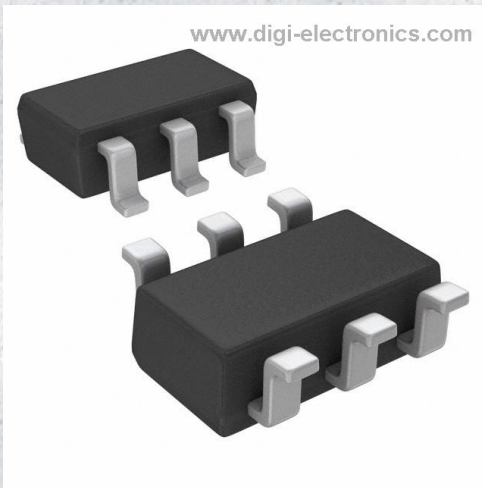


# CPH6341-TL-E Datasheet



<https://www.DiGi-Electronics.com>

DiGi Electronics Part Number	CPH6341-TL-E-DG
Manufacturer	<a href="#">onsemi</a>
Manufacturer Product Number	CPH6341-TL-E
Description	MOSFET P-CH 30V 5A 6CPH
Detailed Description	P-Channel 30 V 5A (Ta) 1.6W (Ta) Surface Mount 6-CPH



Tel: +00 852-30501935

RFQ Email: [Info@DiGi-Electronics.com](mailto:Info@DiGi-Electronics.com)

DiGi is a global authorized distributor of electronic components.

## Purchase and inquiry

Manufacturer Product Number:

CPH6341-TL-E

Series:

-

FET Type:

P-Channel

Drain to Source Voltage (Vdss):

30 V

Drive Voltage (Max Rds On, Min Rds On):

4V, 10V

Vgs(th) (Max) @ Id:

-

Vgs (Max):

±20V

FET Feature:

-

Operating Temperature:

150°C (TJ)

Supplier Device Package:

6-CPH

Base Product Number:

CPH634

Manufacturer:

onsemi

Product Status:

Discontinued at Digi-Key

Technology:

MOSFET (Metal Oxide)

Current - Continuous Drain (Id) @ 25°C:

5A (Ta)

Rds On (Max) @ Id, Vgs:

59mOhm @ 3A, 10V

Gate Charge (Qg) (Max) @ Vgs:

10 nC @ 10 V

Input Capacitance (Ciss) (Max) @ Vds:

430 pF @ 10 V

Power Dissipation (Max):

1.6W (Ta)

Mounting Type:

Surface Mount

Package / Case:

SOT-23-6

## Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8541.29.0095

Moisture Sensitivity Level (MSL):

1 (Unlimited)

ECCN:

EAR99

Ordering number : ENA1084B



# CPH6341

## P-Channel Power MOSFET -30V, -5A, 59mΩ, Single CPH6

ON Semiconductor®

<http://onsemi.com>

### Features

- Low ON-resistance
- High-speed switching
- 4V drive
- Protection diode in

### Specifications

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

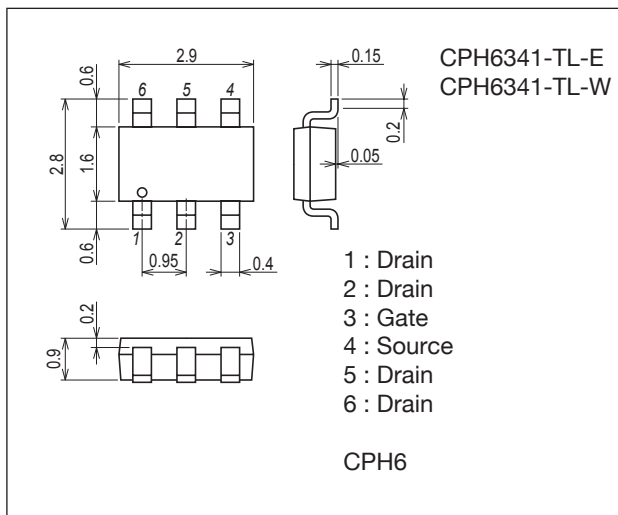
Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V <sub>DSS</sub>		-30	V
Gate-to-Source Voltage	V <sub>GSS</sub>		±20	V
Drain Current (DC)	I <sub>D</sub>		-5	A
Drain Current (Pulse)	I <sub>DP</sub>	PW≤10μs, duty cycle≤1%	-20	A
Allowable Power Dissipation	P <sub>D</sub>	When mounted on ceramic substrate (900mm <sup>2</sup> ×0.8mm)	1.6	W
Channel Temperature	T <sub>ch</sub>		150	°C
Storage Temperature	T <sub>stg</sub>		-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)

