



SANYO Semiconductors

# DATA SHEET

An ON Semiconductor Company

## MCH6341 — P-Channel Silicon MOSFET General-Purpose Switching Device Applications

### Features

- Low ON-resistance
- Halogen free compliance
- 4V drive
- Protection diode in

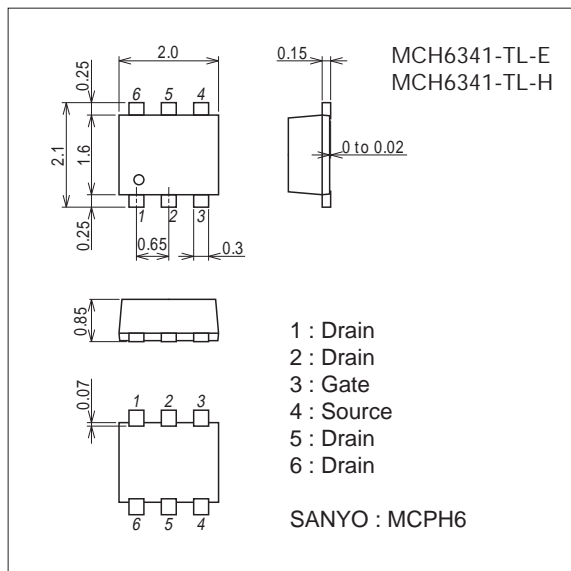
### Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V <sub>DSS</sub>		-30	V
Gate-to-Source Voltage	V <sub>GSS</sub>		±20	V
Drain Current (DC)	I <sub>D</sub>		-5	A
Drain Current (Pulse)	I <sub>DP</sub>	PW≤10μs, duty cycle≤1%	-20	A
Allowable Power Dissipation	P <sub>D</sub>	When mounted on ceramic substrate (1200mm <sup>2</sup> ×0.8mm)	1.5	W
Channel Temperature	T <sub>ch</sub>		150	°C
Storage Temperature	T <sub>stg</sub>		-55 to +150	°C

