



MCH6342 — P-Channel Silicon MOSFET — General-Purpose Switching Device Applications

Features

- Low ON-resistance
- Ultrahigh-speed switching
- 1.8V drive
- Halogen free compliance
- Protection diode in

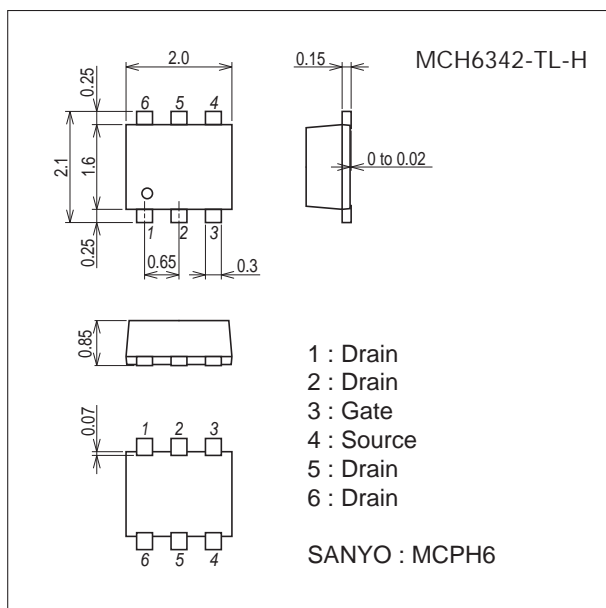
Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V _{DSS}		-30	V
Gate-to-Source Voltage	V _{GSS}		±10	V
Drain Current (DC)	I _D		-4.5	A
Drain Current (Pulse)	I _{DP}	PW≤10μs, duty cycle≤1%	-18	A
Allowable Power Dissipation	P _D	When mounted on ceramic substrate (1500mm ² ×0.8mm)	1.5	W
Channel Temperature	T _{ch}		150	°C
Storage Temperature	T _{stg}		-55 to +150	°C

