



MCH6342

P-Channel Power MOSFET -30V, -4.5A, 73mΩ, Single MCPH6

ON Semiconductor®

<http://onsemi.com>

Features

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

Specifications

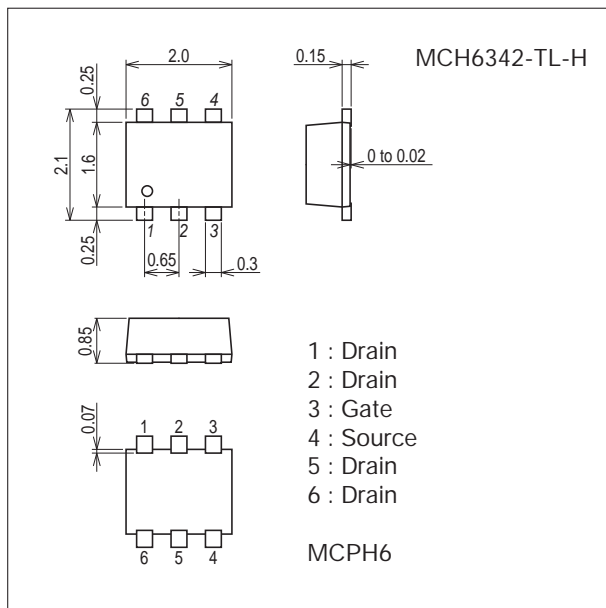
Absolute Maximum Ratings at Ta=25°C

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

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

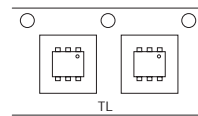
unit : mm (typ)
7022A-009



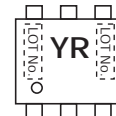
Product & Package Information

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

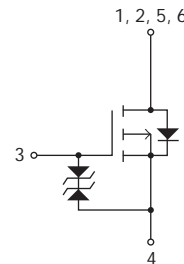
Packing Type : TL



Marking



Electrical Connection

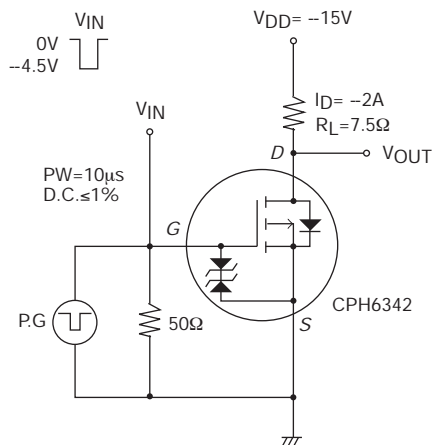


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Electrical Characteristics at Ta=25°C

