



SANYO Semiconductors

DATA SHEET

An ON Semiconductor Company

MCH6122 — PNP Epitaxial Planar Silicon Transistor DC / DC Converter Amplifier

Applications

- Relay drivers, lamp drivers, motor drivers, charger circuit

Features

- Adoption of MBIT process
- Low collector-to-emitter saturation voltage
- Ultrasmall-sized package permitting applied sets to be made small and slim (0.85mm)
- High allowable power dissipation
- Halogen free compliance
- Large current capacity
- High speed switching

Specifications

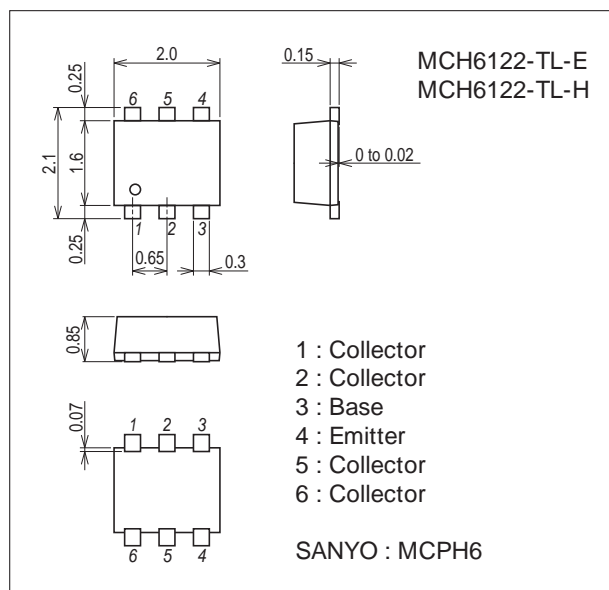
Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V _{CB0}		-30	V
Collector-to-Emitter Voltage	V _{CE0}		-30	V
Emitter-to-Base Voltage	V _{EB0}		-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	When mounted on ceramic substrate (600mm ² ×0.8mm)	1	W
Junction Temperature	T _J		150	°C
Storage Temperature	T _{stg}		-55 to +150	°C

Package Dimensions

unit : mm (typ)

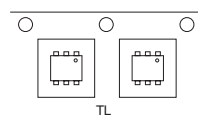
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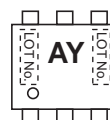
Product & Package Information

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

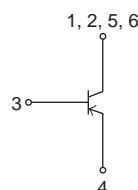
Packing Type : TL



Marking



Electrical Connection



SANYO Semiconductor Co., Ltd.