### Package Dimensions

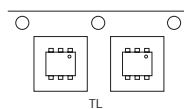
unit : mm (typ)  
7022A-009



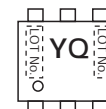
### Product & Package Information

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

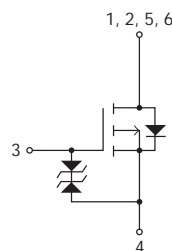
### Packing Type : TL



### Marking



### Electrical Connection

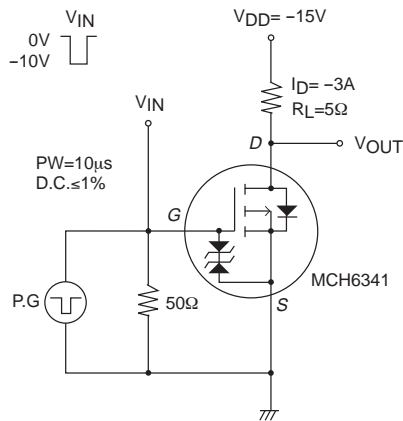


# MCH6341

## Electrical Characteristics at Ta=25°C

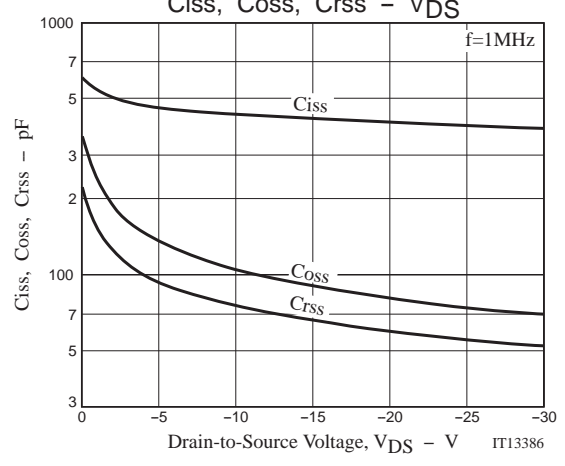
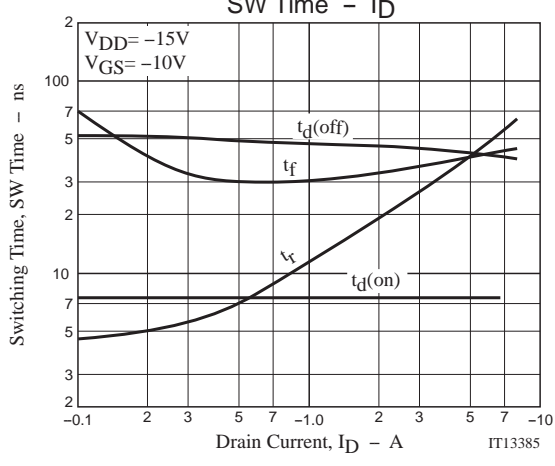
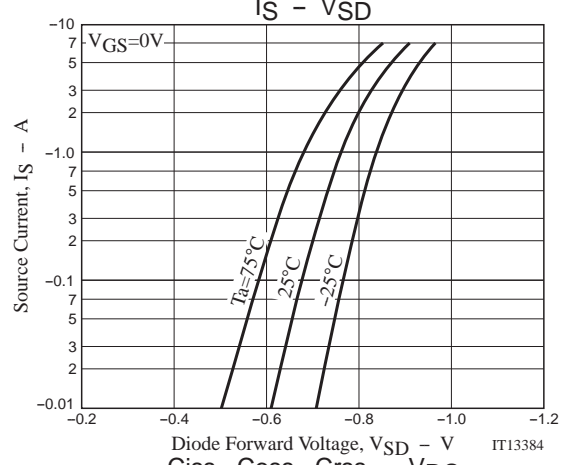
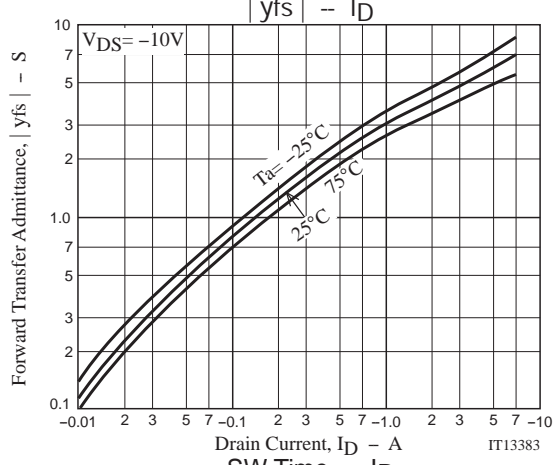
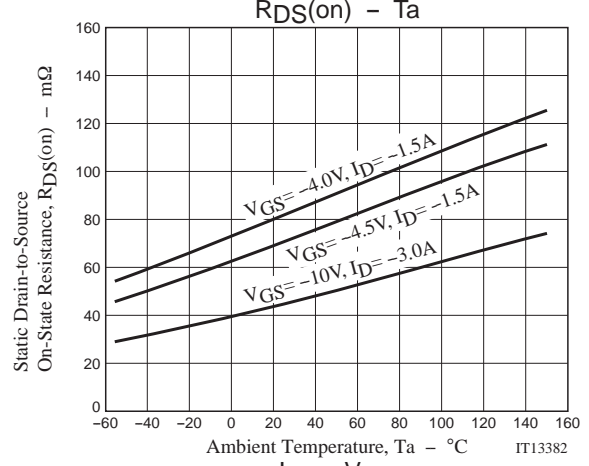
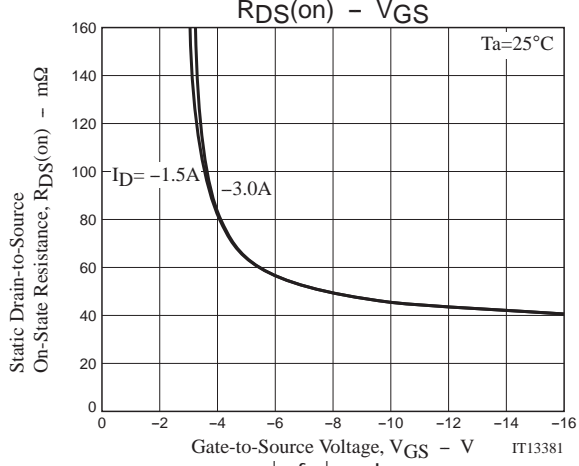
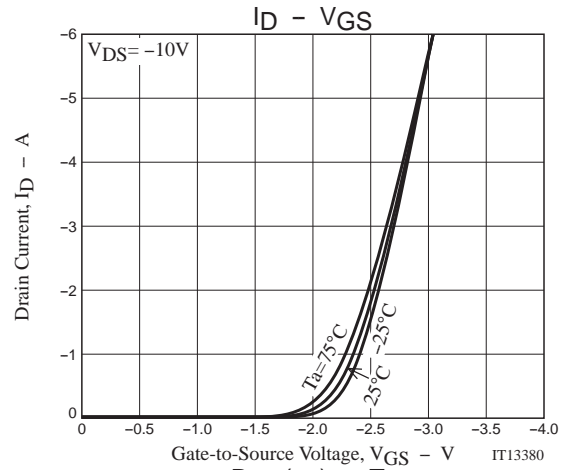
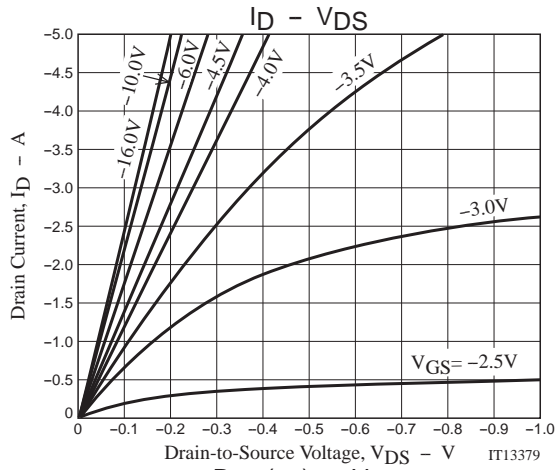
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D = -1mA, V_{GS} = 0V$	-30			V
Zero-Gate Voltage Drain Current	$I_{DSS}$	$V_{DS} = -30V, V_{GS} = 0V$			-1	$\mu A$
Gate-to-Source Leakage Current	$I_{GSS}$	$V_{GS} = \pm 16V, V_{DS} = 0V$			$\pm 10$	$\mu A$
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = -10V, I_D = -1mA$	-1.2		-2.6	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS} = -10V, I_D = -3A$	2.8	4.8		S
Static Drain-to-Source On-State Resistance	$R_{DS(on)1}$	$I_D = -3A, V_{GS} = -10V$		45	59	$m\Omega$
	$R_{DS(on)2}$	$I_D = -1.5A, V_{GS} = -4.5V$		71	100	$m\Omega$
	$R_{DS(on)3}$	$I_D = -1.5A, V_{GS} = -4V$		82	115	$m\Omega$
Input Capacitance	$C_{iss}$	$V_{DS} = -10V, f = 1MHz$		430		pF
Output Capacitance	$C_{oss}$			105		pF
Reverse Transfer Capacitance	$C_{rss}$			75		pF
Turn-ON Delay Time	$t_{d(on)}$		See specified Test Circuit.		7.5	
Rise Time	$t_r$			26		ns
Turn-OFF Delay Time	$t_{d(off)}$			45		ns
Fall Time	$t_f$			35		ns
Total Gate Charge	$Q_g$	$V_{DS} = -15V, V_{GS} = -10V, I_D = -5A$			10	
Gate-to-Source Charge	$Q_{gs}$			2.0		nC
Gate-to-Drain "Miller" Charge	$Q_{gd}$			2.5		nC
Diode Forward Voltage	$V_{SD}$	$I_S = -5A, V_{GS} = 0V$		-0.87	-1.5	V

