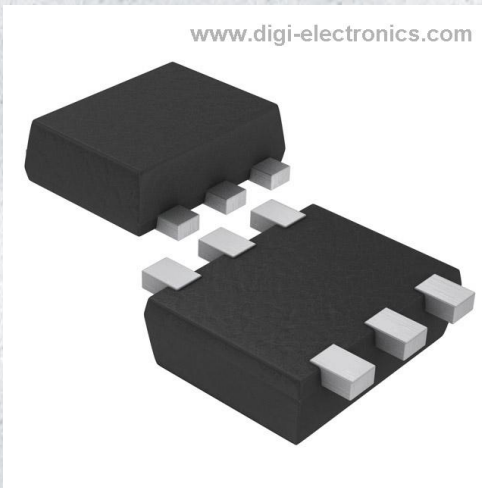


# MCH6122-TL-E Datasheet



DiGi Electronics Part Number	MCH6122-TL-E-DG
Manufacturer	<a href="#">onsemi</a>
Manufacturer Product Number	MCH6122-TL-E
Description	TRANS PNP 30V 3A 6MCPH
Detailed Description	Bipolar (BJT) Transistor PNP 30 V 3 A 400MHz 1 W S urface Mount 6-MCPH



Tel: +00 852-30501935

RFQ Email: [Info@DiGi-Electronics.com](mailto:Info@DiGi-Electronics.com)

DiGi is a global authorized distributor of electronic components.



## Purchase and inquiry

Manufacturer Product Number:

MCH6122-TL-E

Series:

-

Transistor Type:

PNP

Voltage - Collector Emitter Breakdown (Max):

30 V

Current - Collector Cutoff (Max):

100nA (ICBO)

Power - Max:

1 W

Operating Temperature:

150°C (TJ)

Package / Case:

6-SMD, Flat Leads

Base Product Number:

MCH6122

Manufacturer:

onsemi

Product Status:

Active

Current - Collector (Ic) (Max):

3 A

Vce Saturation (Max) @ Ib, Ic:

180mV @ 75mA, 1.5A

DC Current Gain (hFE) (Min) @ Ic, Vce:

200 @ 500mA, 2V

Frequency - Transition:

400MHz

Mounting Type:

Surface Mount

Supplier Device Package:

6-MCPH

## Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8541.29.0075

Moisture Sensitivity Level (MSL):

1 (Unlimited)

ECCN:

EAR99

Ordering number : ENA1287A



# MCH6122

## Bipolar Transistor -30V, -3A, Low VCE(sat), PNP Single MCPH6

ON Semiconductor®

http://onsemi.com

### 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

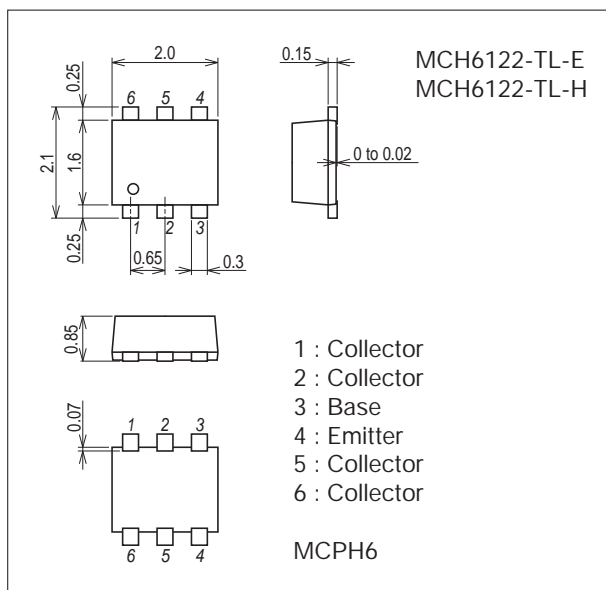
Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V <sub>CBO</sub>		-30	V
Collector-to-Emitter Voltage	V <sub>CEO</sub>		-30	V
Emitter-to-Base Voltage	V <sub>EB0</sub>		-5	V
Collector Current	I <sub>C</sub>		-3	A
Collector Current (Pulse)	I <sub>CP</sub>		-5	A
Base Current	I <sub>B</sub>		-600	mA
Collector Dissipation	P <sub>C</sub>	When mounted on ceramic substrate (600mm <sup>2</sup> ×0.8mm)	1	W
Junction Temperature	T <sub>j</sub>		150	°C
Storage Temperature	T <sub>stg</sub>		-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)

