



SANYO Semiconductors

DATA SHEET

An ON Semiconductor Company

MCH6662 — General-Purpose Switching Device Applications

N-Channel Silicon MOSFET

Features

- ON-resistance Nch : $R_{DS(on)1}=120m\Omega$ (typ.)
- 1.8V drive
- Halogen free compliance
- Protection diode in

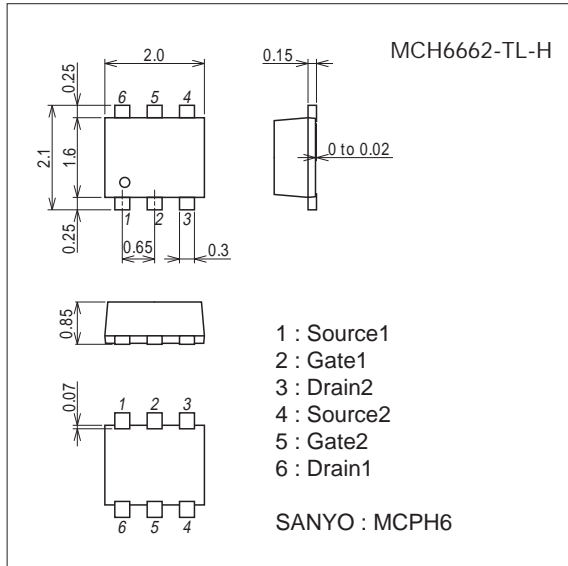
Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DSS}		20	V
Gate-to-Source Voltage	V_{GSS}		± 10	V
Drain Current (DC)	I_D		2.0	A
Drain Current (Pulse)	I_{DP}	$PW \leq 10\mu s$, duty cycle $\leq 1\%$	8.0	A
Allowable Power Dissipation	P_D	When mounted on ceramic substrate (900mm ² ×0.8mm) 1unit	0.8	W
Channel Temperature	T_{ch}		150	°C
Storage Temperature	T_{stg}		-55 to +150	°C

