



# CPH3350

## P-Channel Power MOSFET -20V, -3A, 83mΩ, Single CPH3

ON Semiconductor®

<http://onsemi.com>

### Features

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

### Specifications

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

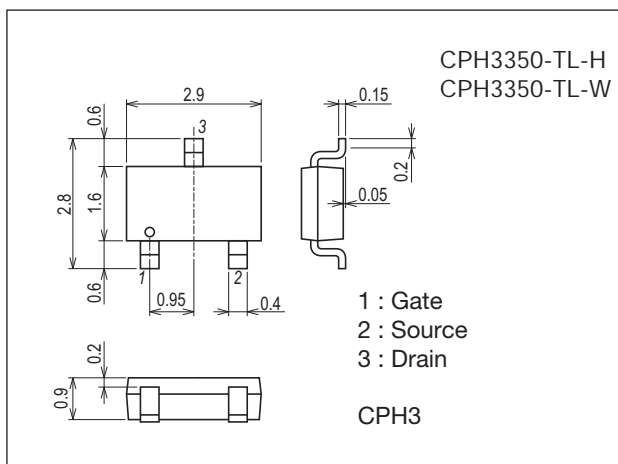
Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V <sub>DSS</sub>		-20	V
Gate-to-Source Voltage	V <sub>GSS</sub>		±10	V
Drain Current (DC)	I <sub>D</sub>		-3	A
Drain Current (Pulse)	I <sub>DP</sub>	PW≤10μs, duty cycle≤1%	-12	A
Allowable Power Dissipation	P <sub>D</sub>	When mounted on ceramic substrate (900mm <sup>2</sup> ×0.8mm)	1.0	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)

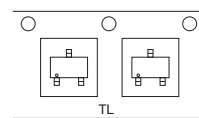
7015A-004



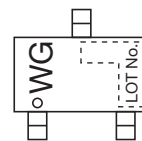
### Product & Package Information

- Package : CPH3
- JEITA, JEDEC : SC-59, TO-236, SOT-23
- Minimum Packing Quantity : 3,000 pcs./reel

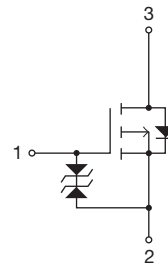
### Packing Type: TL



### Marking



### Electrical Connection

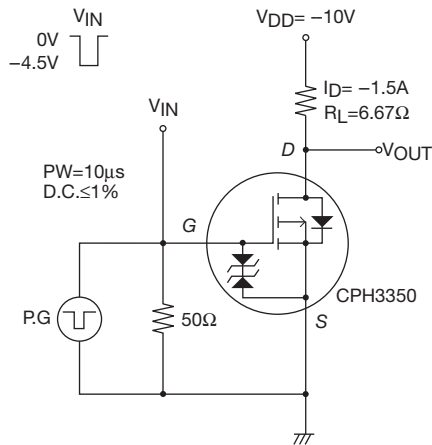


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## Electrical Characteristics at Ta=25°C

