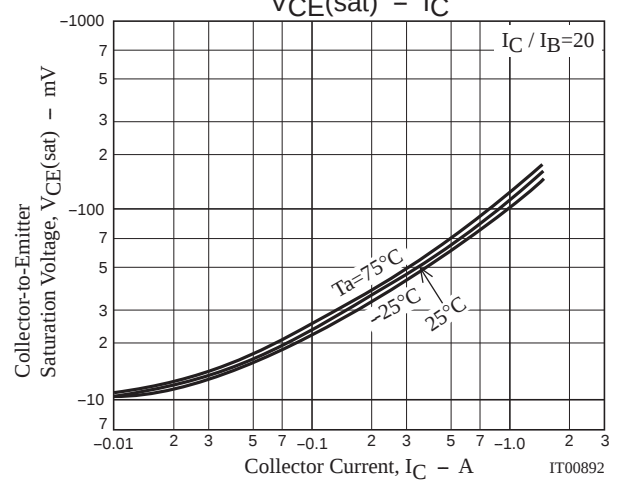
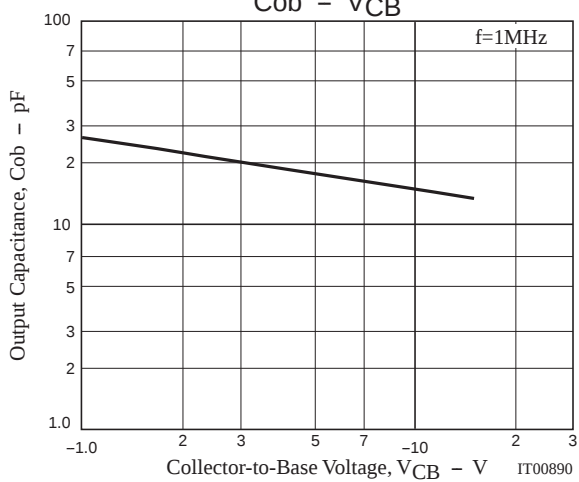
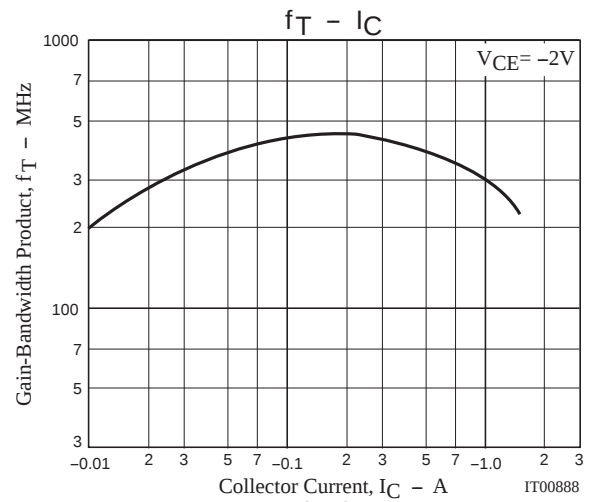
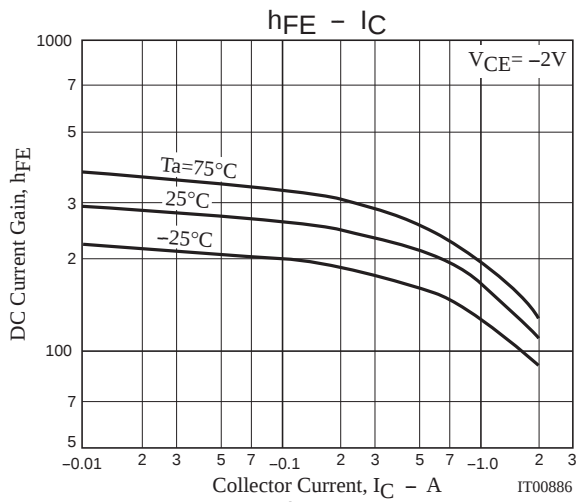
Switching Time Test Circuit