Package Dimensions

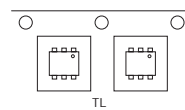
unit : mm (typ)
7022A-006



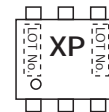
Product & Package Information

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

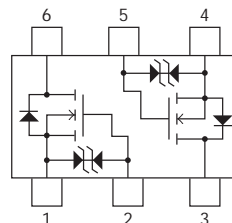
Packing Type : TL



Marking



Electrical Connection

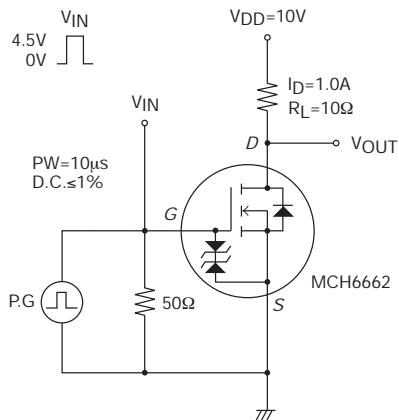


MCH6662

Electrical Characteristics at Ta=25°C

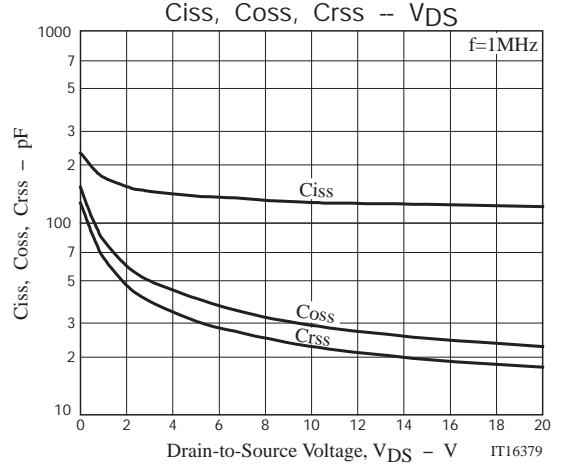
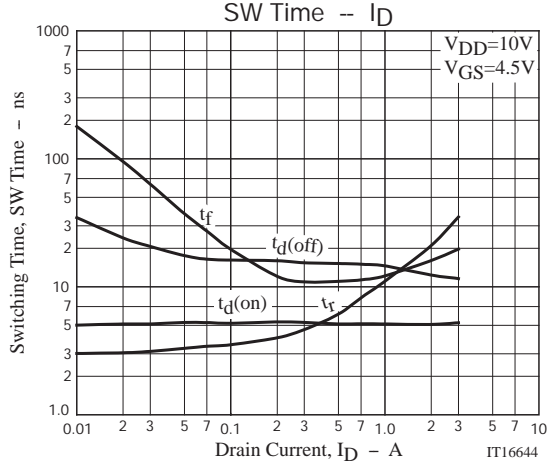
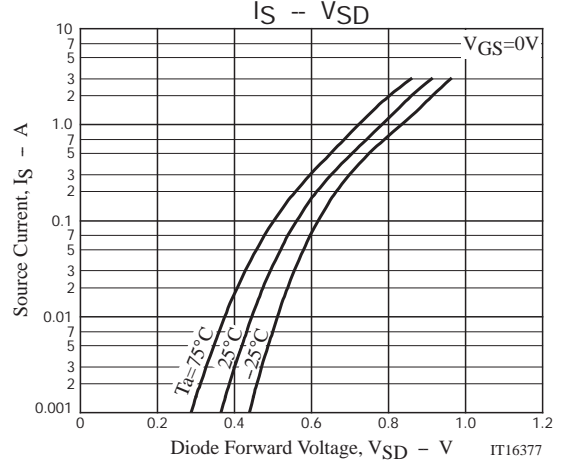
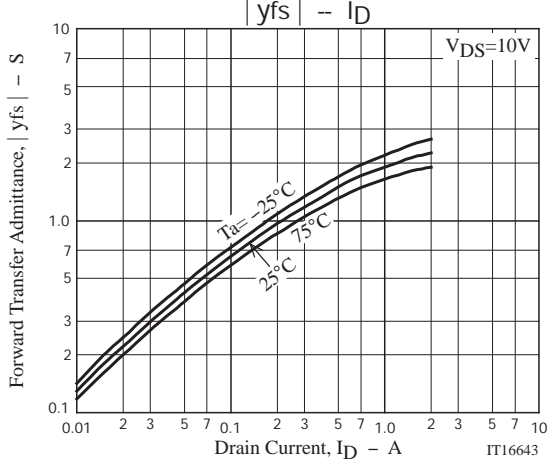
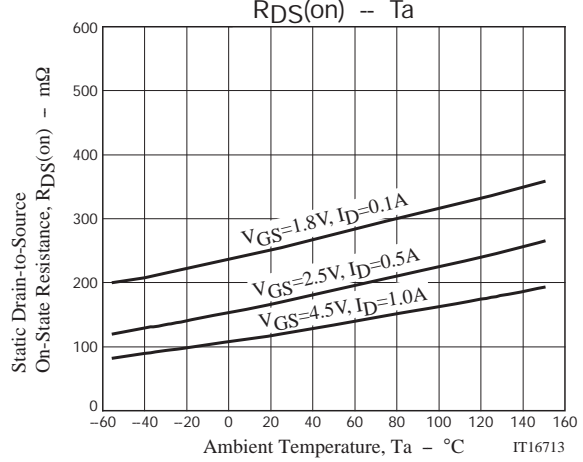
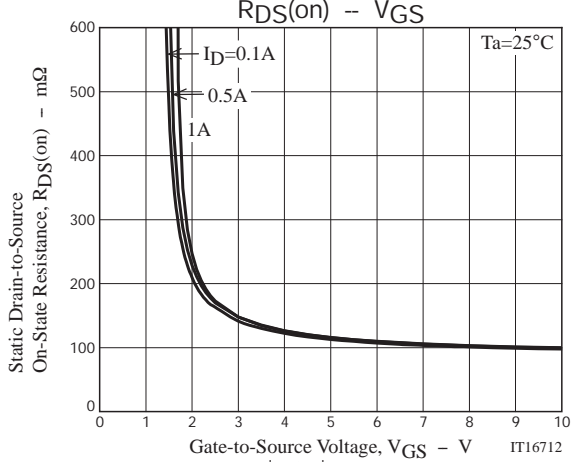
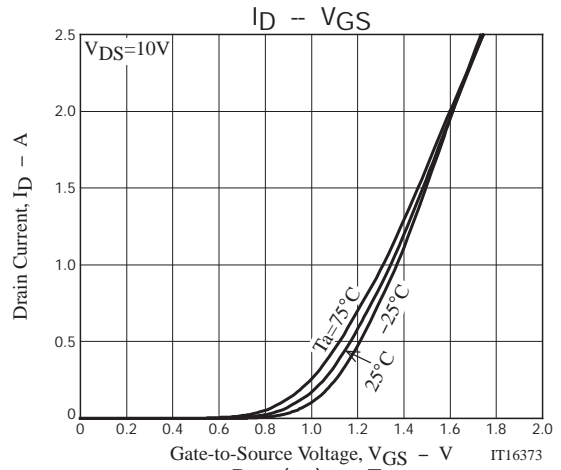
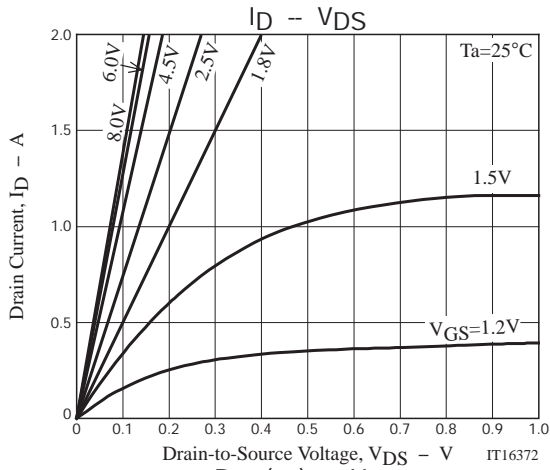
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D=1mA, V_{GS}=0V$	20			V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS}=20V, V_{GS}=0V$			1	μA
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS}=\pm 8V, V_{DS}=0V$			± 10	μA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS}=10V, I_D=1mA$	0.4		1.3	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS}=10V, I_D=1A$		1.9		S
Static Drain-to-Source On-State Resistance	$R_{DS(on)1}$	$I_D=1.0A, V_{GS}=4.5V$		120	160	$m\Omega$
	$R_{DS(on)2}$	$I_D=0.5A, V_{GS}=2.5V$		170	240	$m\Omega$
	$R_{DS(on)3}$	$I_D=0.1A, V_{GS}=1.8V$		255	380	$m\Omega$
Input Capacitance	C_{iss}	$V_{DS}=10V, f=1MHz$		128		pF
Output Capacitance	C_{oss}			28		pF
Reverse Transfer Capacitance	C_{rss}			21		pF
Turn-ON Delay Time	$t_{d(on)}$		See specified Test Circuit.		5.1	
Rise Time	t_r			11		ns
Turn-OFF Delay Time	$t_{d(off)}$			14.5		ns
Fall Time	t_f			12		ns
Total Gate Charge	Q_g	$V_{DS}=10V, V_{GS}=4.5V, I_D=2A$			1.8	
Gate-to-Source Charge	Q_{gs}			0.3		nC
Gate-to-Drain "Miller" Charge	Q_{gd}			0.55		nC
Diode Forward Voltage	V_{SD}	$I_S=2A, V_{GS}=0V$		0.85	1.2	V