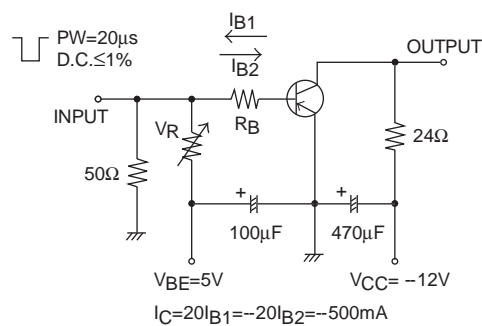
<http://www.sanyosemi.com/en/network/>

MCH6122

Electrical Characteristics at Ta=25°C

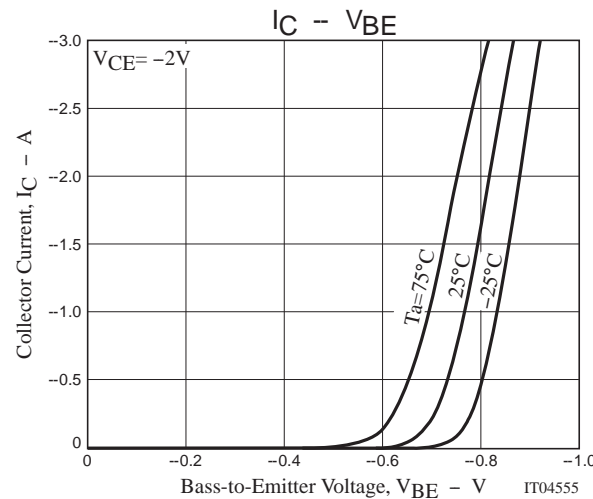
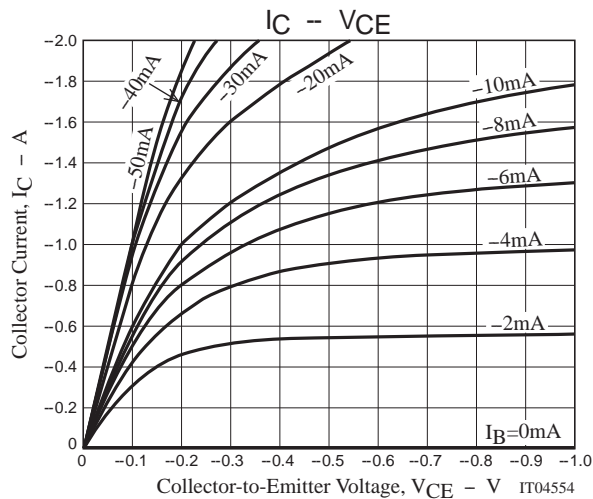
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	ICBO	VCE= -30V, IE=0A			-0.1	μA
Emitter Cutoff Current	IEBO	VEB= -4V, IC=0A			-0.1	μA
Collector Cutoff Current	IECO	VEC= -4.5V, IB=0A			-1	μA
DC Current Gain	hFE	VCE= -2V, IC= -500mA	200		560	
Gain-Bandwidth Product	fT	VCE= -10V, IC= -500mA		400		MHz
Output Capacitance	Cob	VCE= -10V, f=1MHz		25		pF
Collector-to-Emitter Saturation Voltage	VCE(sat)1	IC= -1.5A, IB= -30mA		-180	-270	mV
	VCE(sat)2	IC= -1.5A, IB= -75mA		-120	-180	mV
Base-to-Emitter Saturation Voltage	VEB(sat)	IC= -1.5A, IB= -30mA		-0.83	-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, RE=∞	-30			V
Emitter-to-Base Breakdown Voltage	V(BR)EBO	IE= -10μA, IC=0A	-5			V
Turn-On Time	ton	See specified Test Circuit.		50		ns
Storage Time	tstg			270		ns
Fall Time	tf			27		ns