Package Dimensions

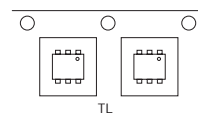
unit : mm (typ)
7022A-009



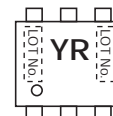
Product & Package Information

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

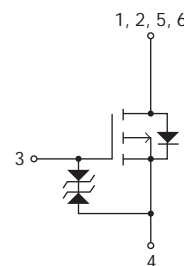
Packing Type : TL



Marking



Electrical Connection

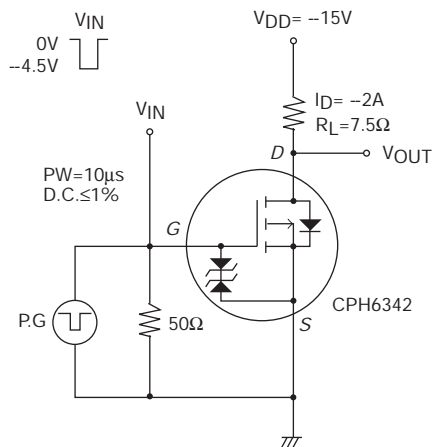


MCH6342

Electrical Characteristics at Ta=25°C

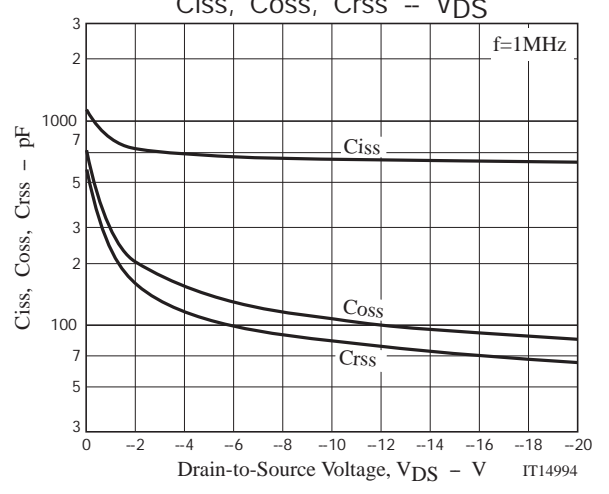
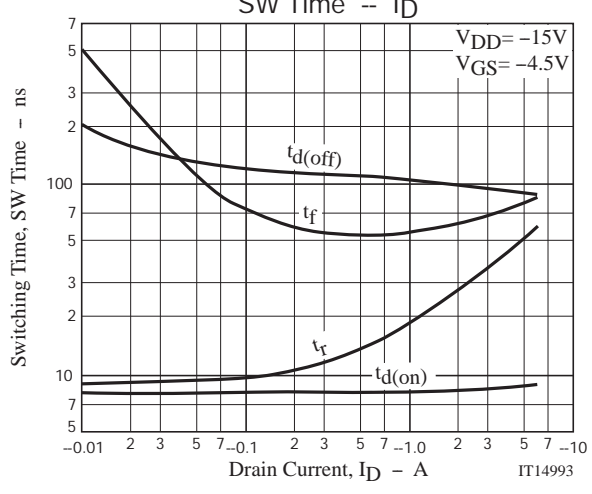
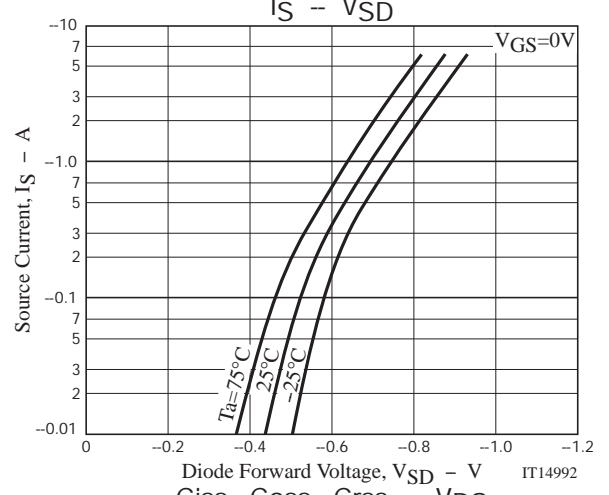
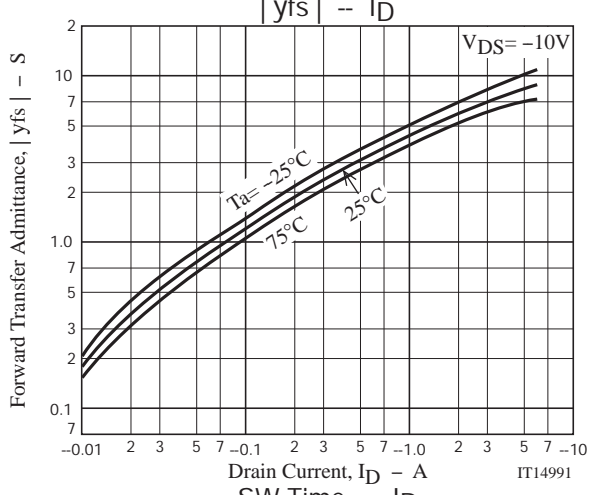
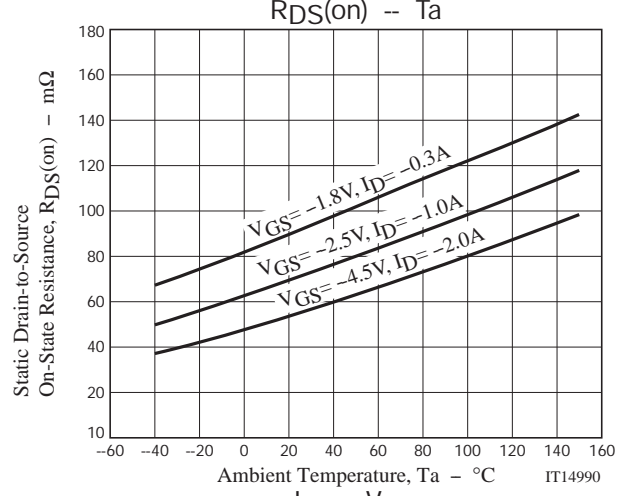
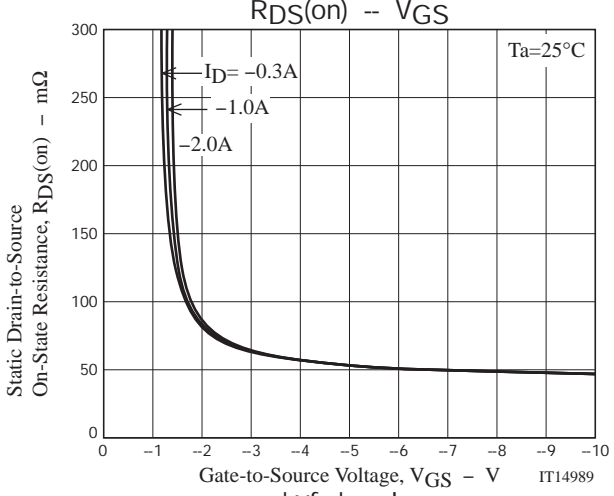
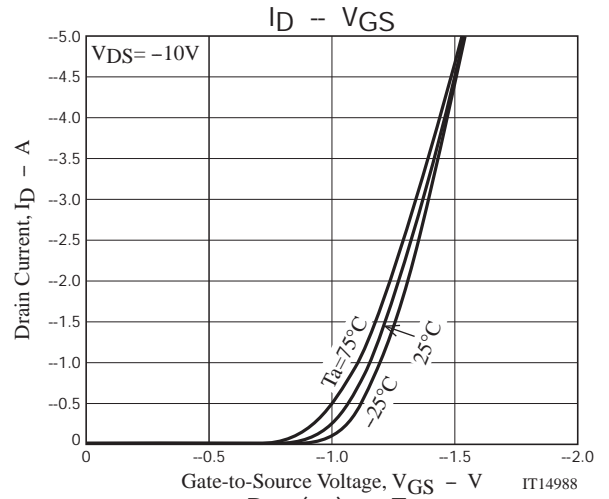
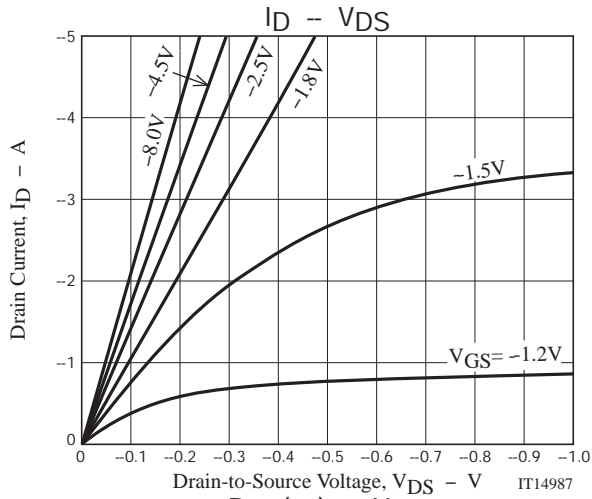
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	V(BR)DSS	I _D =-1mA, V _{GS} =0V	-30			V
Zero-Gate Voltage Drain Current	I _{DSS}	V _{DS} =-30V, V _{GS} =0V			-1	μA