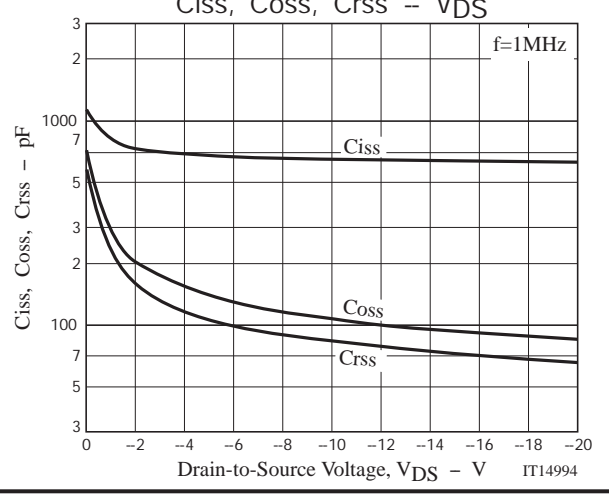
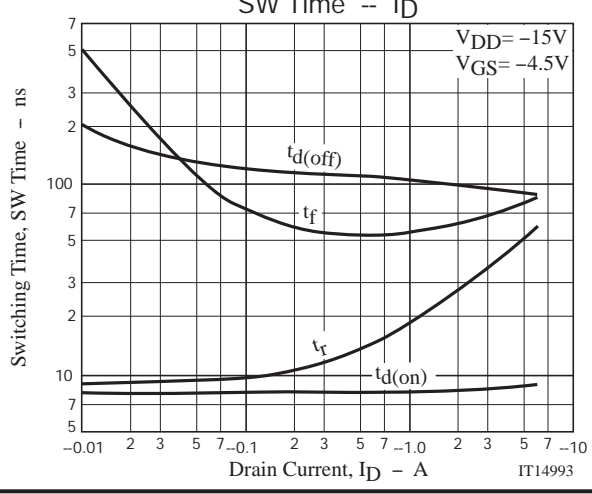
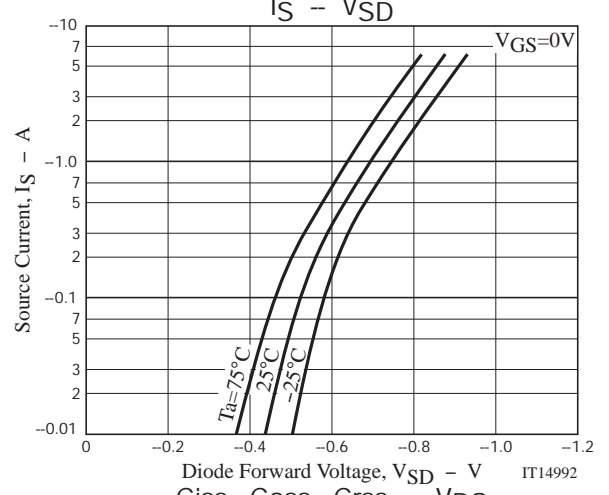
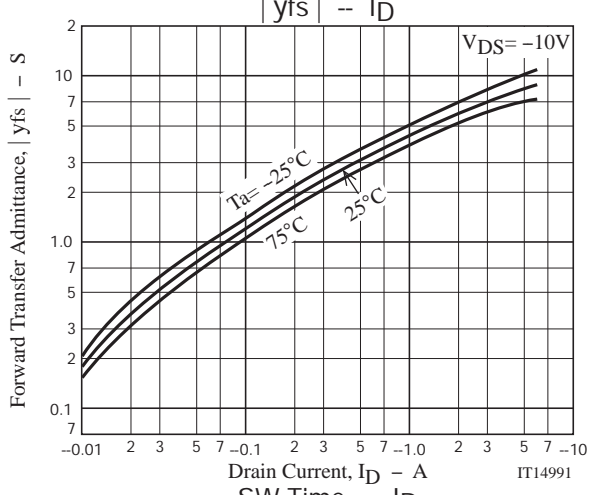
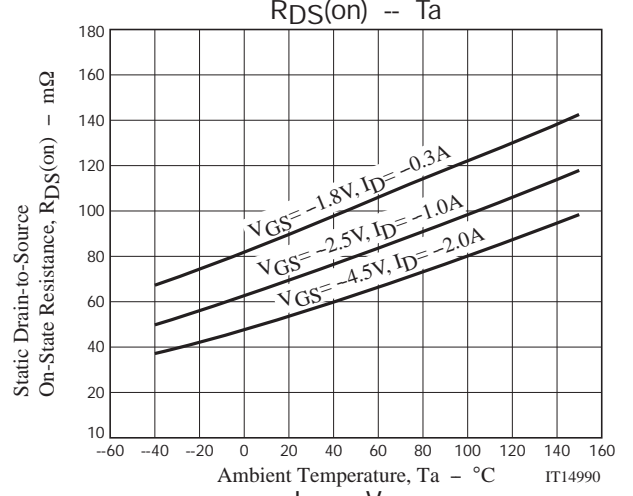
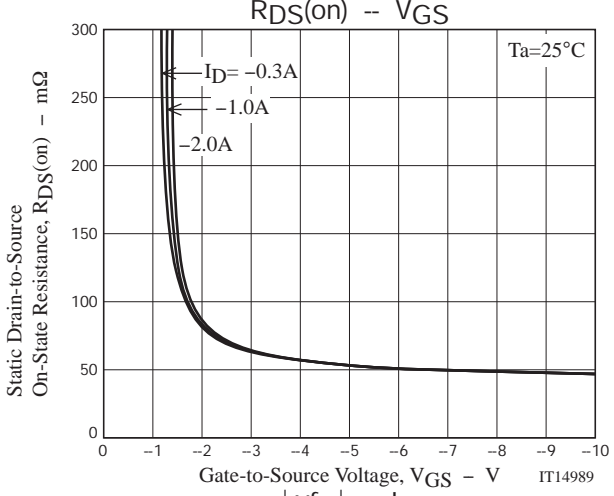
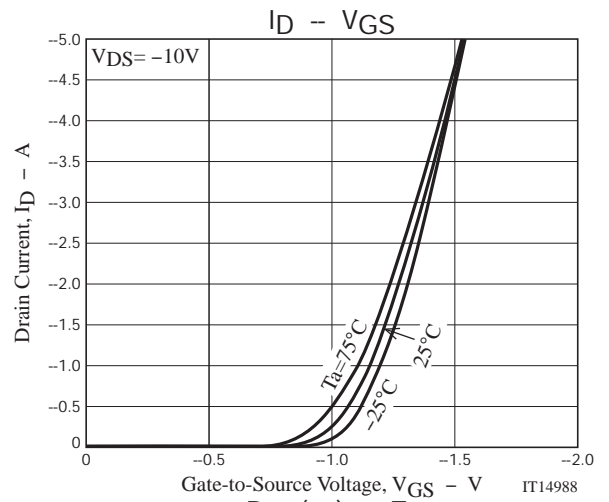
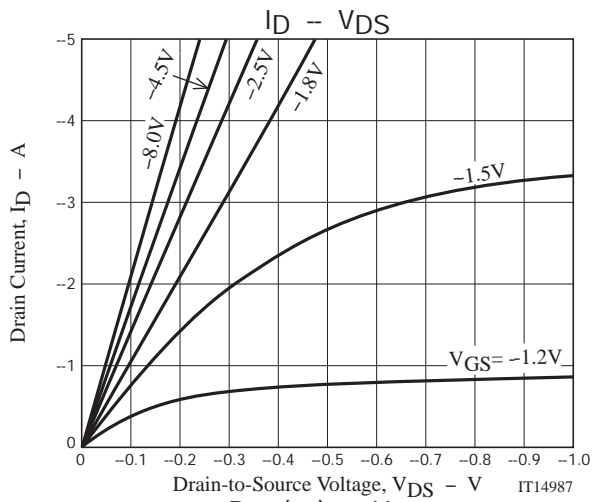
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	V(BR)DSS	ID=-1mA, VGS=0V	-30			V
Zero-Gate Voltage Drain Current	IDSS	VDS=-30V, VGS=0V			-1	μA
Gate-to-Source Leakage Current	IGSS	VGS=±8V, VDS=0V			±10	μA
Cutoff Voltage	VGS(off)	VDS=-10V, ID=-1mA	-0.4		-1.3	V
Forward Transfer Admittance	yfs	VDS=-10V, ID=-2A	3.4	5.8		S
Static Drain-to-Source On-State Resistance	RDS(on)1	ID=-2A, VGS=-4.5V		56	73	mΩ
	RDS(on)2	ID=-1A, VGS=-2.5V		71	99	mΩ
	RDS(on)3	ID=-0.3A, VGS=-1.8V		95	155	mΩ
Input Capacitance	Ciss			650		pF
Output Capacitance	Coss	VDS=-10V, f=1MHz		105		pF
Reverse Transfer Capacitance	Crss			83		pF
Turn-ON Delay Time	td(on)	See specified Test Circuit.		8.2		ns
Rise Time	tr			28		ns
Turn-OFF Delay Time	td(off)			100		ns
Fall Time	tf			60		ns
Total Gate Charge	Qg				8.6	
Gate-to-Source Charge	Qgs	VDS=-15V, VGS=-4.5V, ID=-4.5A		1.3		nC
Gate-to-Drain "Miller" Charge	Qgd			2.4		nC
Diode Forward Voltage	VSD		IS=-4.5A, VGS=0V		-0.83	-1.2

