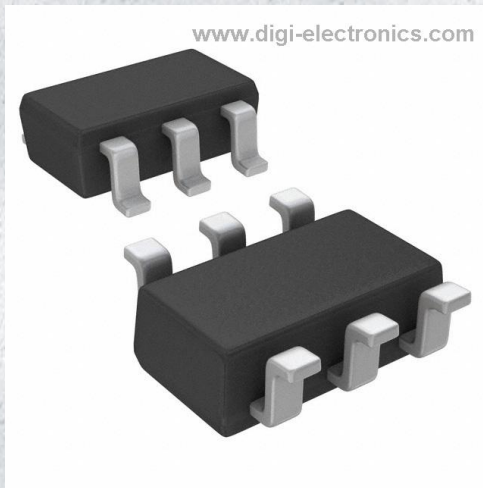


CPH6350-TL-W Datasheet



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

DiGi Electronics Part Number	CPH6350-TL-W-DG
Manufacturer	onsemi
Manufacturer Product Number	CPH6350-TL-W
Description	MOSFET P-CH 30V 6A 6CPH
Detailed Description	P-Channel 30 V 6A (Ta) 1.6W (Ta) Surface Mount 6-CPH



Tel: +00 852-30501935

RFQ Email: Info@DiGi-Electronics.com

DiGi is a global authorized distributor of electronic components.

Purchase and inquiry

Manufacturer Product Number:

CPH6350-TL-W

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:

CPH6350

Manufacturer:

onsemi

Product Status:

Active

Technology:

MOSFET (Metal Oxide)

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

6A (Ta)

Rds On (Max) @ Id, Vgs:

43mOhm @ 3A, 10V

Gate Charge (Qg) (Max) @ Vgs:

13 nC @ 10 V

Input Capacitance (Ciss) (Max) @ Vds:

600 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 : ENA1529B



CPH6350

P-Channel Power MOSFET -30V, -6A, 43mΩ, Single CPH6

ON Semiconductor®

<http://onsemi.com>

Features

- 4V drive
- Low ON-resistance
- Protection diode in

Specifications

Absolute Maximum Ratings at Ta=25°C

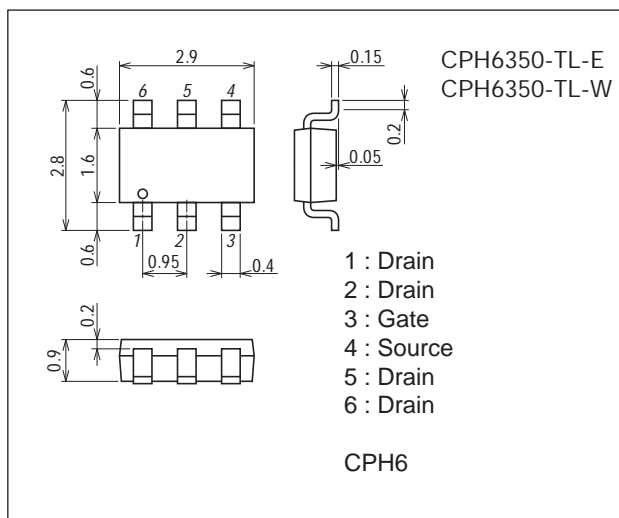
Parameter	Symbol	Conditions	Ratings	Unit
Drain to Source Voltage	V _{DSS}		-30	V
Gate to Source Voltage	V _{GSS}		±20	V
Drain Current (DC)	I _D		-6	A
Drain Current (Pulse)	I _{DP}	PW≤10μs, duty cycle≤1%	-24	A
Allowable Power Dissipation	P _D	When mounted on ceramic substrate (900mm ² ×0.8mm)	1.6	W
Channel 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)

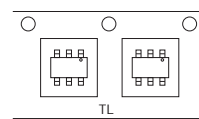
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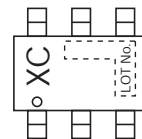
Ordering & Package Information

Device	Package	Shipping	memo
CPH6350-TL-E	CPH6 SC-74, SOT-26, SOT-457	3,000pcs./reel	Pb-Free
CPH6350-TL-W	CPH6 SC-74, SOT-26, SOT-457	3,000pcs./reel	Pb-Free and Halogen Free