Gate-to-Source Leakage Current	I _{GSS}	V _{GS} =±8V, V _{DS} =0V			±10	μA
Cutoff Voltage	V _{GS(off)}	V _{DS} =-10V, I _D =-1mA	-0.4		-1.3	V
Forward Transfer Admittance	y _{fs}	V _{DS} =-10V, I _D =-2A	3.4	5.8		S
Static Drain-to-Source On-State Resistance	R _{DS(on)1}	I _D =-2A, V _{GS} =-4.5V		56	73	mΩ
	R _{DS(on)2}	I _D =-1A, V _{GS} =-2.5V		71	99	mΩ
	R _{DS(on)3}	I _D =-0.3A, V _{GS} =-1.8V		95	155	mΩ
Input Capacitance	C _{iss}			650		pF
Output Capacitance	C _{oss}	V _{DS} =-10V, f=1MHz		105		pF
Reverse Transfer Capacitance	C _{rss}			83		pF
Turn-ON Delay Time	t _{d(on)}	See specified Test Circuit.		8.2		ns
Rise Time	t _r			28		ns
Turn-OFF Delay Time	t _{d(off)}			100		ns
Fall Time	t _f			60		ns
Total Gate Charge	Q _g				8.6	
Gate-to-Source Charge	Q _{gs}	V _{DS} =-15V, V _{GS} =-4.5V, I _D =-4.5A		1.3		nC
Gate-to-Drain "Miller" Charge	Q _{gd}			2.4		nC
Diode Forward Voltage	V _{SD}	I _S =-4.5A, V _{GS} =0V		-0.83	-1.2	V

