



SANYO Semiconductors

# DATA SHEET

An ON Semiconductor Company

## MCH6605 — P-Channel Silicon MOSFET — General-Purpose Switching Device Applications

### Features

- Low ON-resistance
- Ultrahigh-speed switching
- 4V drive
- Composite type with 2 MOSFETs contained in a single package, facilitating high-density mounting

### Specifications

#### Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V <sub>DSS</sub>		-50	V
Gate-to-Source Voltage	V <sub>GSS</sub>		±20	V
Drain Current (DC)	I <sub>D</sub>		-0.14	A
Drain Current (Pulse)	I <sub>DP</sub>	PW≤10μs, duty cycles≤1%	-0.56	A
Allowable Power Dissipation	P <sub>D</sub>	When mounted on ceramic substrate (900mm <sup>2</sup> ×0.8mm)1unit	0.8	W
Channel Temperature	T <sub>ch</sub>		150	°C
Storage Temperature	T <sub>stg</sub>		-55 to +150	°C

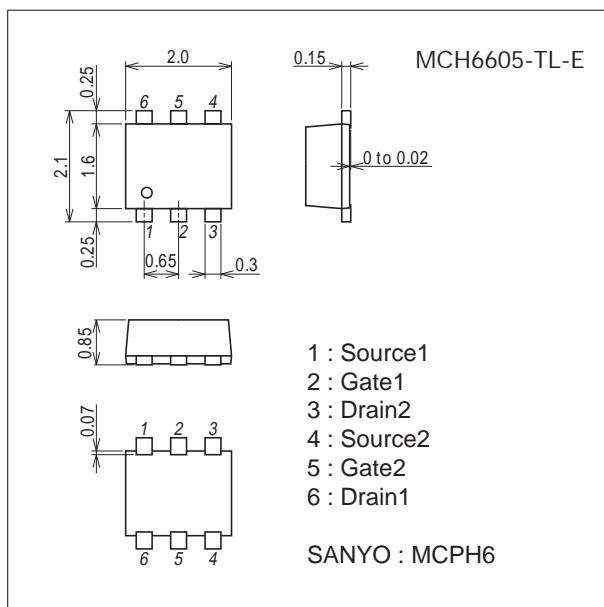
This product is designed to "ESD immunity < 200V\*\*", so please take care when handling.

\* Machine Model

### Package Dimensions

unit : mm (typ)

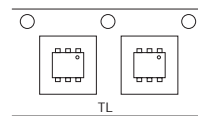
7022A-006



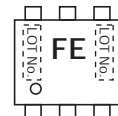
### Product & Package Information

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

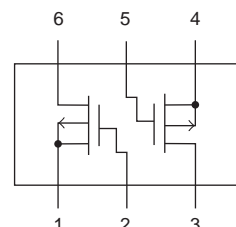
### Packing Type : TL



### Marking



### Electrical Connection



SANYO Semiconductor Co., Ltd.