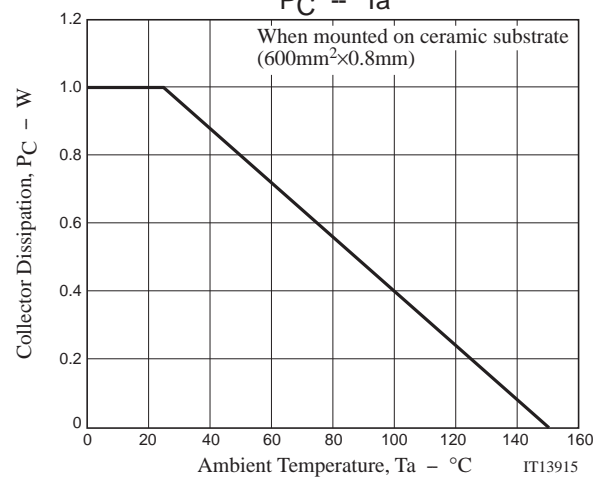
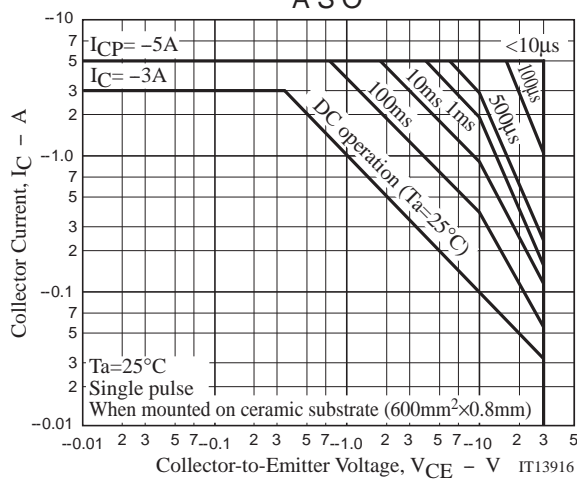
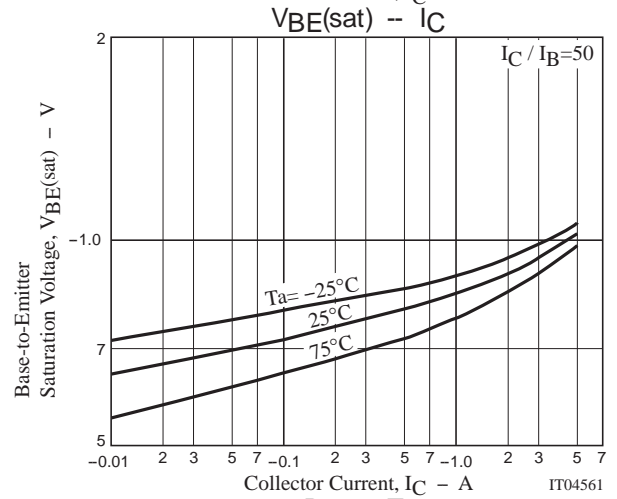
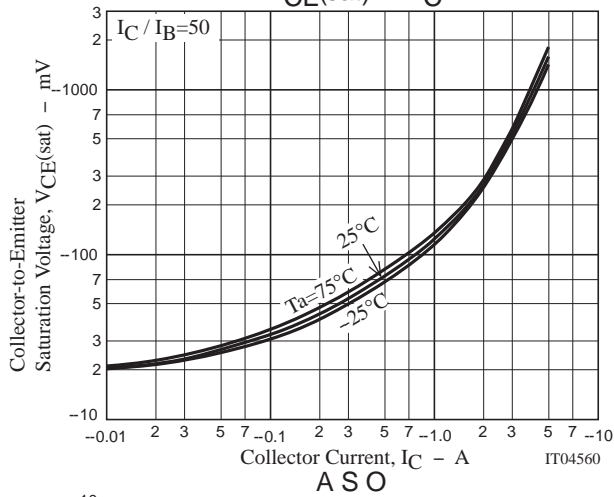
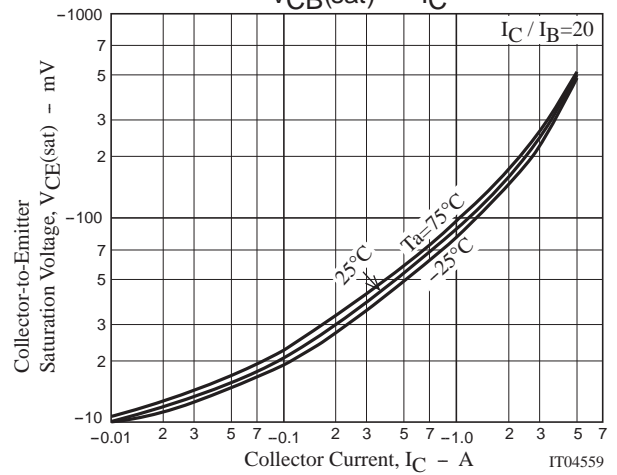
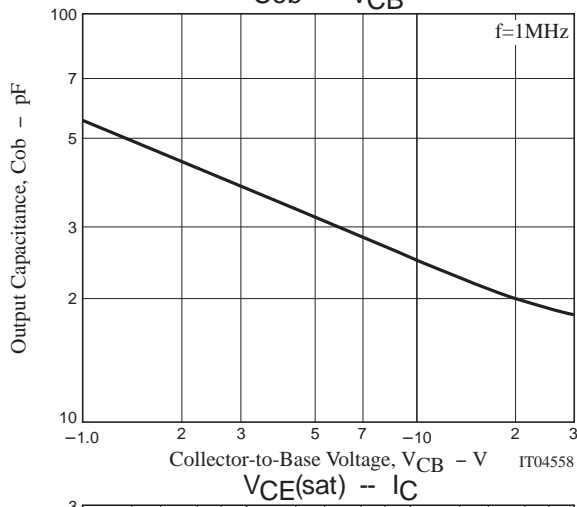
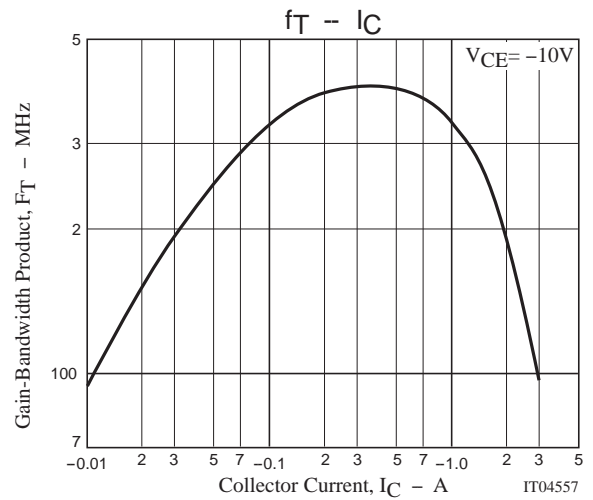
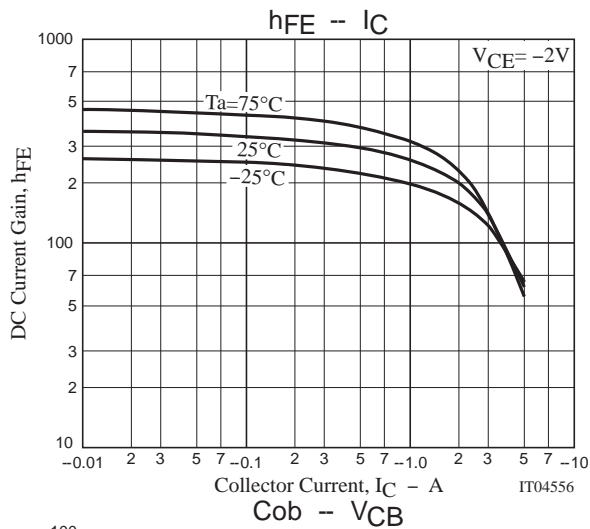
Switching Time Test Circuit