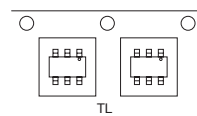
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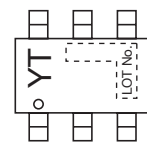
### Product & Package Information

- Package : CPH6
- JEITA, JEDEC : SC-74, SOT-26, SOT-457
- Minimum Packing Quantity : 3,000 pcs./reel

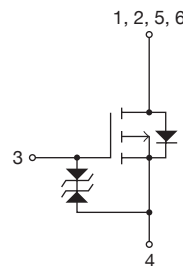
### Packing Type: TL



### Marking



### Electrical Connection



### ORDERING INFORMATION

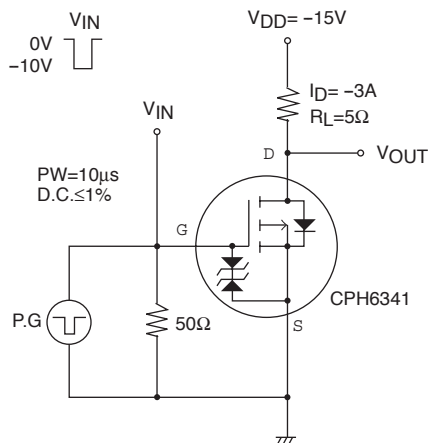
See detailed ordering and shipping information on page 2 of this data sheet.