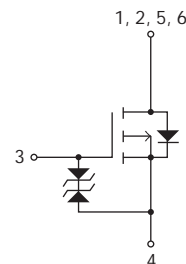
Packing Type: TL



Marking



Electrical Connection

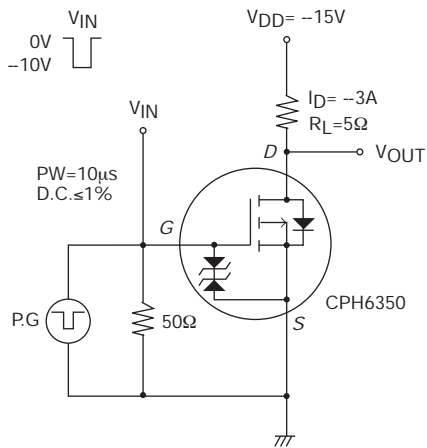


CPH6350

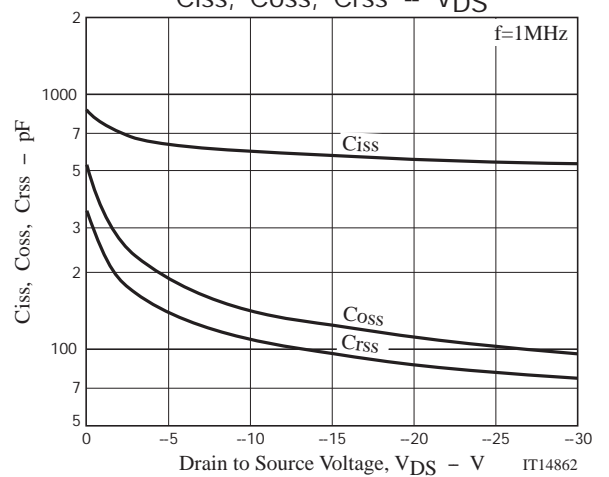
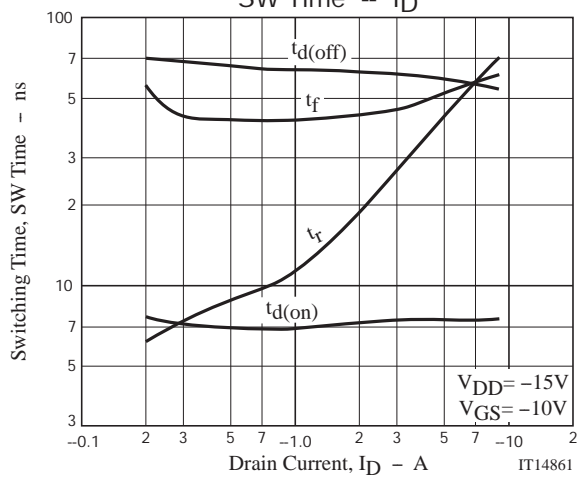
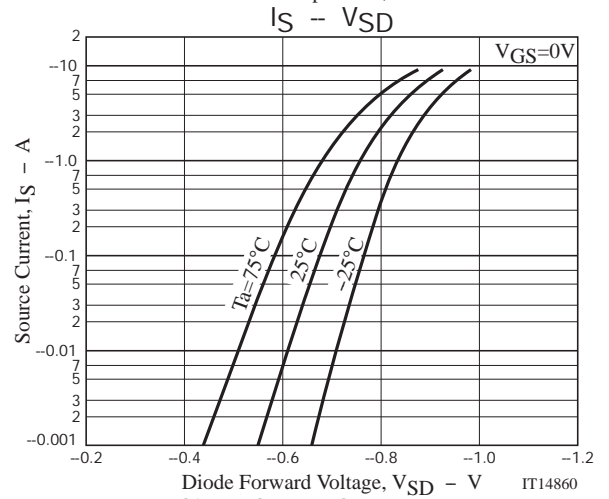