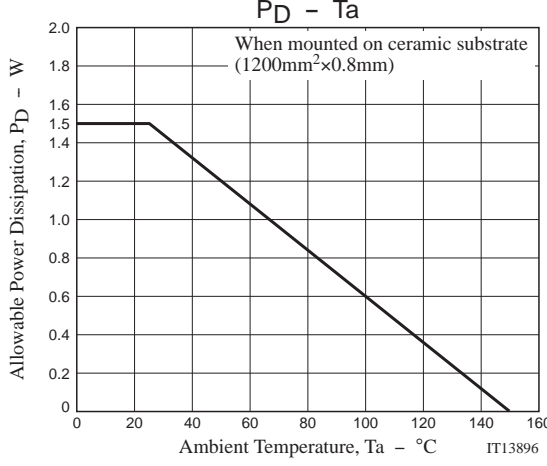
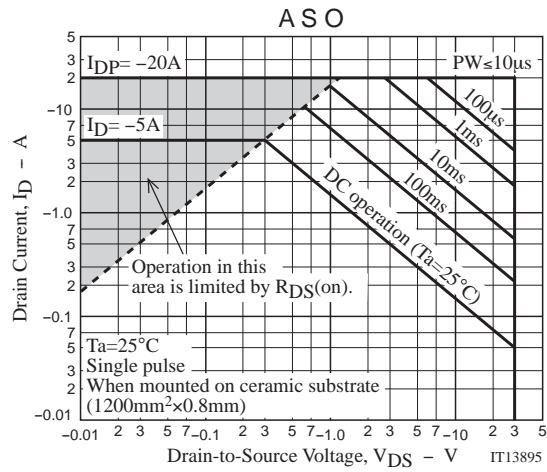
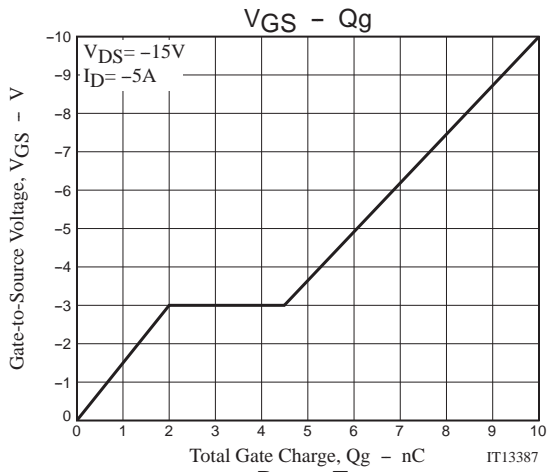
## Switching Time Test Circuit