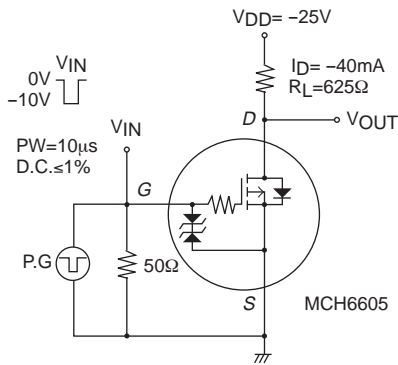
<http://semicon.sanyo.com/en/network>

# MCH6605

## Electrical Characteristics at Ta=25°C

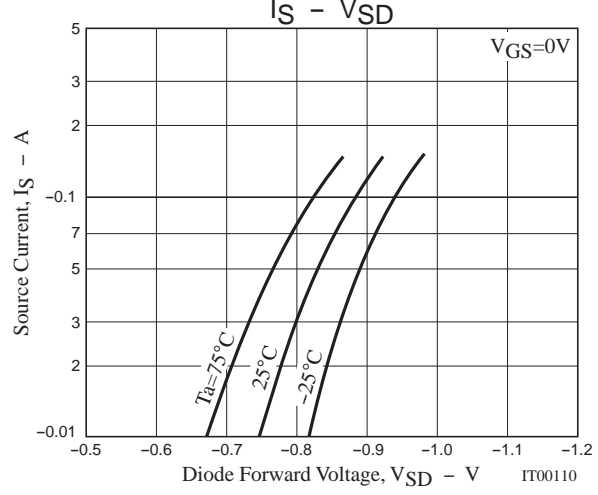
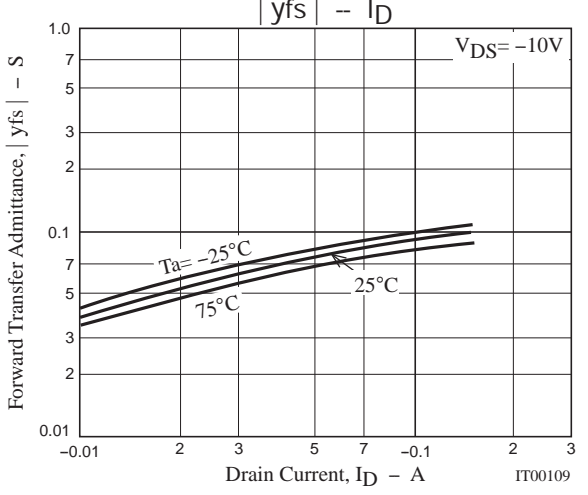
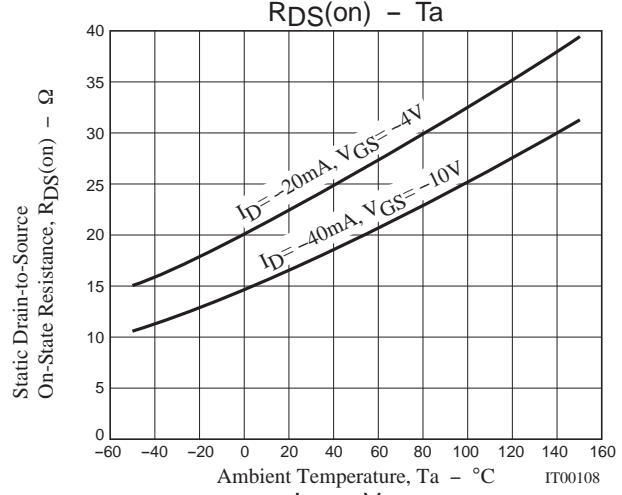
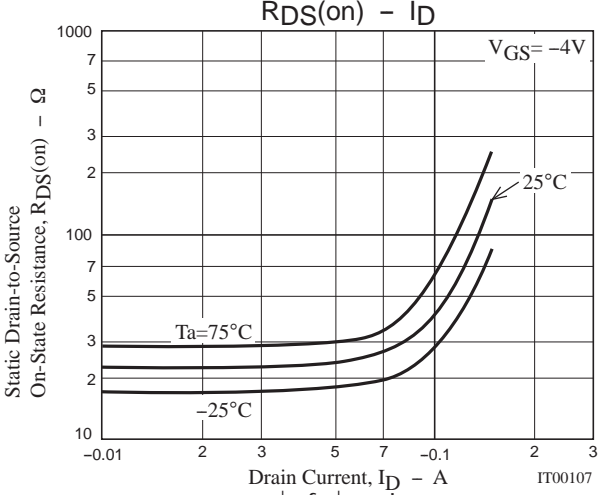
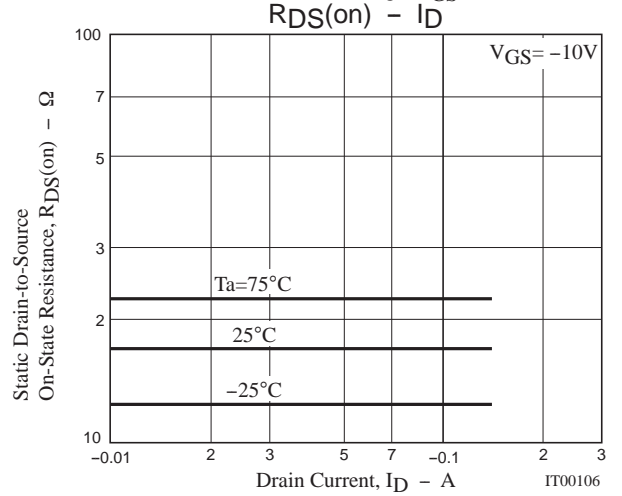
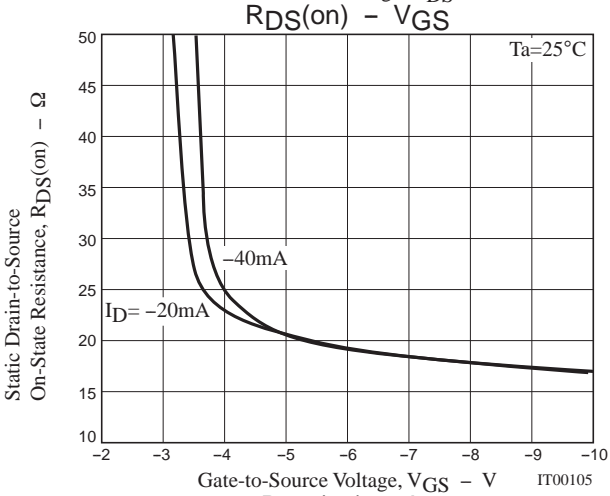
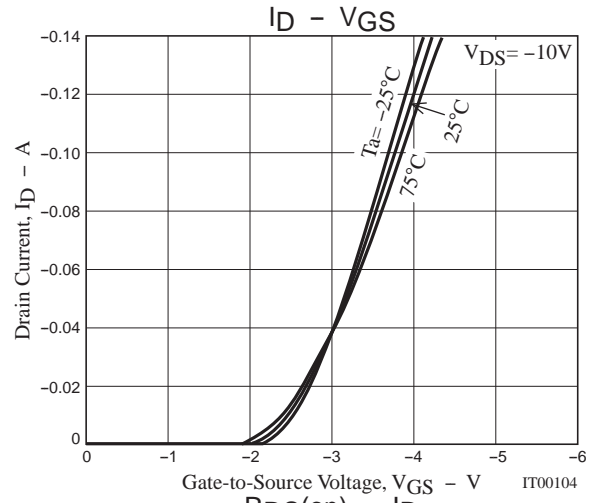
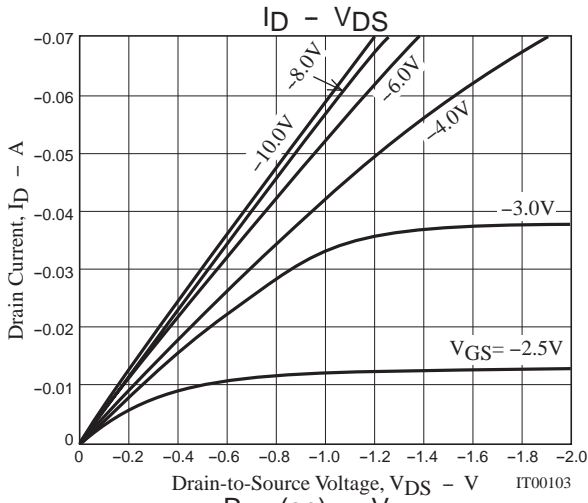
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	V(BR)DSS	ID=1mA, VGS=0V	-50			V
Zero-Gate Voltage Drain Current	IDSS	VDS=-50V, VGS=0V			-1	μA
Gate-to-Source Leakage Current	IGSS	VGS=±16V, VDS=0V			±10	μA
Cutoff Voltage	VGS(off)	VDS=-10V, ID=-100μA	-1		-2.5	V
Forward Transfer Admittance	yfs	VDS=-10V, ID=-40mA	50	70		mS
Static Drain-to-Source On-State Resistance	RDS(on)1	ID=-40mA, VGS=-10V		17	22	Ω
	RDS(on)2	ID=-20mA, VGS=-4V		23	32	Ω
Input Capacitance	Ciss	VDS=-10V, f=1MHz		6.2		pF
Output Capacitance	Coss			4.0		pF
Reverse Transfer Capacitance	Crss			1.3		pF
Turn-ON Delay Time	td(on)			13		ns
Rise Time	tr	See specified Test Circuit.		10		ns
Turn-OFF Delay Time	td(off)			100		ns
Fall Time	tf			150		ns
Total Gate Charge	Qg			1.32		nC
Gate-to-Source Charge	Qgs	VDS=-10V, VGS=-10V, ID=-70mA		0.17		nC
Gate-to-Drain "Miller" Charge	Qgd			0.34		nC
Diode Forward Voltage	VSD		IS=-70mA, VGS=0V	-0.85	-1.2	