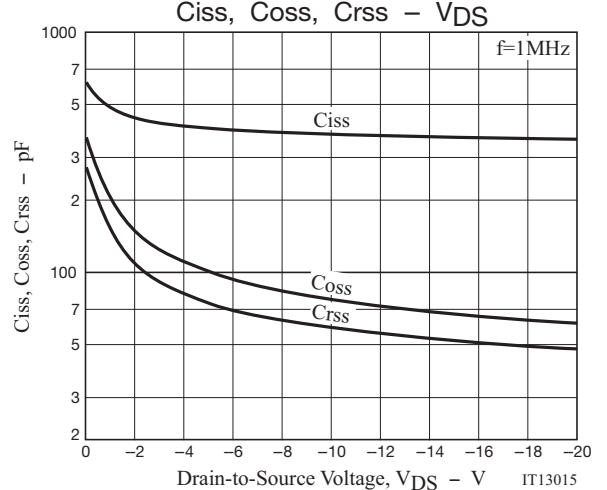
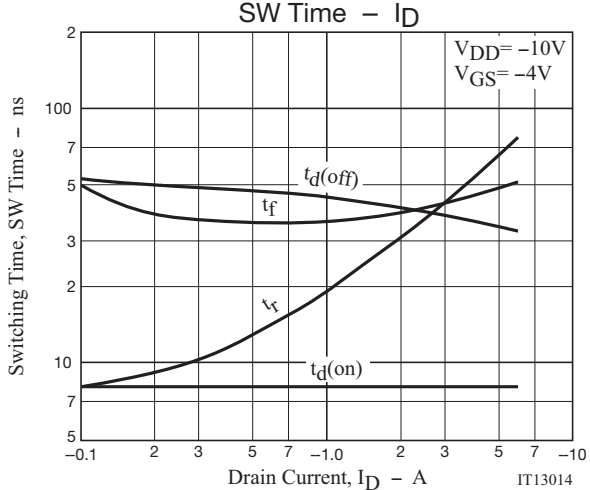
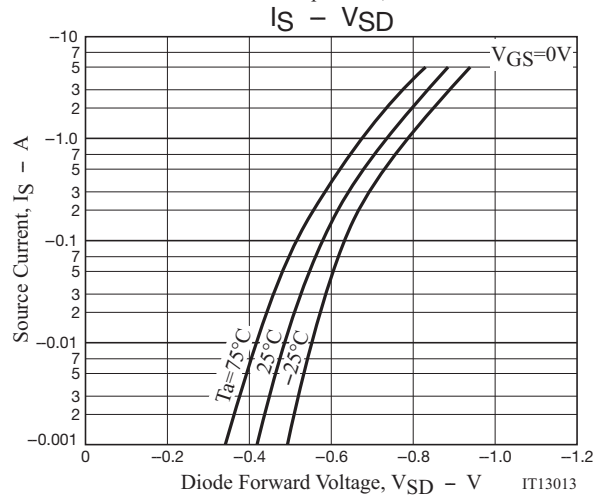
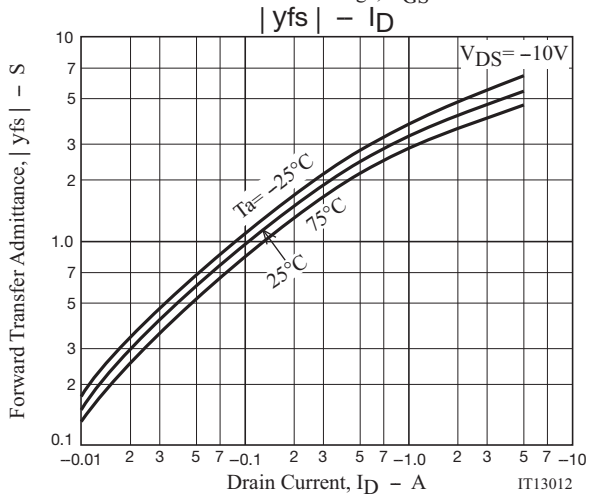
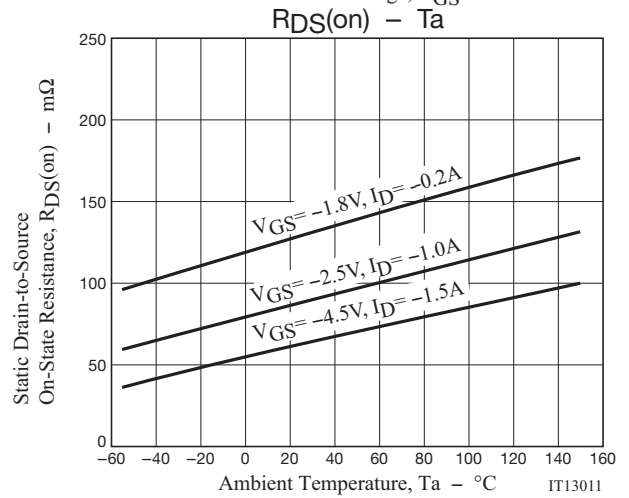
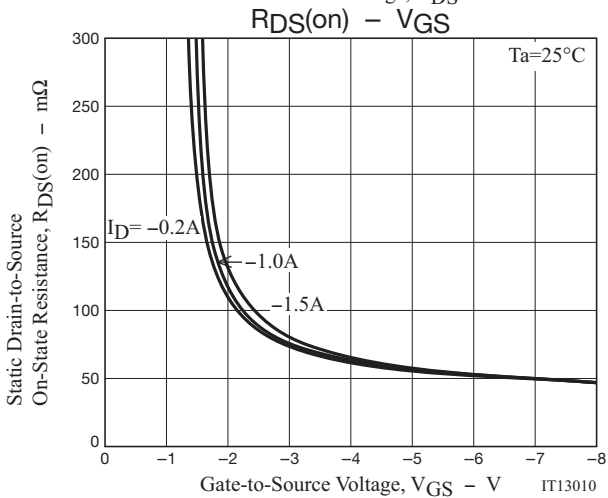
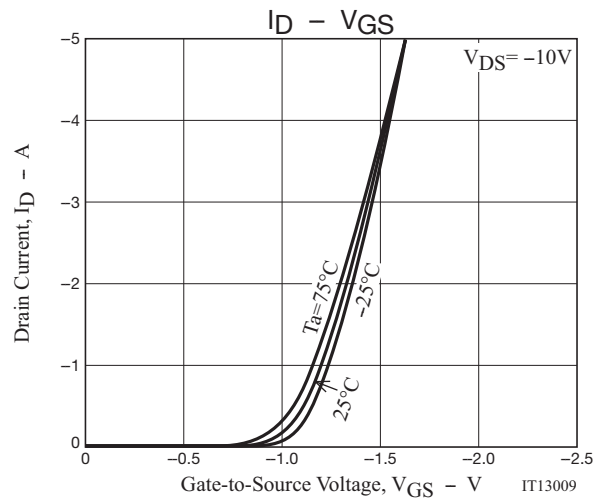
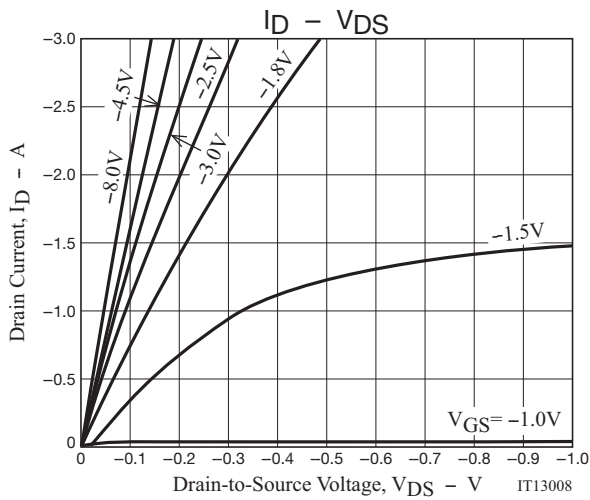
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	V(BR)DSS	ID=-1mA, VGS=0V	-20			V
Zero-Gate Voltage Drain Current	IDSS	VDS=-20V, VGS=0V			-1	μA
Gate-to-Source Leakage Current	IGSS	VGS=±8V, VDS=0V			±10	μA
Cutoff Voltage	VGS(off)	VDS=-10V, ID=-1mA	-0.4		-1.3	V
Forward Transfer Admittance	yfs	VDS=-10V, ID=-1.5A		4.3		S
Static Drain-to-Source On-State Resistance	RDS(on)1	ID=-1.5A, VGS=-4.5V		64	83	mΩ
	RDS(on)2	ID=-1A, VGS=-2.5V		89	124	mΩ
	RDS(on)3	ID=-0.2A, VGS=-1.8V		131	196	mΩ
Input Capacitance	Ciss	VDS=-10V, f=1MHz		375		pF
Output Capacitance	Coss			77		pF
Reverse Transfer Capacitance	Crss			58		pF
Turn-ON Delay Time	td(on)		See specified Test Circuit.		8.1	
Rise Time	tr			26		ns
Turn-OFF Delay Time	td(off)			42		ns
Fall Time	tf			37		ns
Total Gate Charge	Qg	VDS=-10V, VGS=-4.5V, ID=-3A			4.6	
Gate-to-Source Charge	Qgs			0.8		nC
Gate-to-Drain "Miller" Charge	Qgd			1.3		nC
Diode Forward Voltage	VSD	IS=-3A, VGS=0V		-0.83	-1.2	V