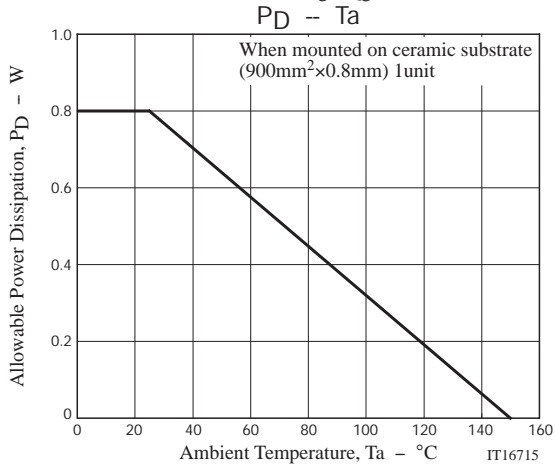
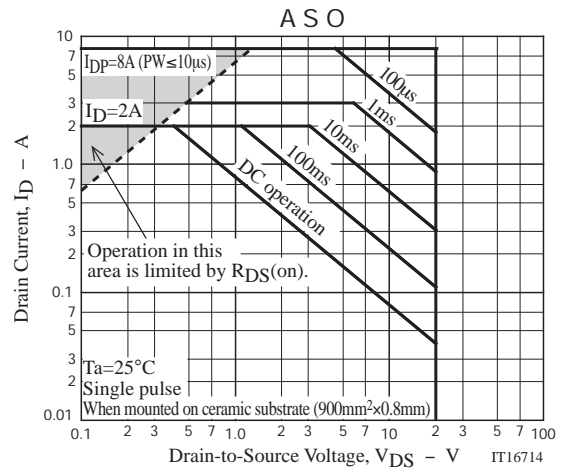
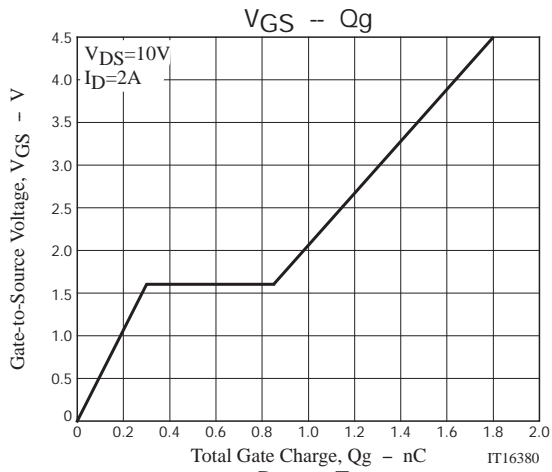
Switching Time Test Circuit