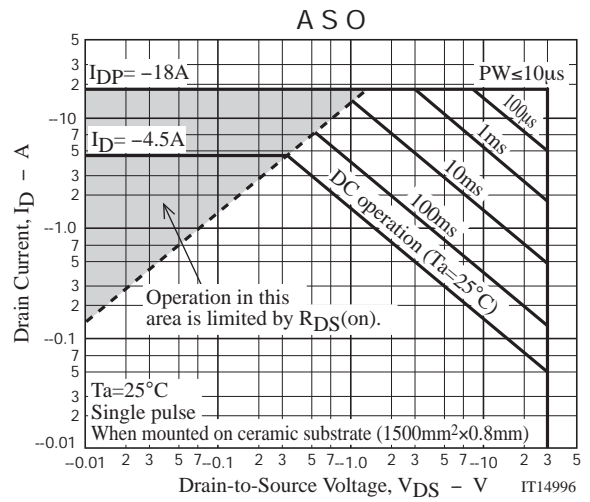
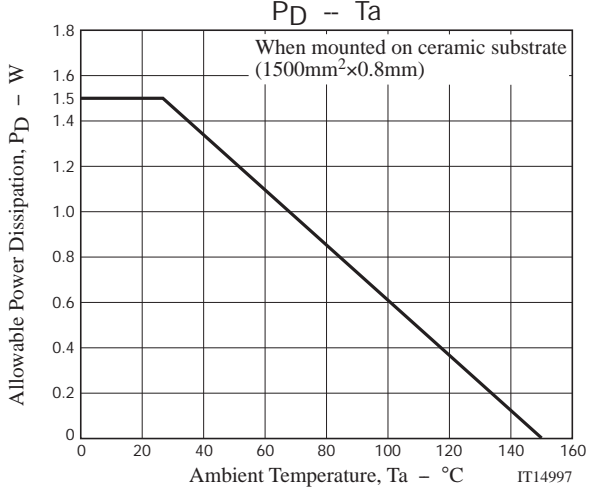
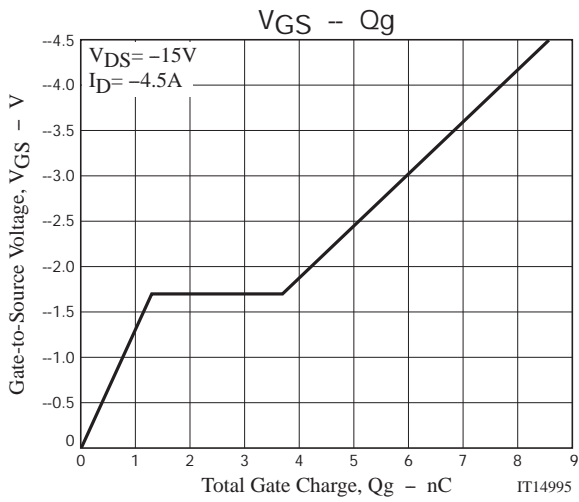
Switching Time Test Circuit