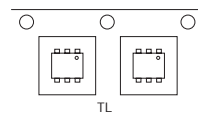
7022A-007



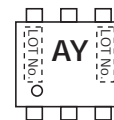
### Product & Package Information

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

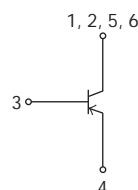
### Packing Type : TL



### Marking



### Electrical Connection

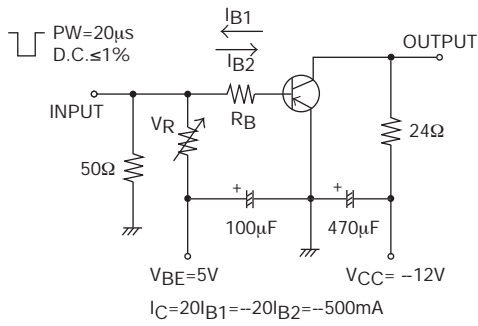


# MCH6122

## Electrical Characteristics at Ta=25°C

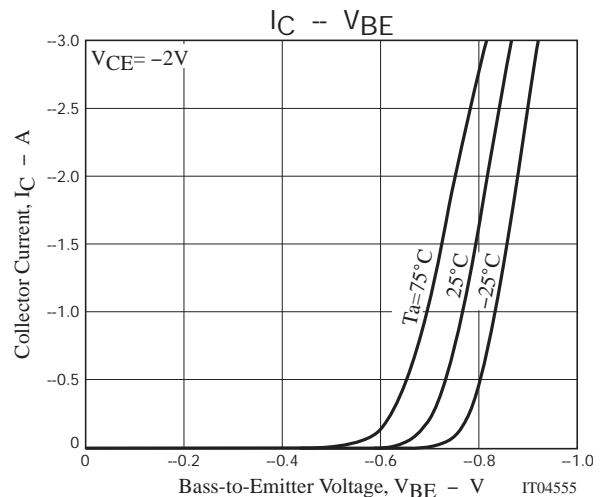
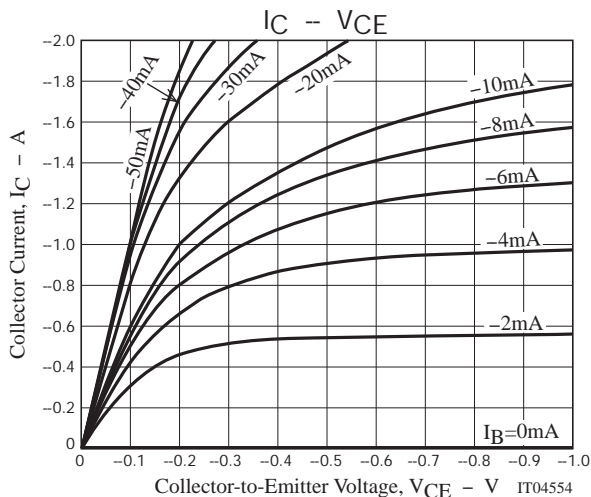
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	ICBO	V <sub>CB</sub> = -30V, I <sub>E</sub> = 0A			-0.1	μA
Emitter Cutoff Current	I <sub>EBO</sub>	V <sub>EB</sub> = -4V, I <sub>C</sub> = 0A			-0.1	μA
Collector Cutoff Current	I <sub>ECO</sub>	V <sub>EC</sub> = -4.5V, I <sub>B</sub> = 0A			-1	μA
DC Current Gain	h <sub>FE</sub>	V <sub>CE</sub> = -2V, I <sub>C</sub> = -500mA	200		560	
Gain-Bandwidth Product	f <sub>T</sub>	V <sub>CE</sub> = -10V, I <sub>C</sub> = -500mA		400		MHz
Output Capacitance	C <sub>ob</sub>	V <sub>CB</sub> = -10V, f = 1MHz		25		pF
Collector-to-Emitter Saturation Voltage	V <sub>CE(sat)1</sub>	I <sub>C</sub> = -1.5A, I <sub>B</sub> = -30mA		-180	-270	mV
	V <sub>CE(sat)2</sub>	I <sub>C</sub> = -1.5A, I <sub>B</sub> = -75mA		-120	-180	mV
Base-to-Emitter Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> = -1.5A, I <sub>B</sub> = -30mA		-0.83	-1.2	V
Collector-to-Base Breakdown Voltage	V(BR)CBO	I <sub>C</sub> = -10μA, I <sub>E</sub> = 0A	-30			V
Collector-to-Emitter Breakdown Voltage	V(BR)CEO	I <sub>C</sub> = -1mA, R <sub>BE</sub> = ∞	-30			V
Emitter-to-Base Breakdown Voltage	V(BR)EBO	I <sub>E</sub> = -10μA, I <sub>C</sub> = 0A	-5			V
Turn-On Time	t <sub>on</sub>	See specified Test Circuit.		50		ns
Storage Time	t <sub>stg</sub>			270		ns
Fall Time	t <sub>f</sub>			27		ns