## Ordering Information

Device	Package	Shipping	memo
MCH6341-TL-E	MCPH6	3,000pcs./reel	Pb Free
MCH6341-TL-H	MCPH6	3,000pcs./reel	Pb Free and Halogen Free





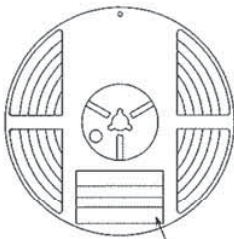
Taping Specification

MCH6341-TL-E, MCH6341-TL-H

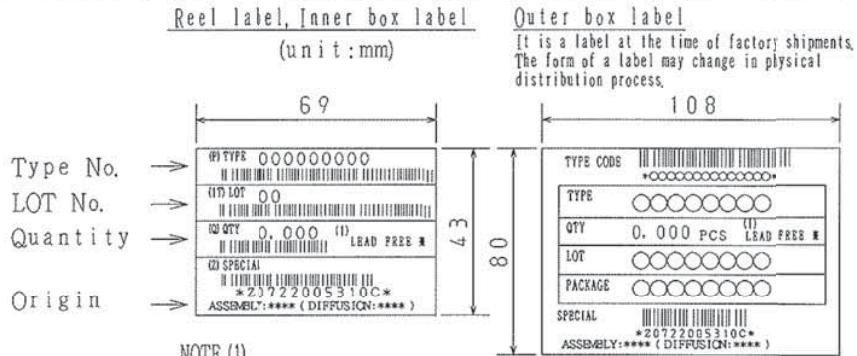
1. Packing Format

Package Name	Carrier Tape Type	Maximum Number of devices contained (tcs)			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



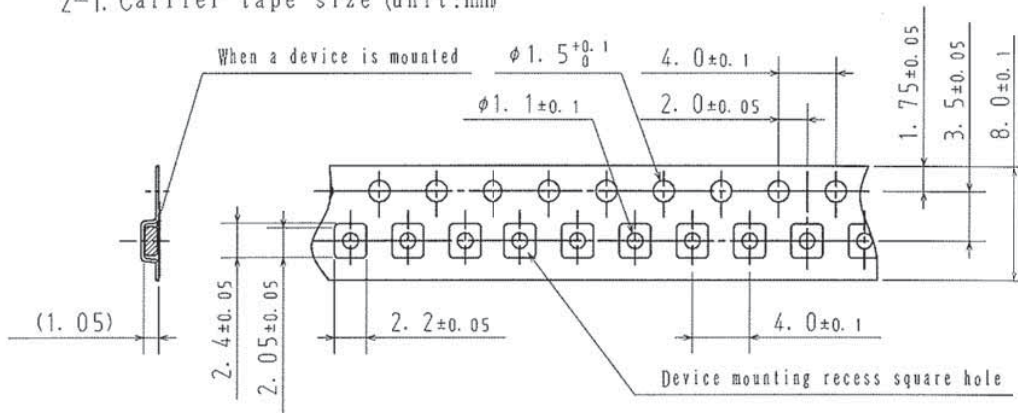
NOTE (1)