## CPH6341

Electrical Characteristics at  $T_a=25^\circ\text{C}$ 

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

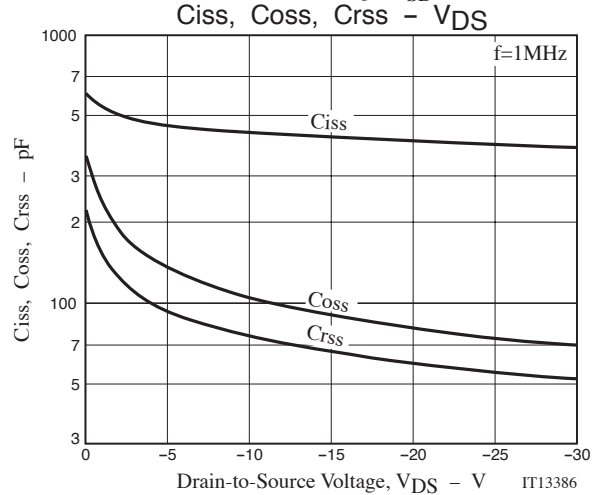
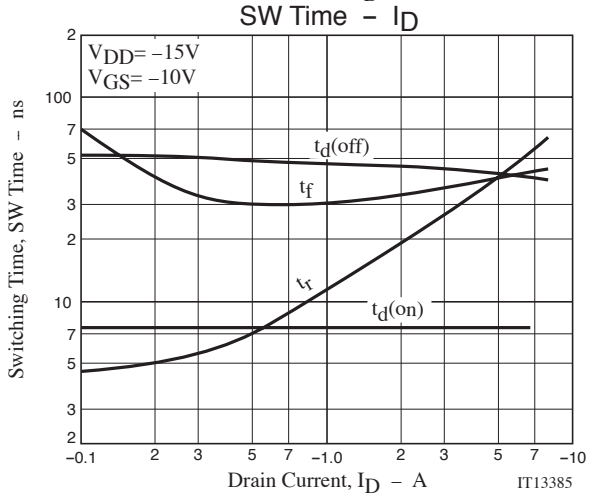
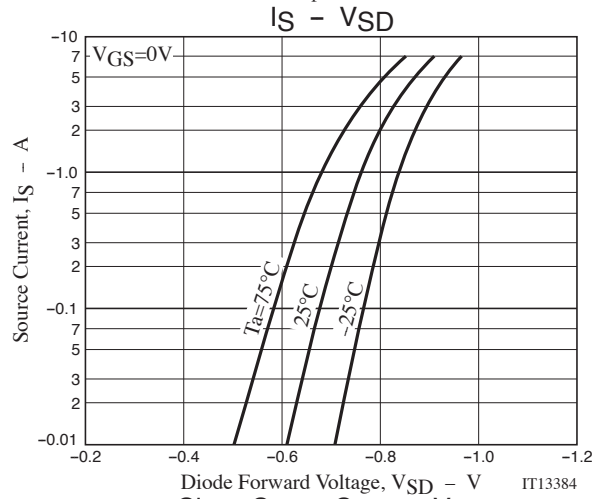
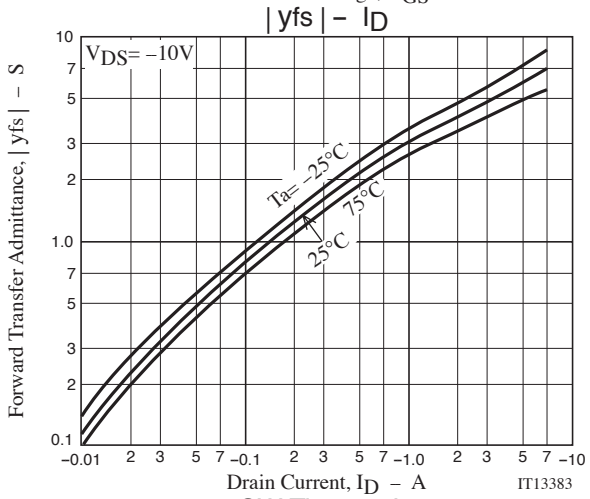
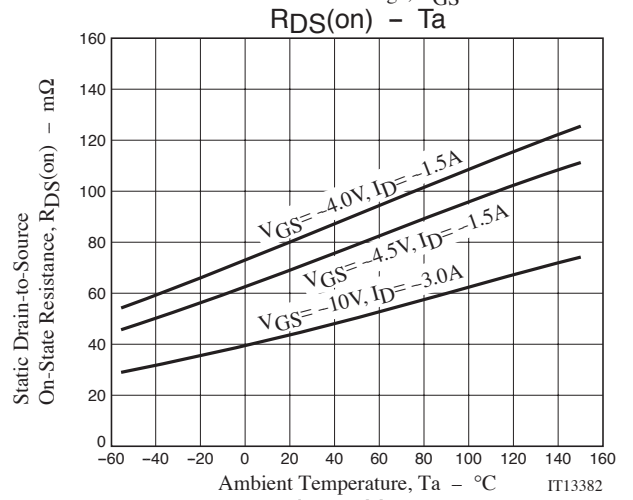
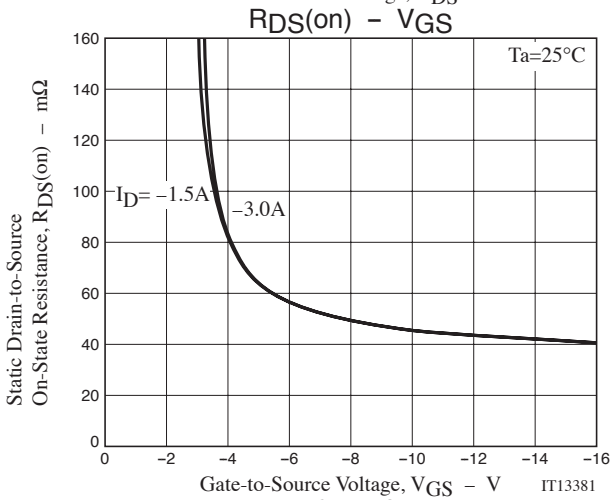
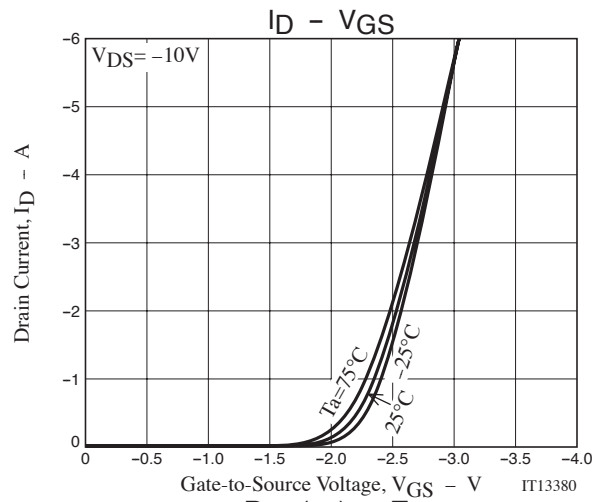
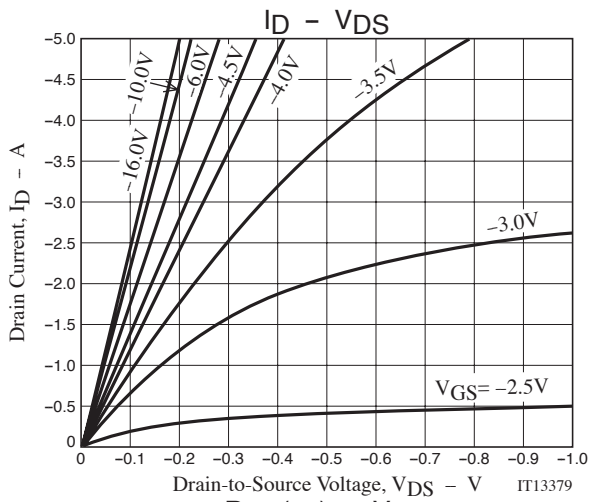
## Switching Time Test Circuit