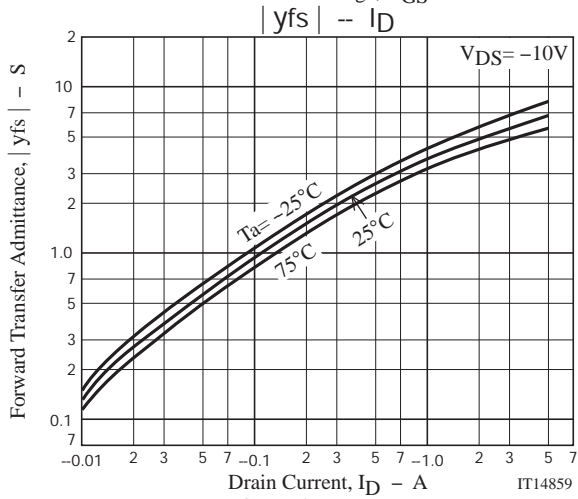
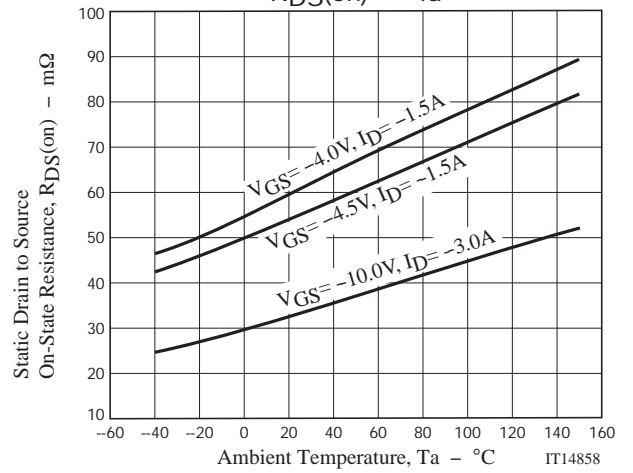
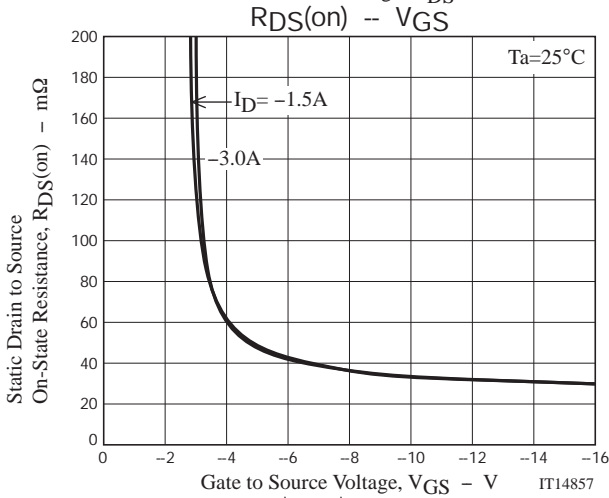
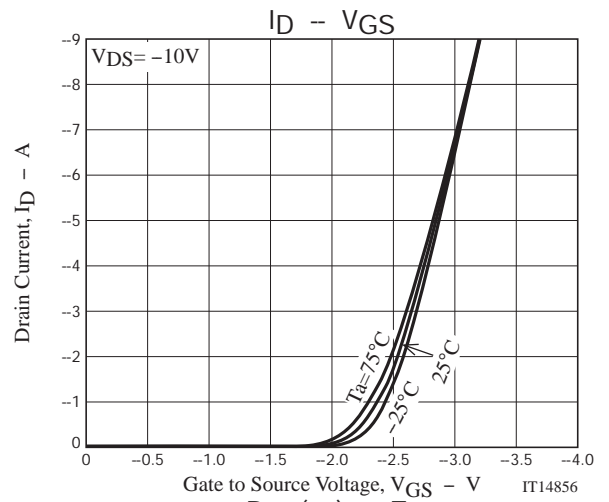
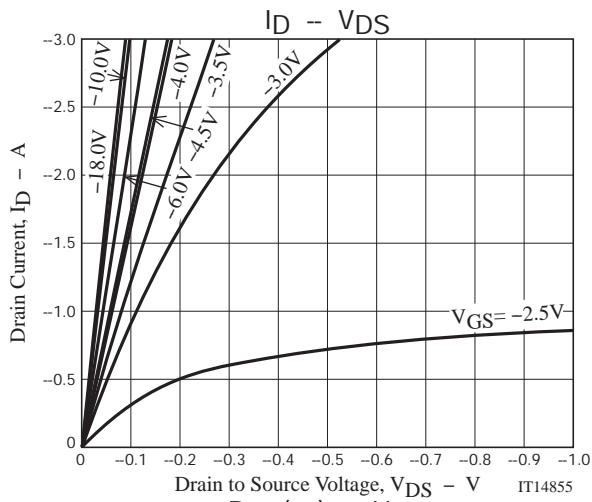
Electrical Characteristics at $T_a=25^\circ\text{C}$