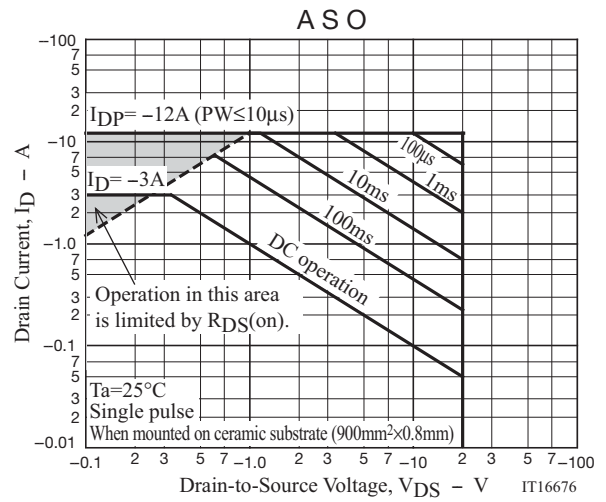
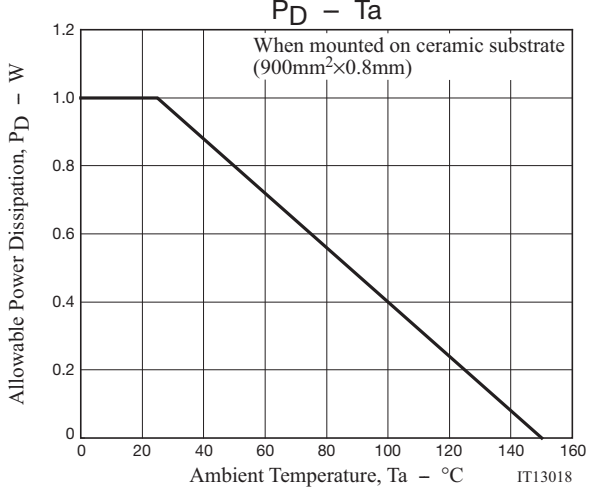
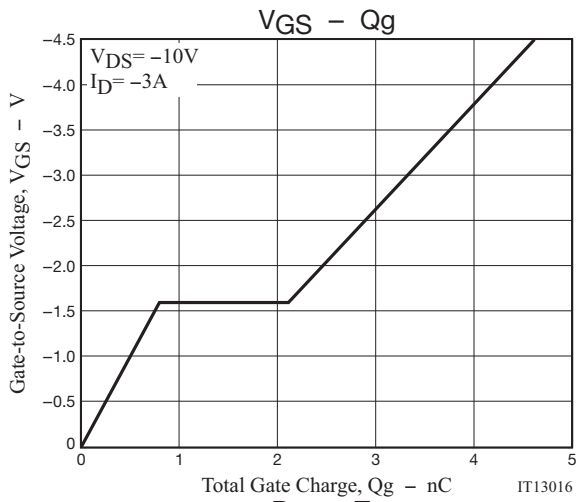
## Switching Time Test Circuit