Ordering Information

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





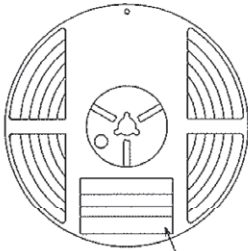
Taping Specification

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

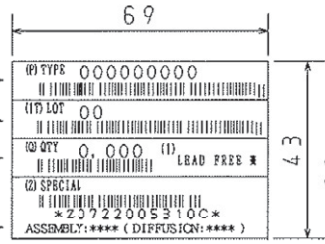
Packing method



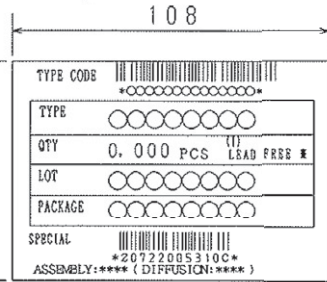
Type No.
LOT No.
Quantity
Origin

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.



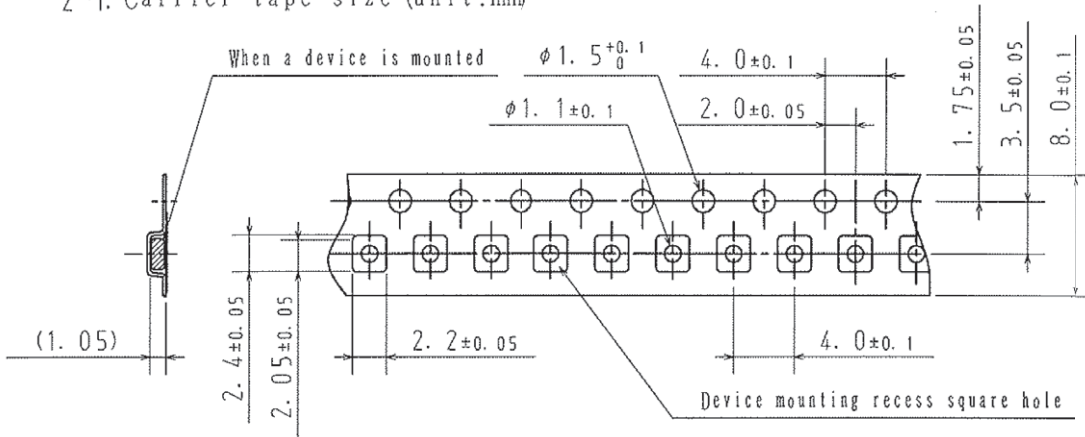
NOTE (1)