## Switching Time Test Circuit

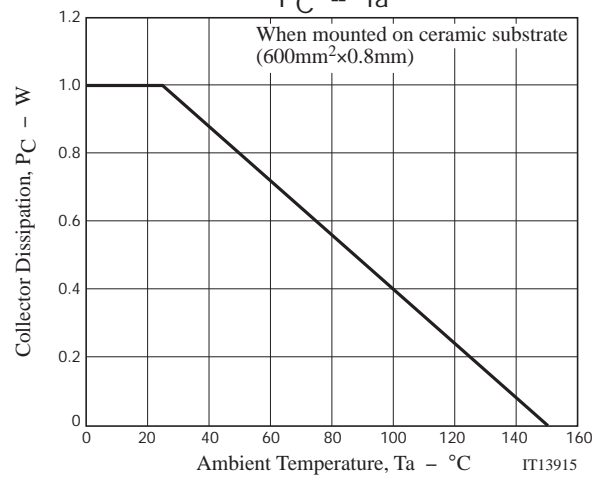
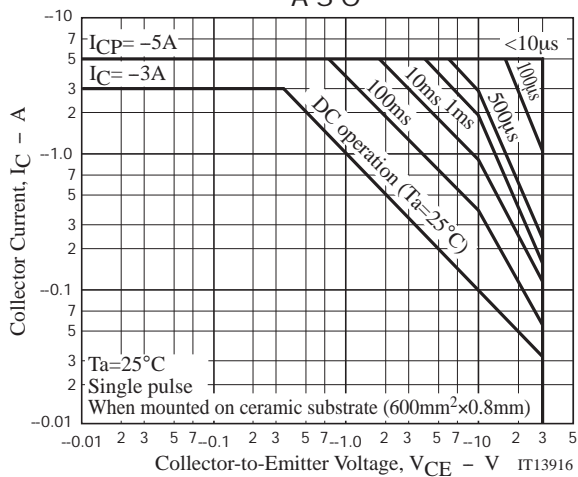
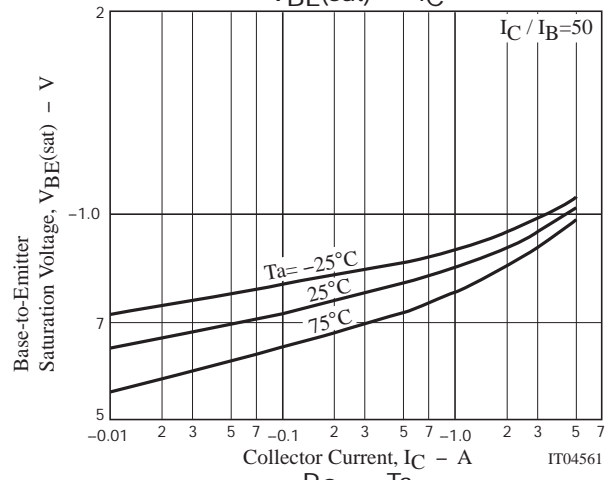
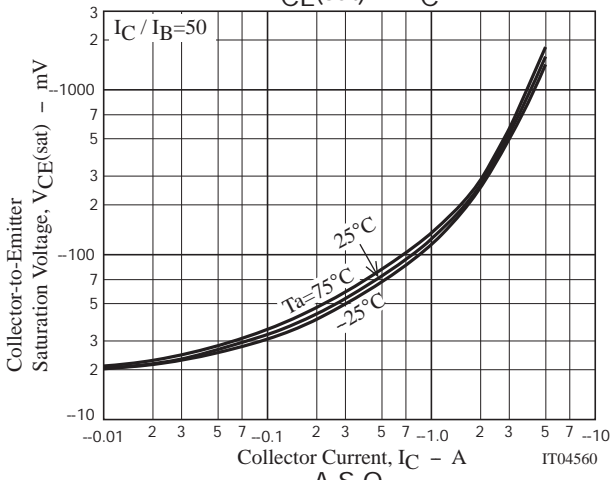