Ordering Information

Device	Package	Shipping	memo
MCH6101-TL-E	MCPH6	3,000pcs./reel	Pb Free





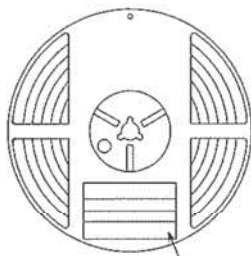
Embossed Taping Specification

MCH6101-TL-E

1. Packing Format

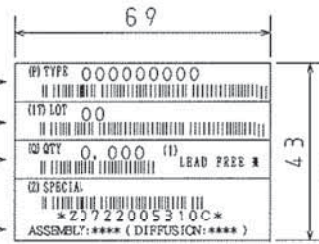
Package Name	Carrier Tape Type	Maximum Number of devices contained (pcs)			Packing format	
		Reel	Inner box	Outer box	Inner BOX (C-1)	Outer BOX (A-7)
MCPH6	MCP4	3,000	15,000	90,000	5 reels contained Dimensions:mm (external) 183×72×185	6 inner boxes contained Dimensions:mm (external) 440×195×210

Packing method



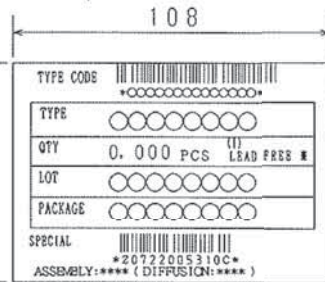
Reel label

Type No.
LOT No.
Quantity
Origin

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.



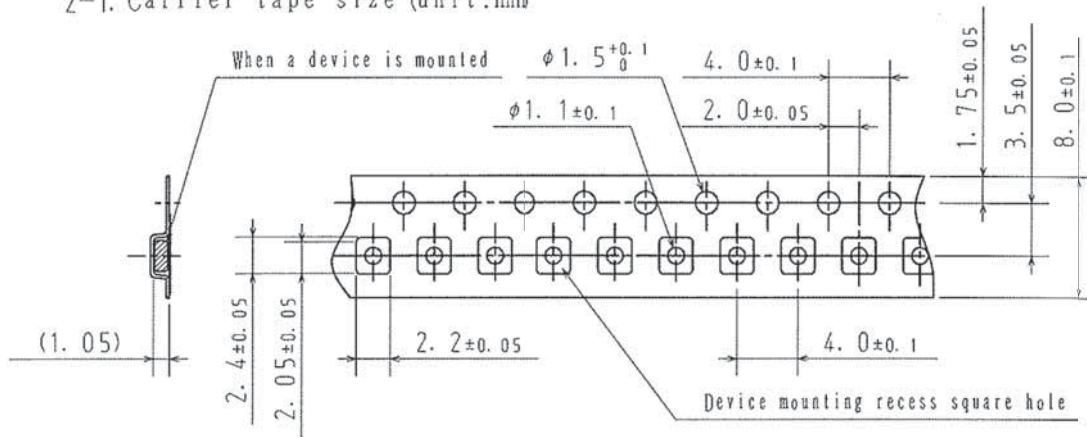
NOTE (1)

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

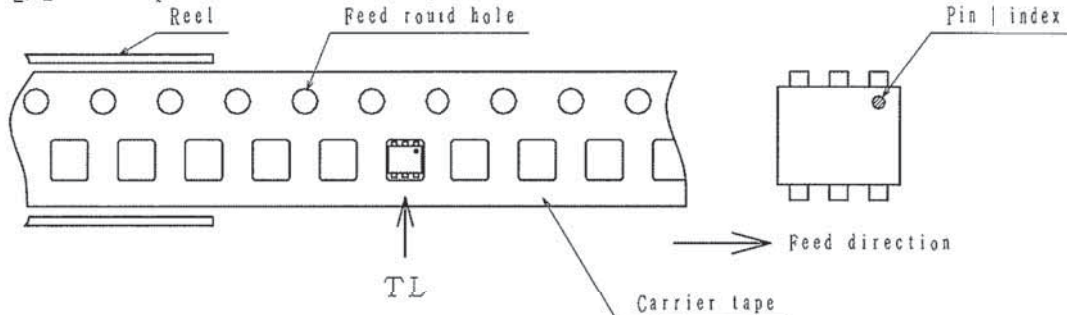
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