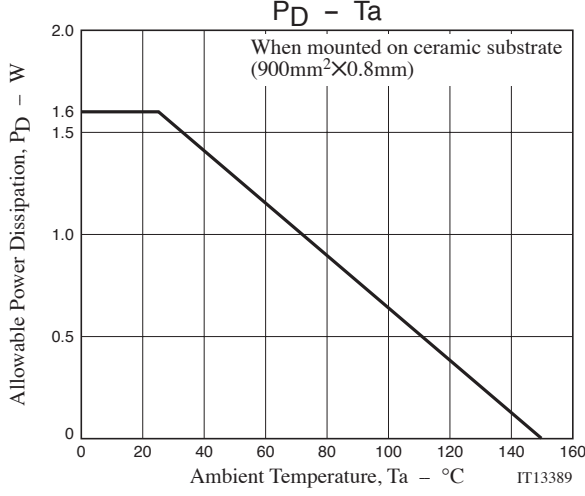
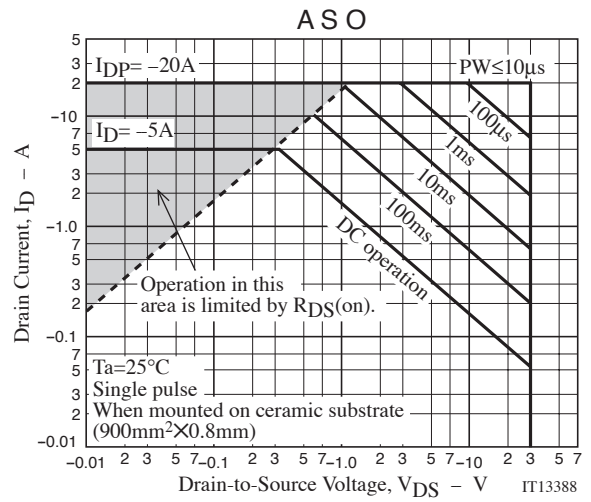
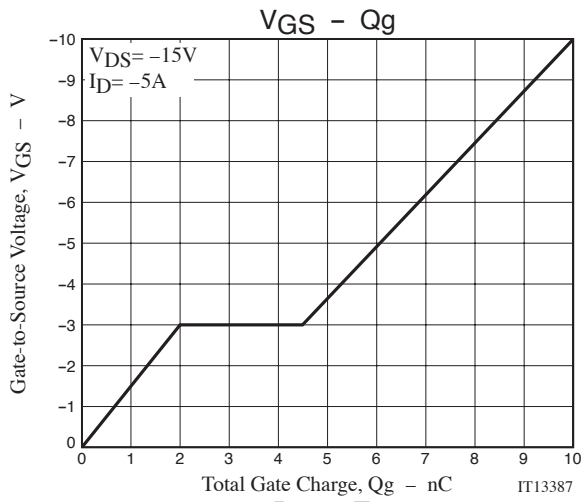
## Ordering Information