## Ordering Information

Device	Package	Shipping	memo
CPH3350-TL-H	CPH3	3,000pcs./reel	Pb Free and Halogen Free
CPH3350-TL-W			

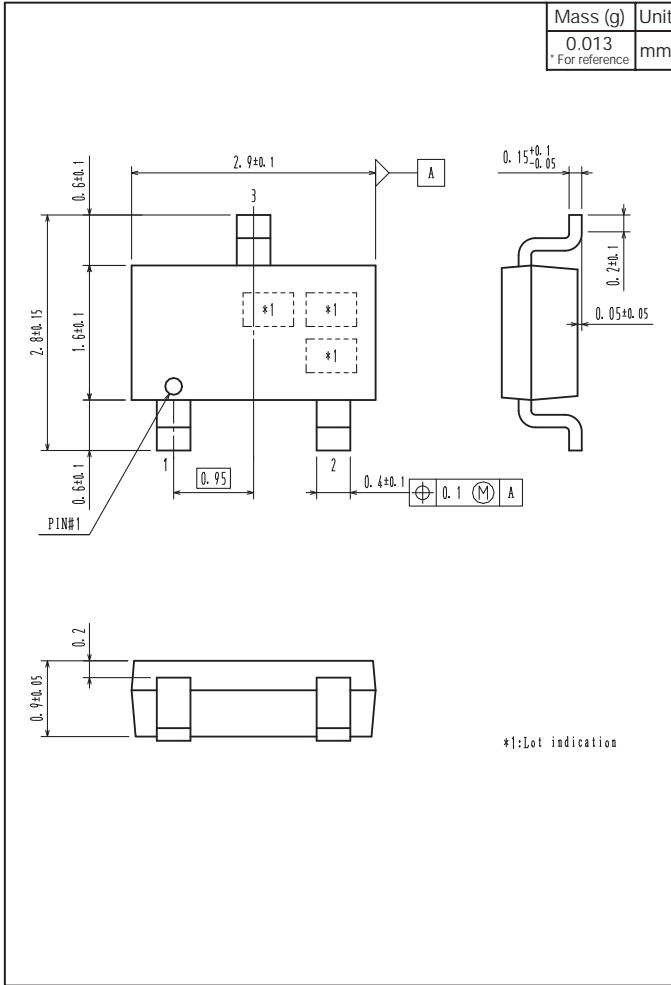




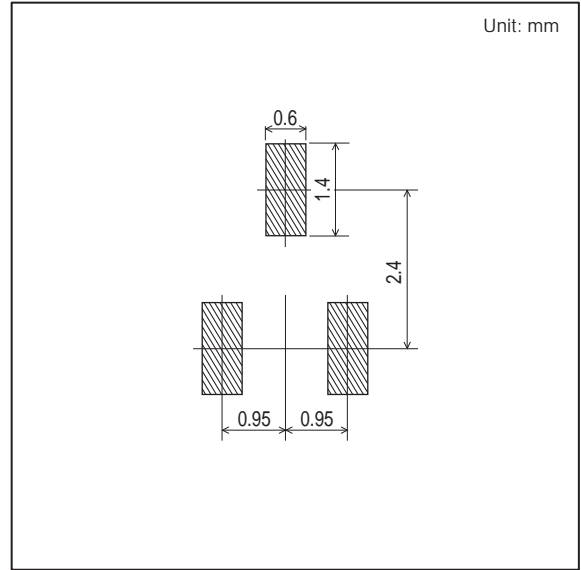
# CPH3350

## Outline Drawing

CPH3350-TL-H, CPH3350-TL-W



## Land Pattern Example



Note on usage : Since the CPH3350 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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