Ordering Information

Device	Package	Shipping	memo
MCH6122-TL-E	MCPH6	3,000pcs./reel	Pb Free
MCH6122-TL-H	MCPH6	3,000pcs./reel	Pb Free and Halogen Free





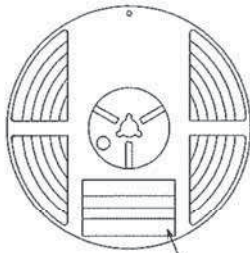
Embossed Taping Specification

MCH6122-TL-E, MCH6122-TL-H

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

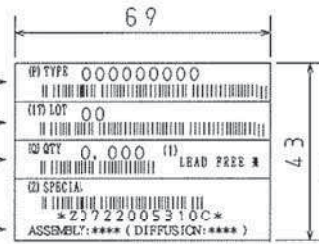
Packing method



Type No.
LOT No.
Quantity
Origin

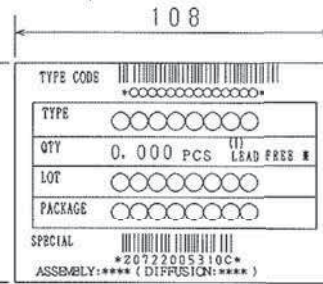
Reel label

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.)



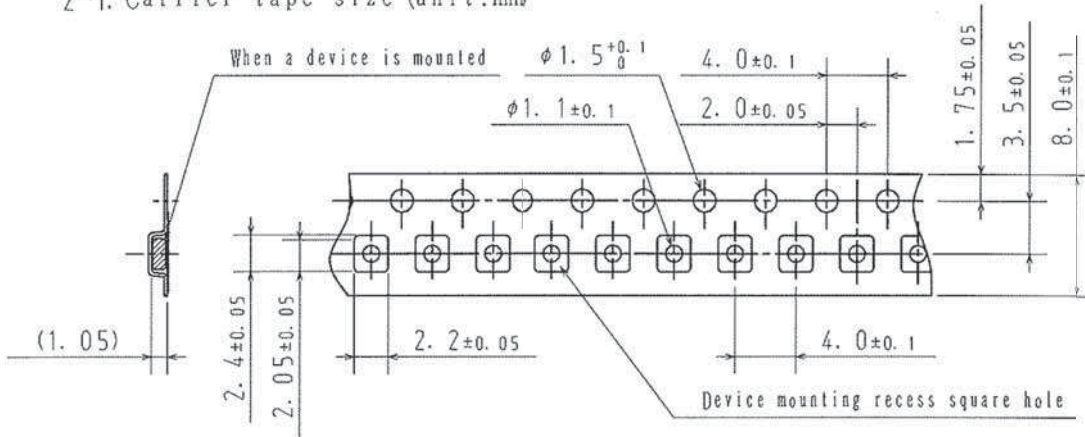
NOTE (1)