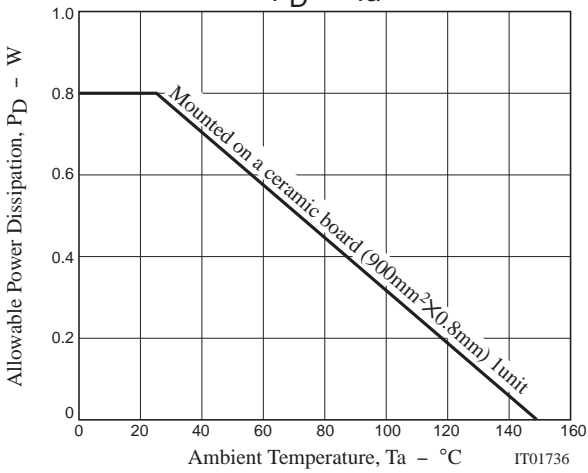
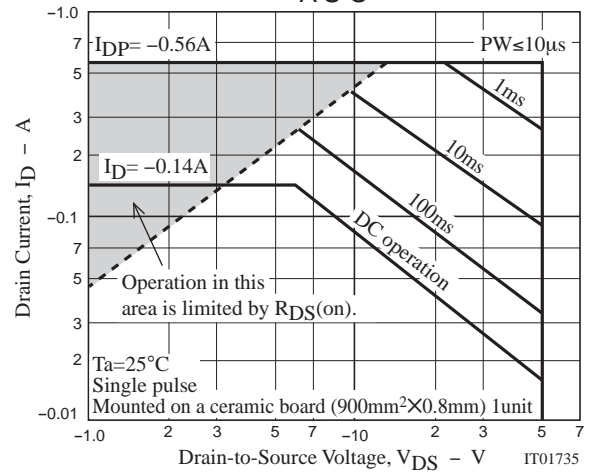
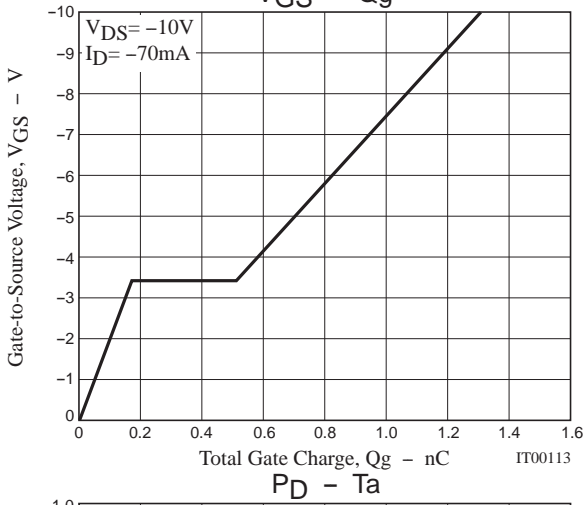
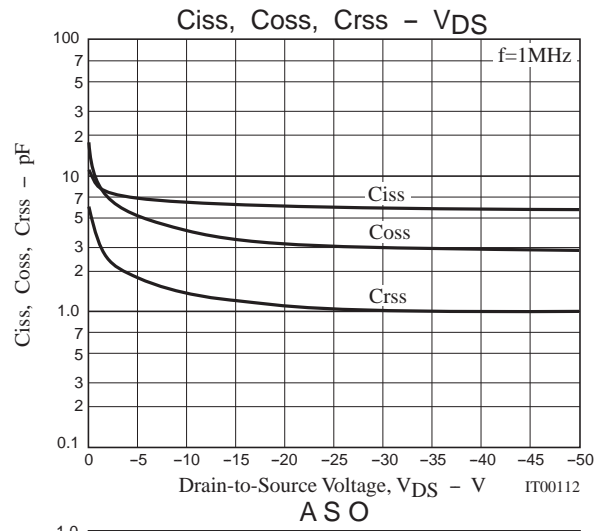
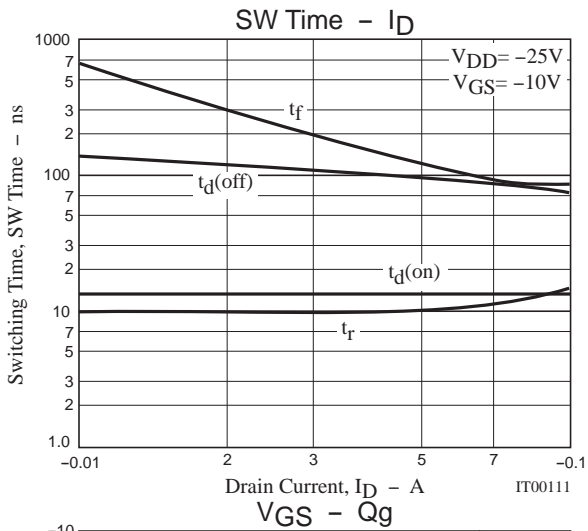
## Switching Time Test Circuit