Ordering Information

Device	Package	Shipping	memo
MCH6662-TL-H	MCPH6	3,000pcs./reel	Pb Free and Halogen Free





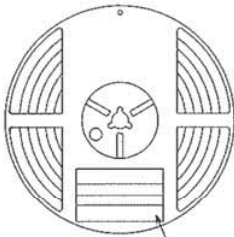
Embossed Taping Specification

MCH6662-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



Reel label

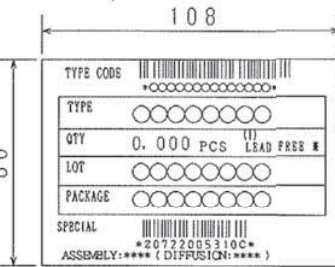
Type No.
LOT No.
Quantity
Origin

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.



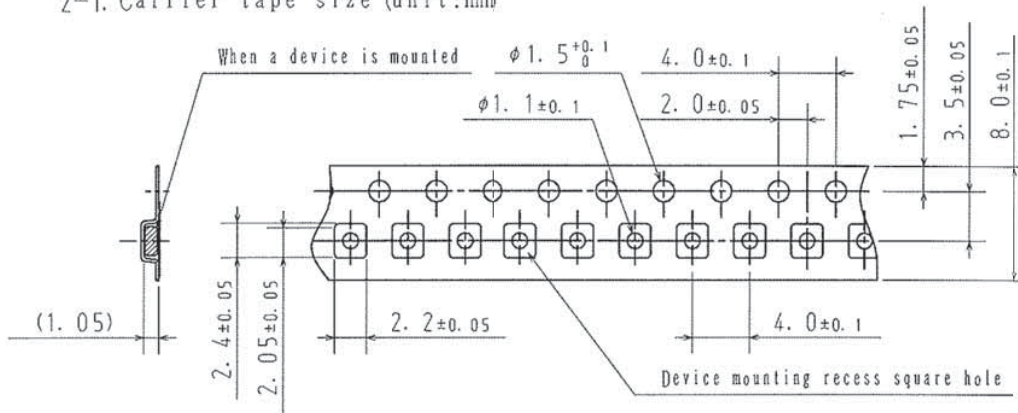
NOTE (1)