Device	Package	Shipping	memo
CPH6341-TL-E	CPH6	3,000pcs./reel	Pb-Free
CPH6341-TL-W			Pb-Free and Halogen Free

CPH6341



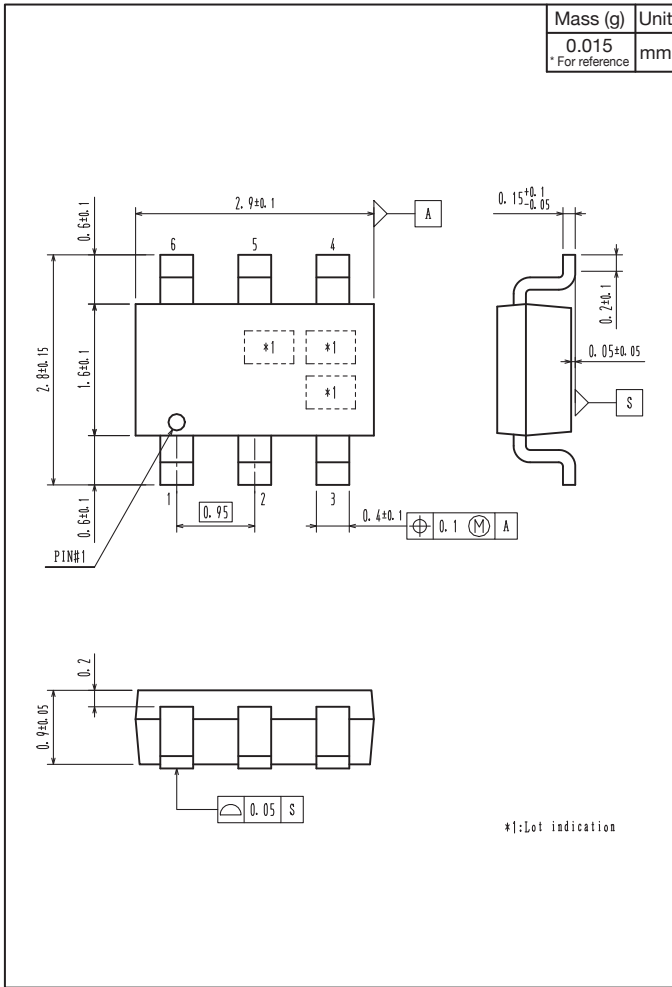
### CPH6341



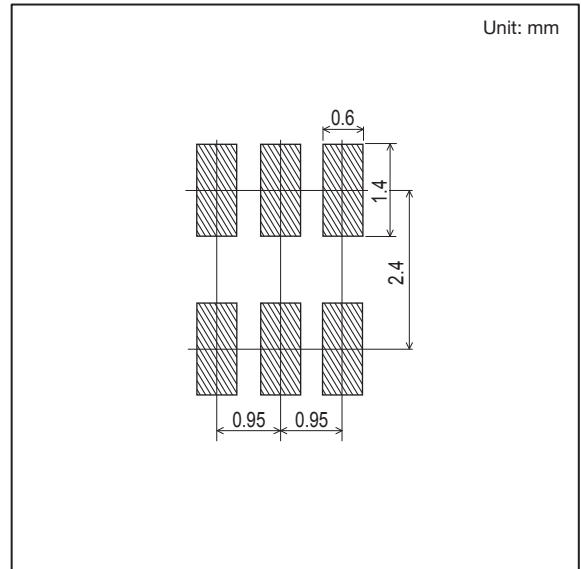
# CPH6341

## Outline Drawing

CPH6341-TL-E, CPH6341-TL-W



## Land Pattern Example



**CPH6341**

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Note on usage : Since the CPH6341 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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