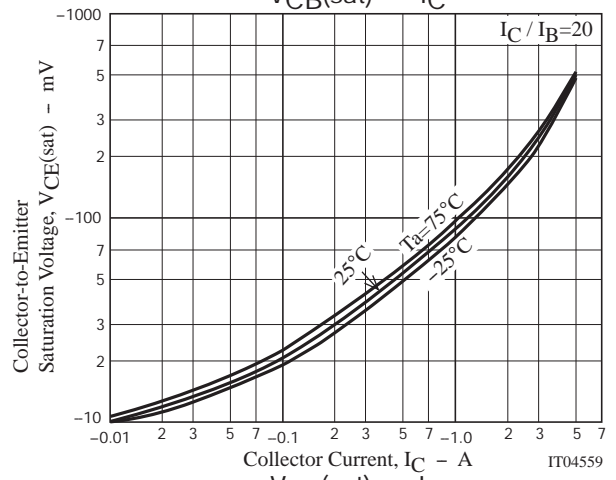
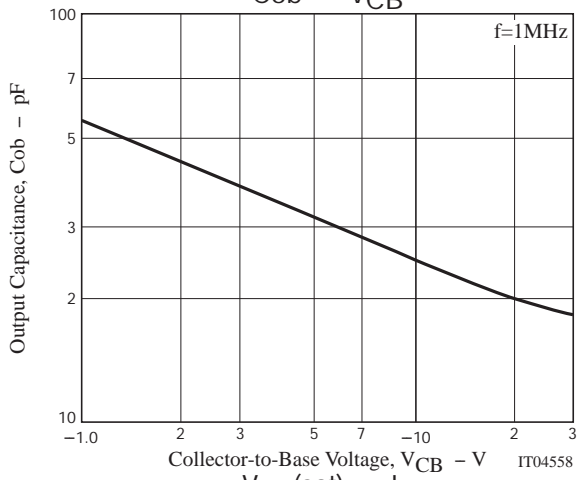
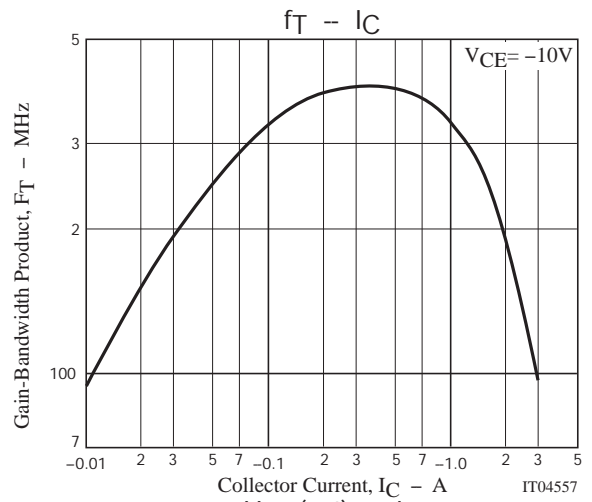
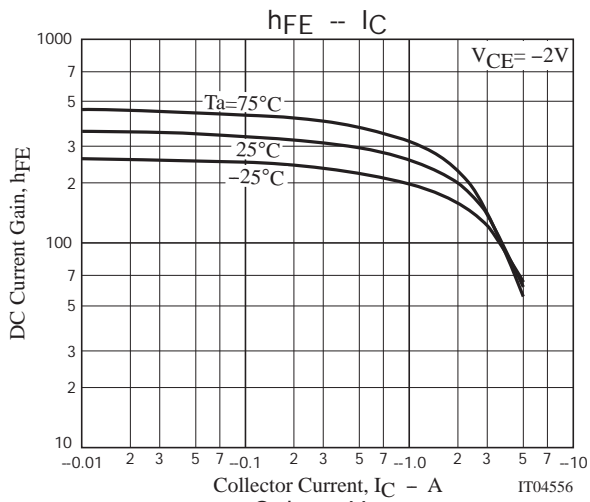