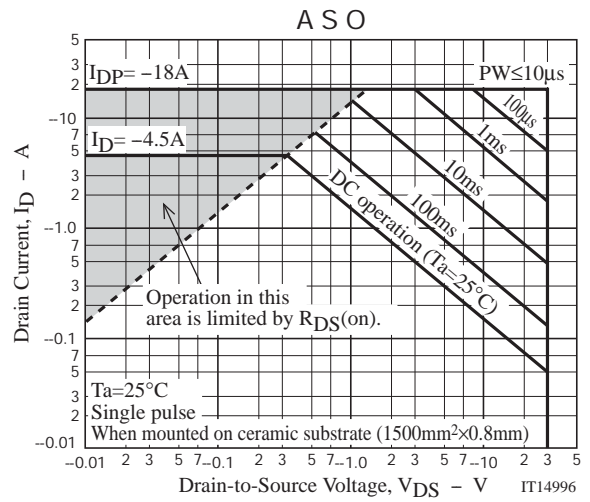
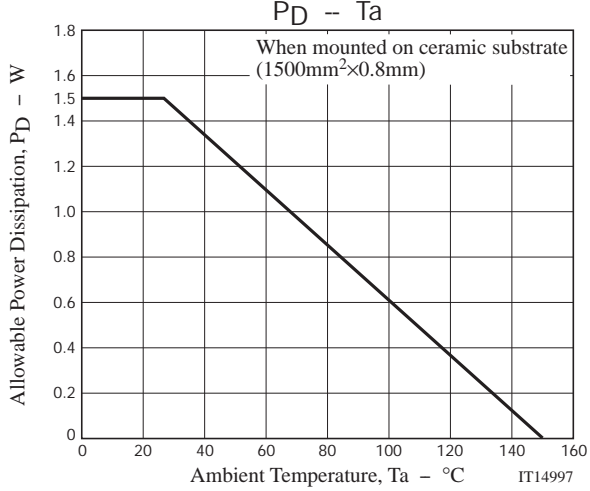
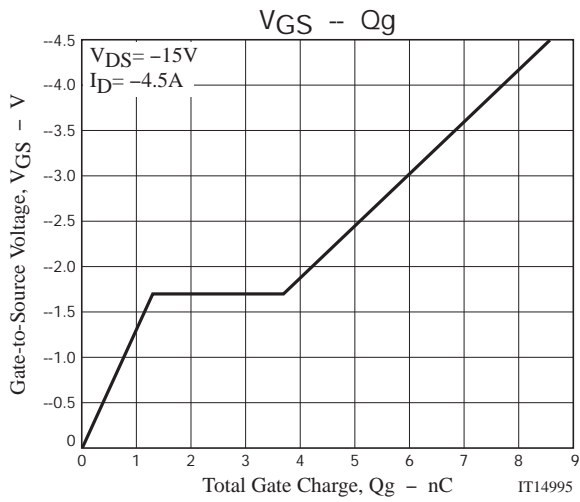
Switching Time Test Circuit