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

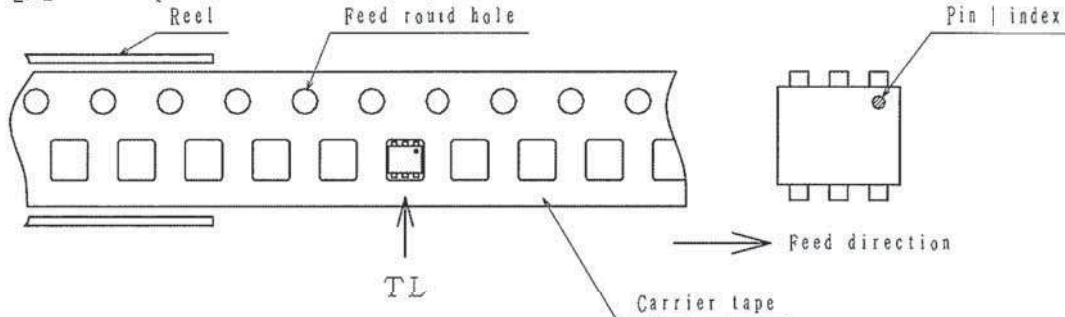
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

2. Taping configuration

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



2-2. Device placement direction

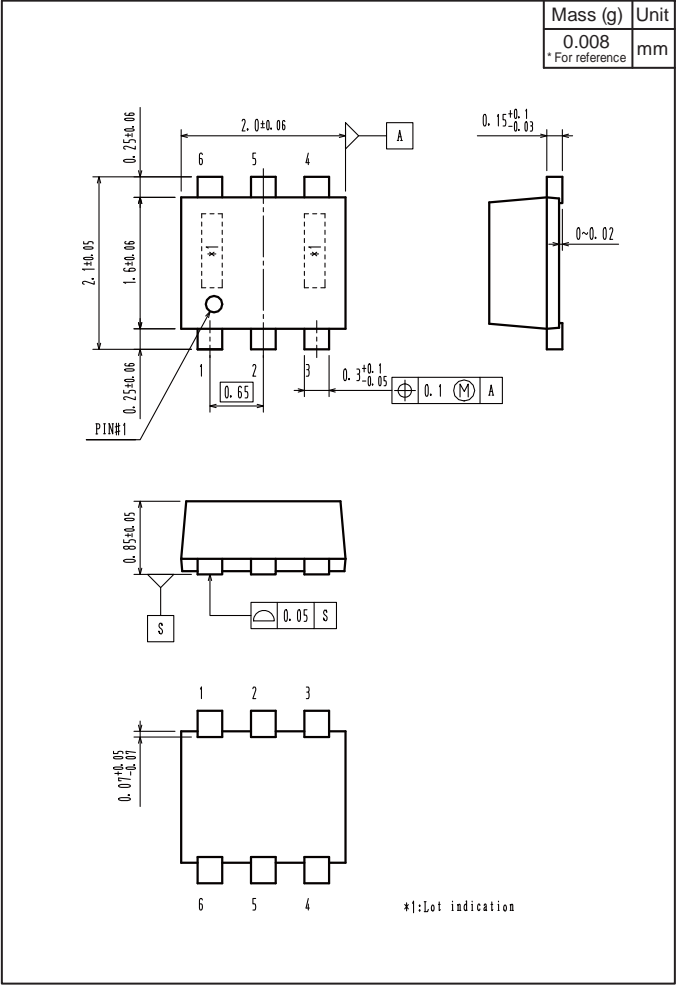


Those with pin 1 index on the feed hole side.....TL

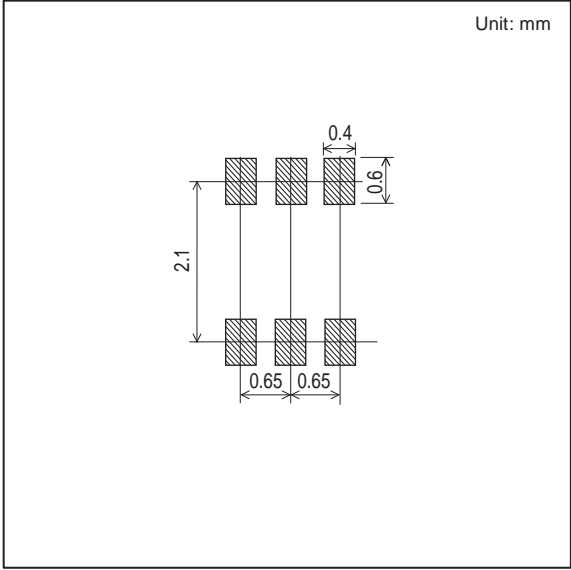
MCH6122

Outline Drawing

MCH6122-TL-E, MCH6122-TL-H



Land Pattern Example



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