## Ordering Information

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



# MCH6122



# MCH6122

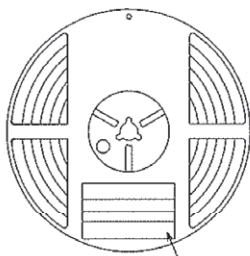
## Embossed Taping Specification

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



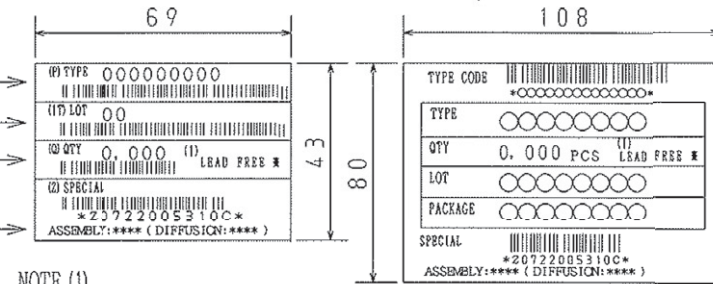
Type No.  
LOT No.  
Quantity  
Origin

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.



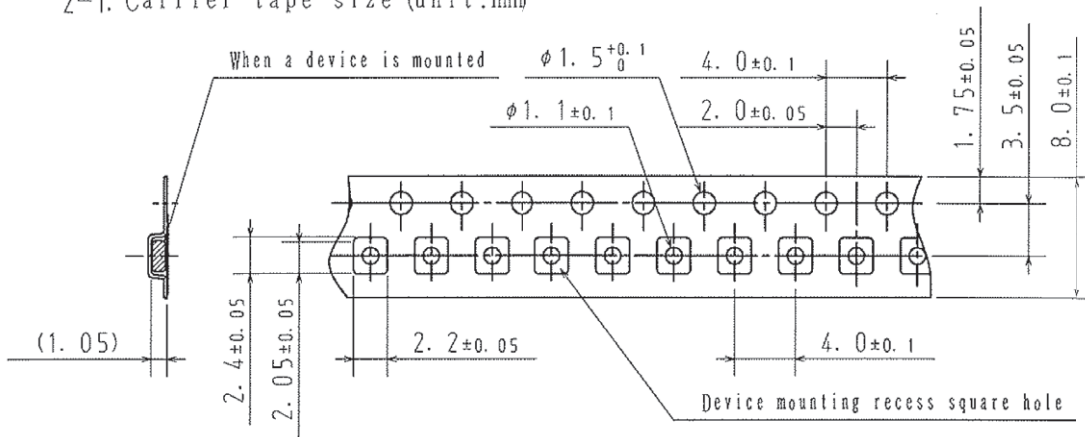
NOTE (1)