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

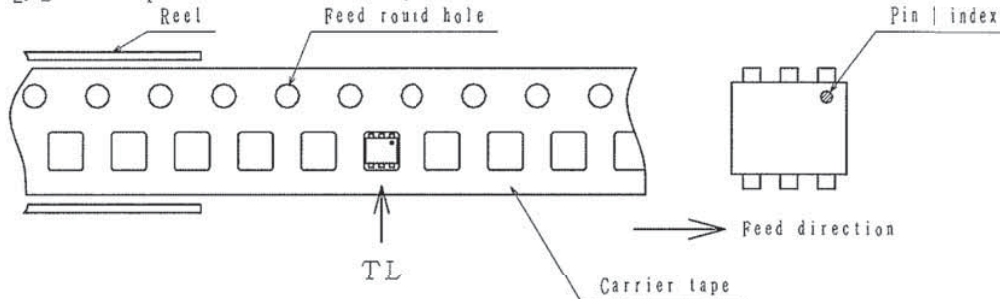
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

2. Taping configuration

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



2-2. Device placement direction

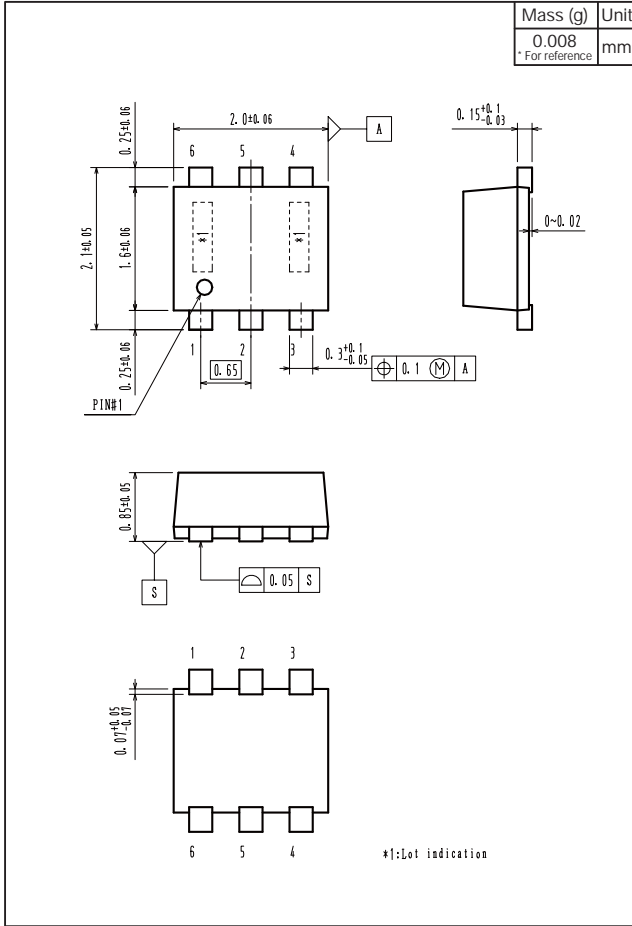


Those with pin 1 index on the feed hole side.....TL

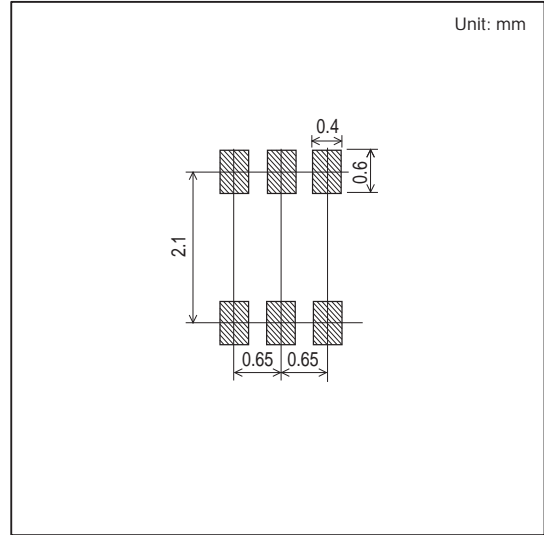
# MCH6341

## Outline Drawing

MCH6341-TL-E, MCH6341-TL-H



## Land Pattern Example



Note on usage : Since the MCH6341 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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