## Ordering Information

Device	Package	Shipping	memo
MCH6605-TL-E	MCPH6	3,000pcs./reel	Pb Free





Taping Specification

MCH6605-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

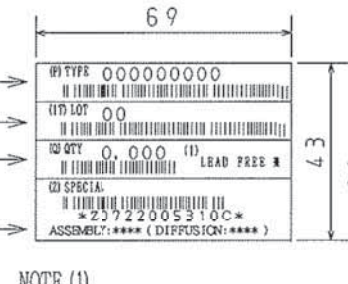
Packing method



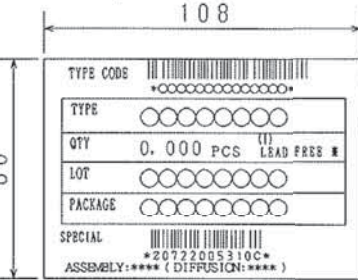
Type No.  
LOT No.  
Quantity  
Origin

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.)



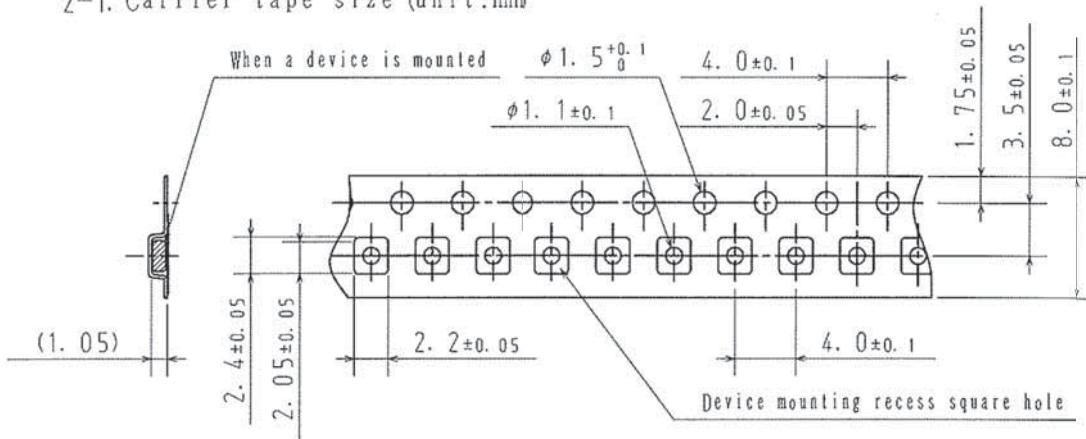
NOTE (1)