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

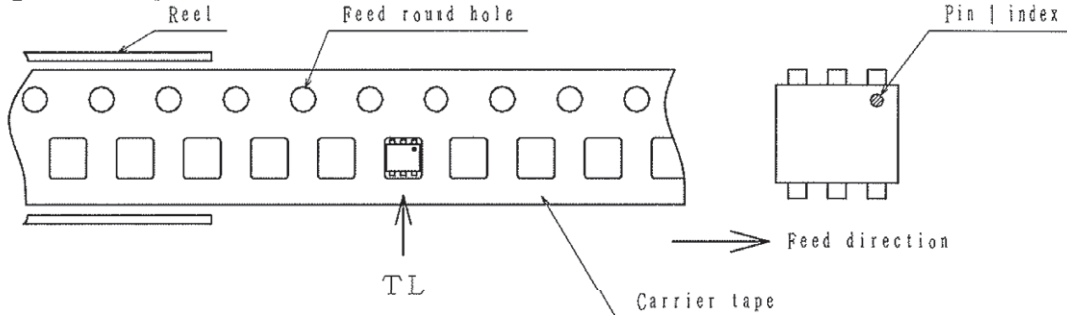
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

2. Taping configuration

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



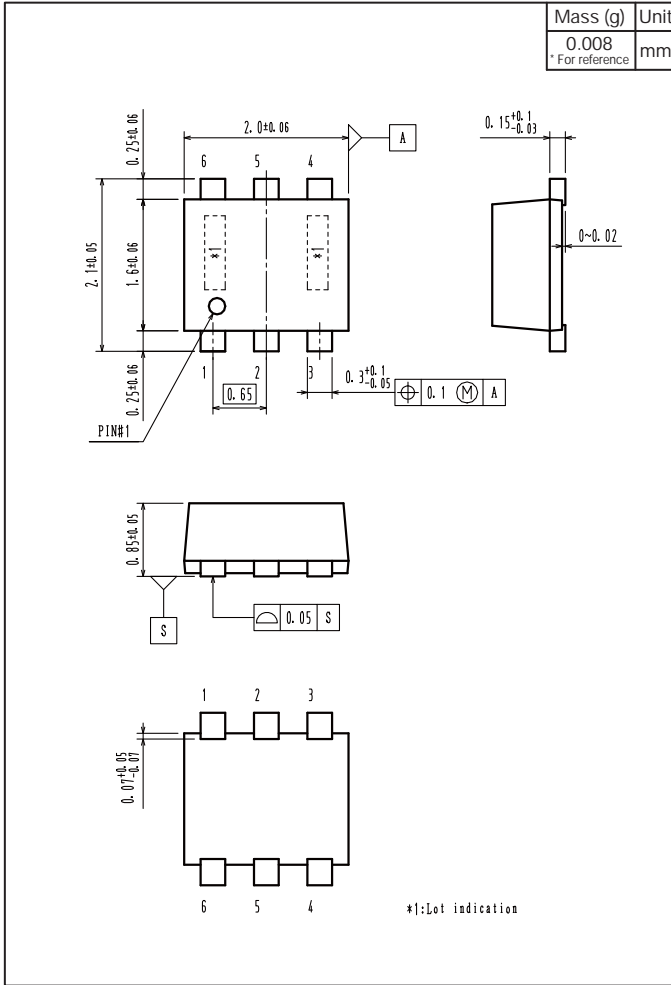
2-2. Device placement direction



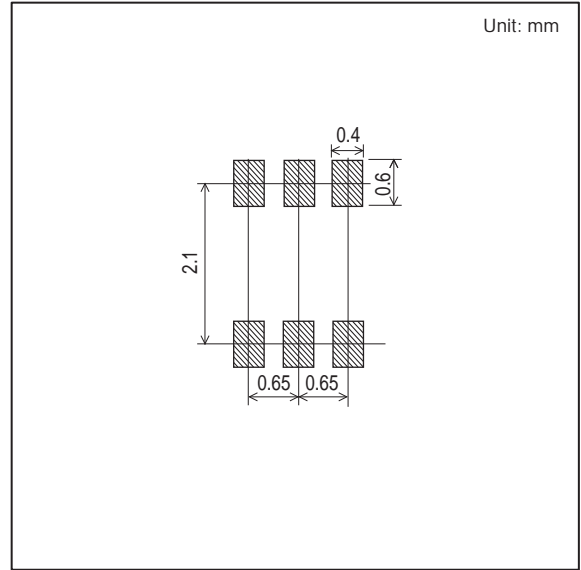
Those with pin | index on the feed hole side.....TL

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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