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	μA
Gate to Source Leakage Current	I_{GSS}	$V_{GS}=\pm 16\text{V}$, $V_{DS}=0\text{V}$			± 10	μA
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} $	$V_{DS}=-10\text{V}$, $I_D=-3\text{A}$		5.4		S
Static Drain to Source On-State Resistance	$R_{DS(on)1}$	$I_D=-3\text{A}$, $V_{GS}=-10\text{V}$		33	43	$\text{m}\Omega$
	$R_{DS(on)2}$	$I_D=-1.5\text{A}$, $V_{GS}=-4.5\text{V}$		58	82	$\text{m}\Omega$
	$R_{DS(on)3}$	$I_D=-1.5\text{A}$, $V_{GS}=-4\text{V}$		61	86	$\text{m}\Omega$
Input Capacitance	C_{iss}			600		pF
Output Capacitance	C_{oss}	$V_{DS}=-10\text{V}$, $f=1\text{MHz}$		145		pF
Reverse Transfer Capacitance	C_{rss}			110		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit.		7.4		ns
Rise Time	t_r			27		ns
Turn-OFF Delay Time	$t_{d(off)}$			62		ns
Fall Time	t_f			45		ns
Total Gate Charge	Q_g				13	
Gate to Source Charge	Q_{gs}	$V_{DS}=-15\text{V}$, $V_{GS}=-10\text{V}$, $I_D=-6\text{A}$		1.8		nC
Gate to Drain "Miller" Charge	Q_{gd}			3.2		nC
Diode Forward Voltage	V_{SD}	$I_S=-6\text{A}$, $V_{GS}=0\text{V}$		-0.87	-1.2	V

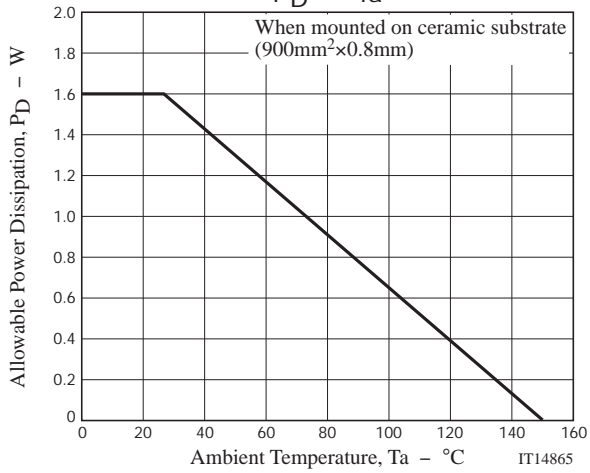
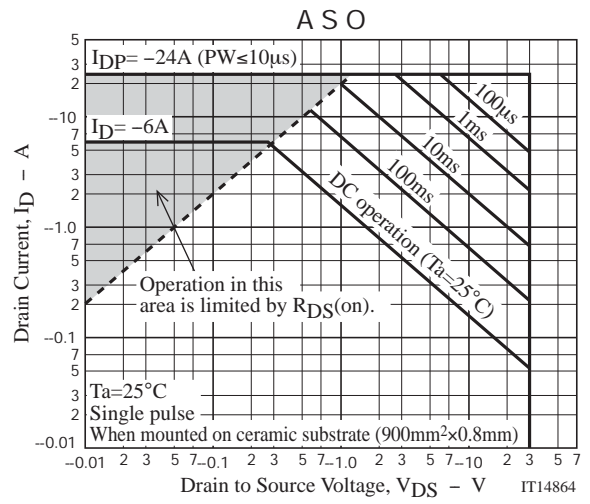
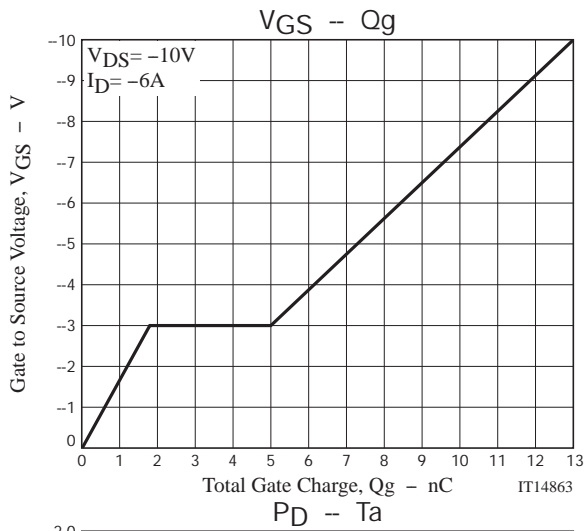
Switching Time Test Circuit