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

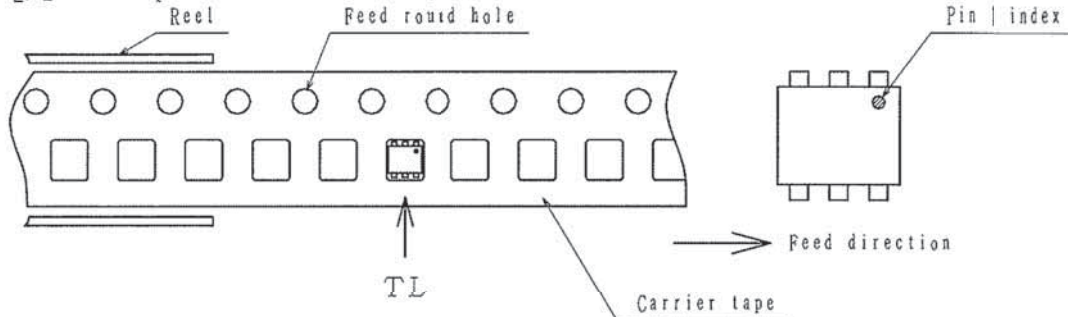
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

2. Taping configuration

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



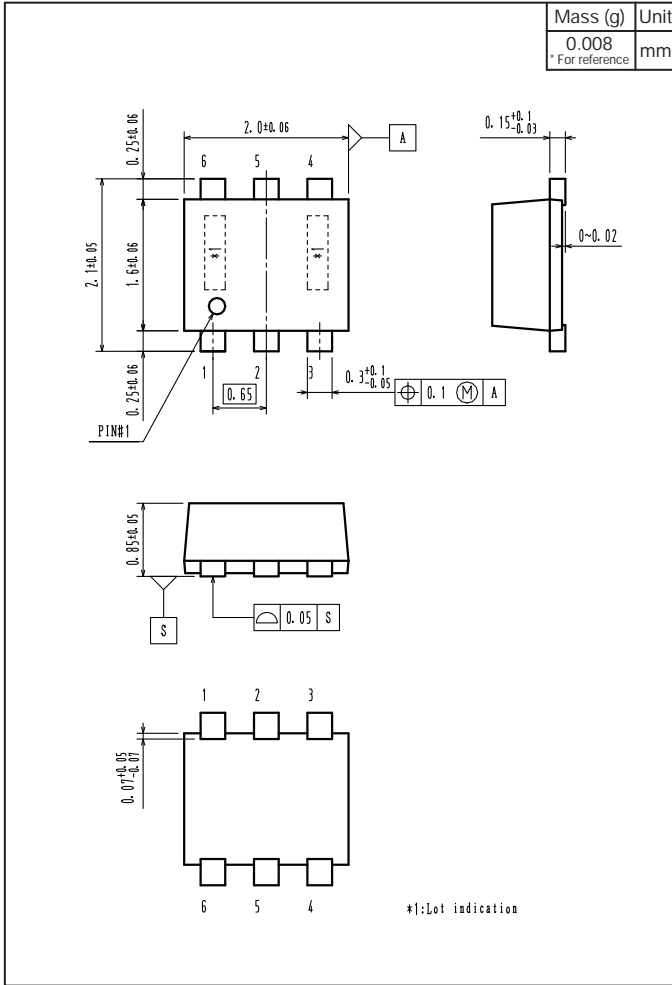
2-2. Device placement direction



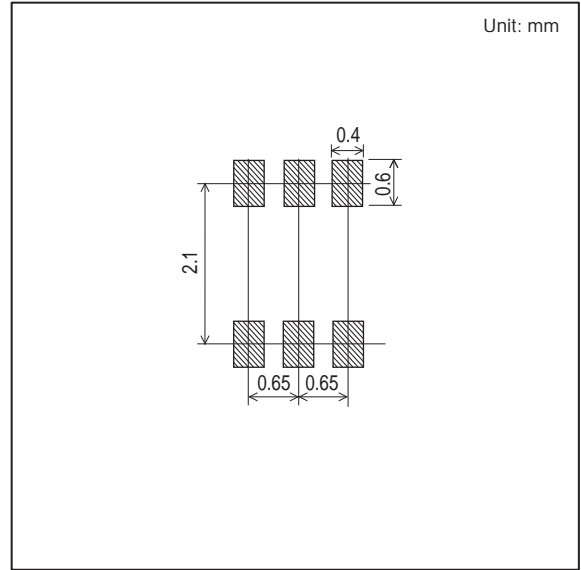
Those with pin | index on the feed hole side.....TL

# MCH6605

## Outline Drawing MCH6605-TL-E



## Land Pattern Example



Note on usage : Since the MCH6605 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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