Ordering Information

Device	Package	Shipping	memo
MCH6342-TL-H	MCPH6	3,000pcs./reel	Pb Free and Halogen Free





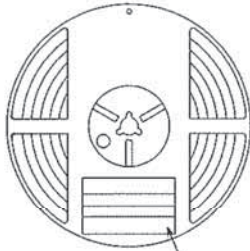
Taping Specification

MCH6342-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

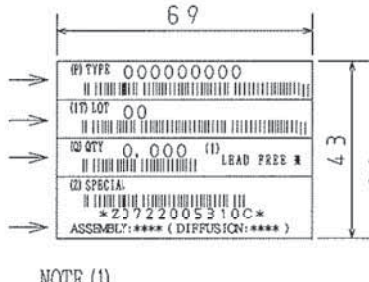
Packing method



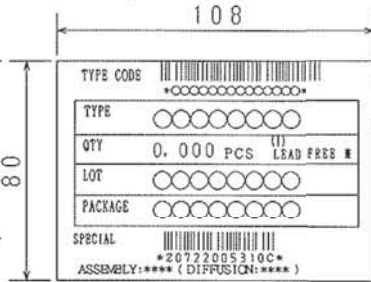
Type No.
LOT No.
Quantity
Origin

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.



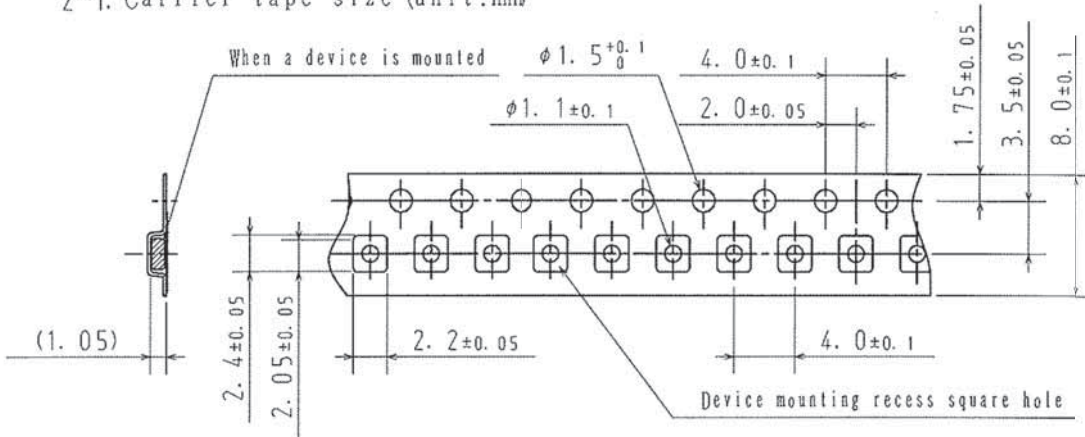
NOTE (1)

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

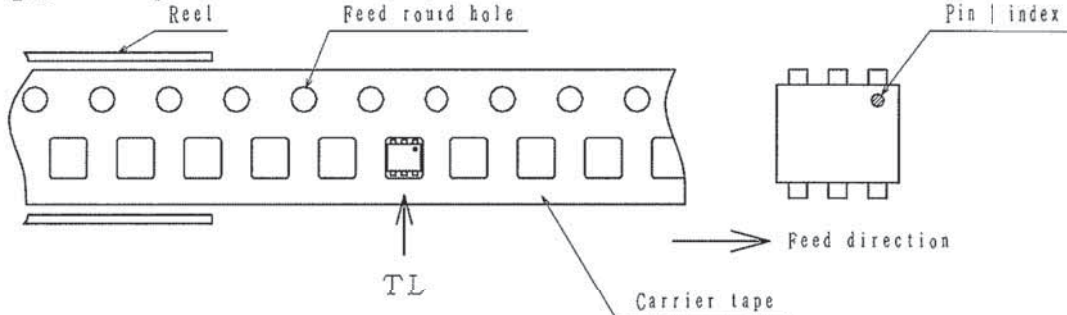
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