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

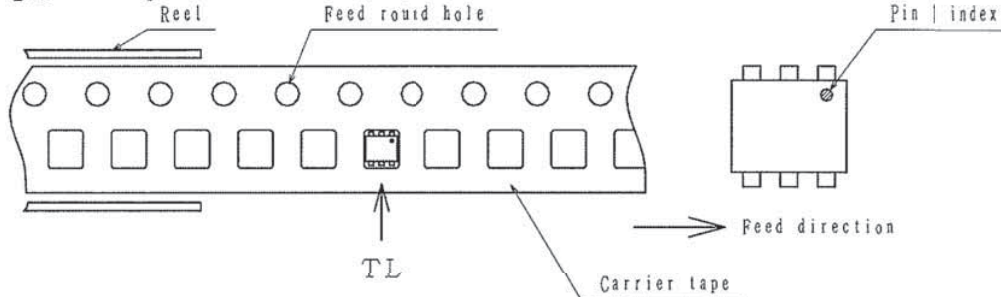
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

2. Taping configuration

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



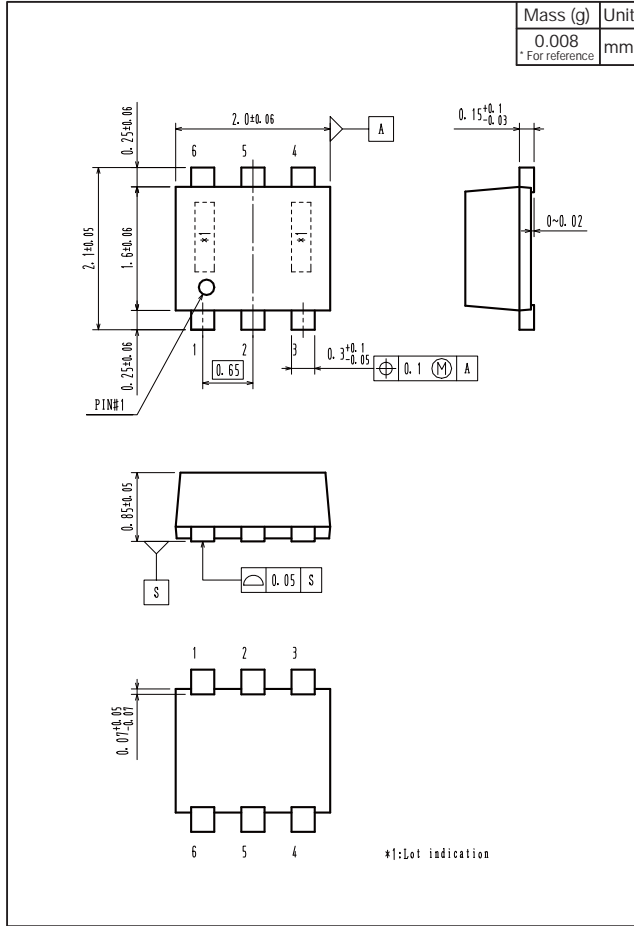
2-2. Device placement direction



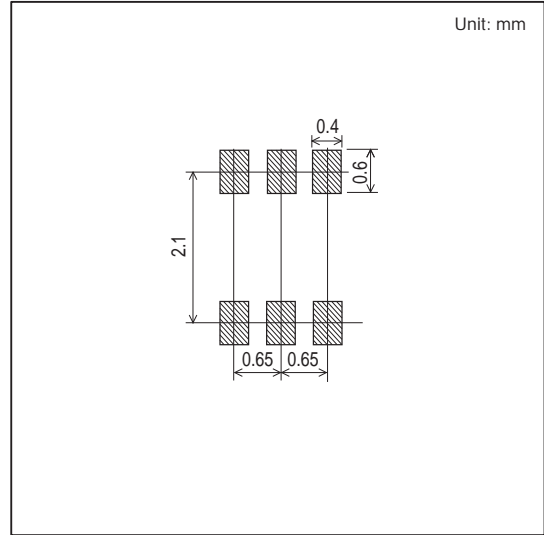
Those with pin | index on the feed hole side.....TL

MCH6662

Outline Drawing MCH6662-TL-H



Land Pattern Example



Note on usage : Since the MCH6662 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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