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

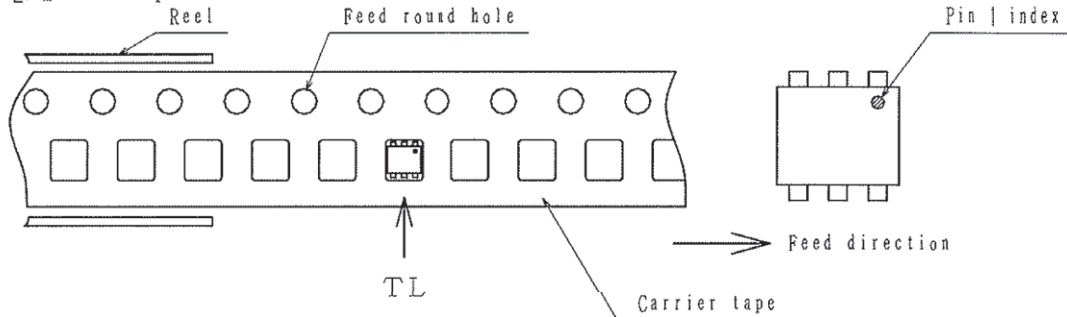
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

### 2. Taping configuration

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



#### 2-2. Device placement direction

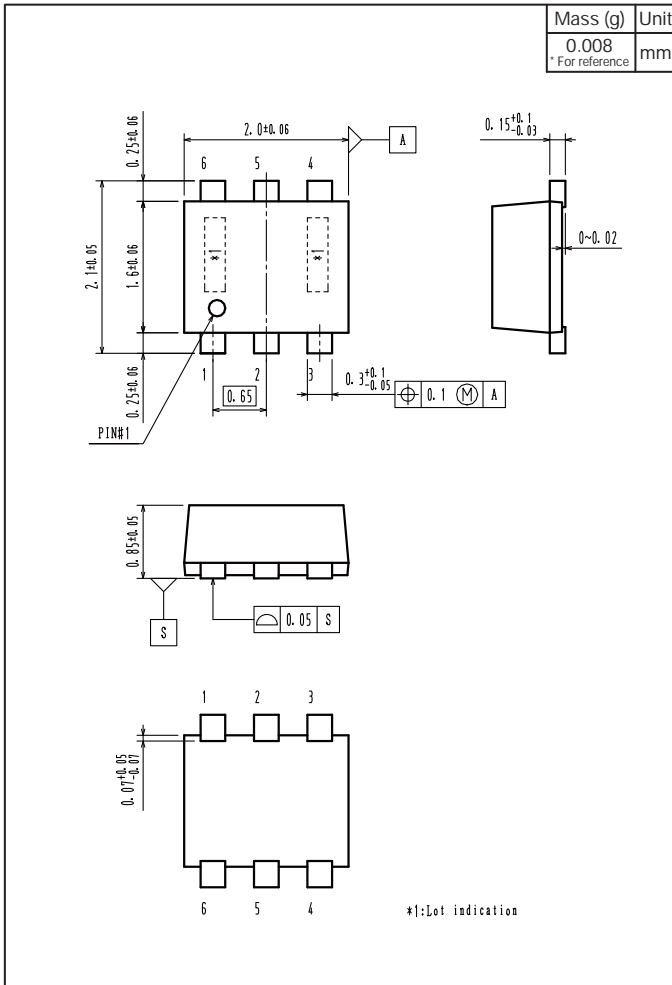


Those with pin | index on the feed hole side.....TL

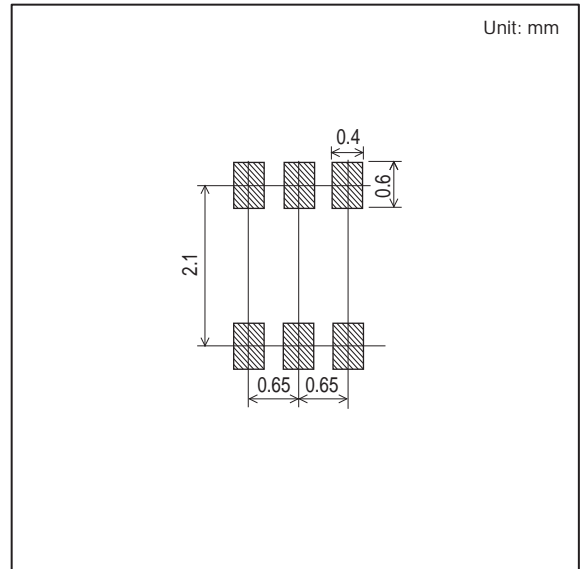
# MCH6122

## Outline Drawing

MCH6122-TL-E, MCH6122-TL-H



## Land Pattern Example





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## MCH6122

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