2. Taping configuration

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



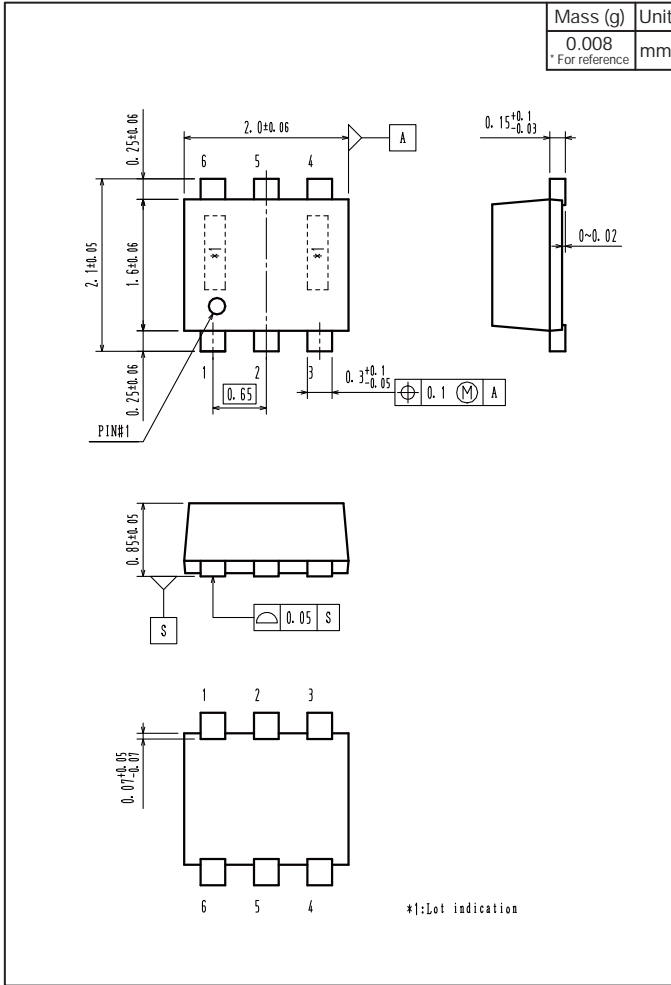
2-2. Device placement direction



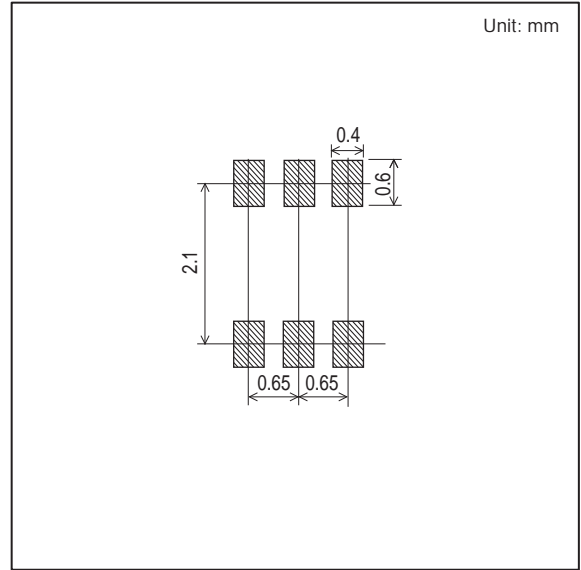
Those with pin | index on the feed hole side.....TL

MCH6342

Outline Drawing MCH6342-TL-H



Land Pattern Example



Note on usage : Since the MCH6342 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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