CPH6350



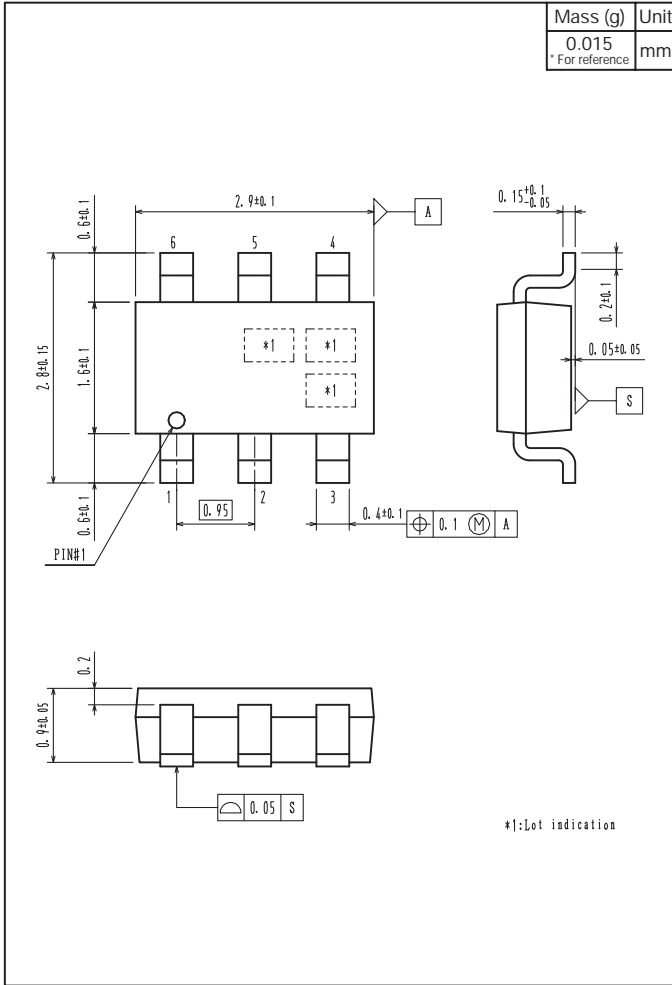
CPH6350



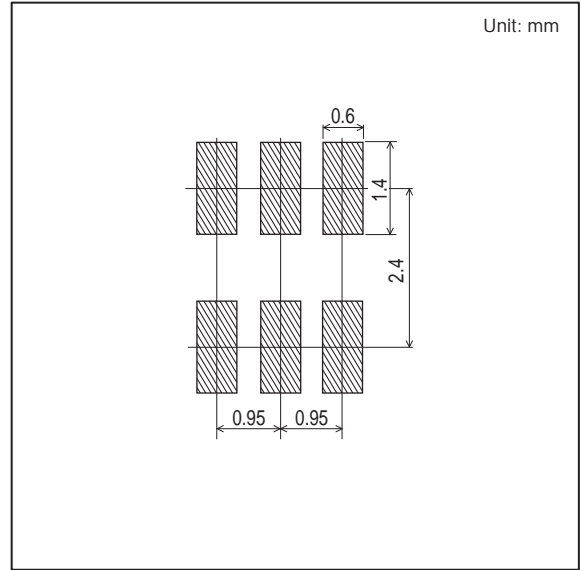
CPH6350

Outline Drawing

CPH6350-TL-E, CPH6350-TL-W



Land Pattern Example



CPH6350

Note on usage : Since the CPH6350 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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