2. Taping configuration

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



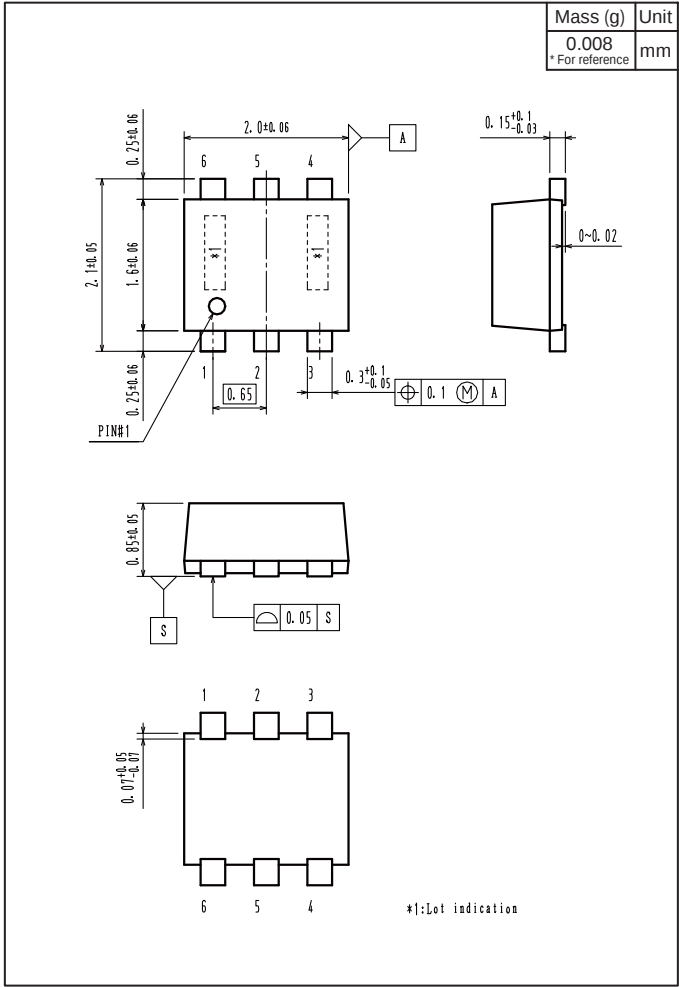
2-2. Device placement direction



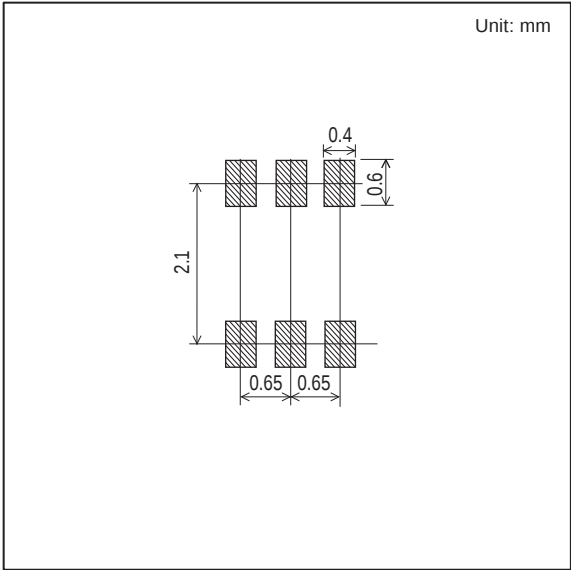
Those with pin 1 index on the feed hole side.....TL

MCH6101

Outline Drawing
MCH6101-TL-E



Land Pattern Example



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