



SANYO Semiconductors

DATA SHEET

An ON Semiconductor Company

CPH3350 — P-Channel Silicon MOSFET General-Purpose Switching Device Applications

Features

- Ultrahigh-speed switching
- 1.8V drive
- Halogen free compliance

Specifications

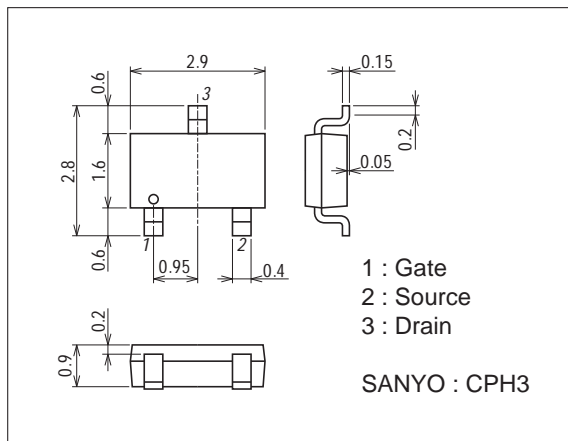
Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V _{DSS}		-20	V
Gate-to-Source Voltage	V _{GSS}		±10	V
Drain Current (DC)	I _D		-3	A
Drain Current (Pulse)	I _{DP}	PW≤10μs, duty cycle≤1%	-12	A
Allowable Power Dissipation	P _D	When mounted on ceramic substrate (900mm ² ×0.8mm)	1.0	W
Channel Temperature	T _{ch}		150	°C
Storage Temperature	T _{stg}		-55 to +150	°C

Package Dimensions

unit : mm (typ)

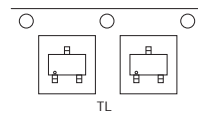
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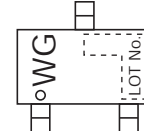
Product & Package Information

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

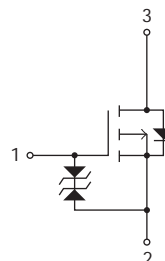
Packing Type: TL



Marking



Electrical Connection

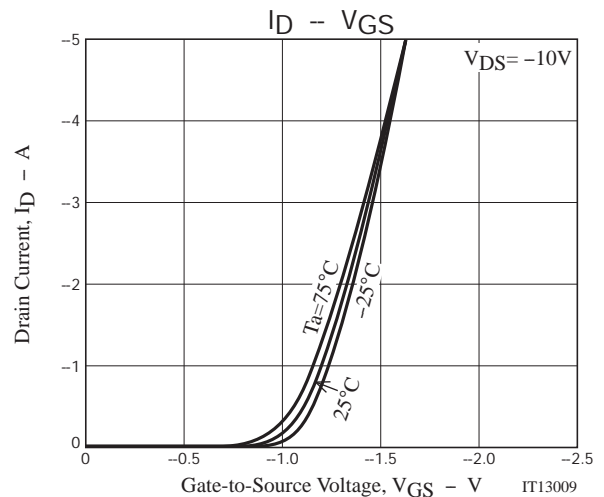
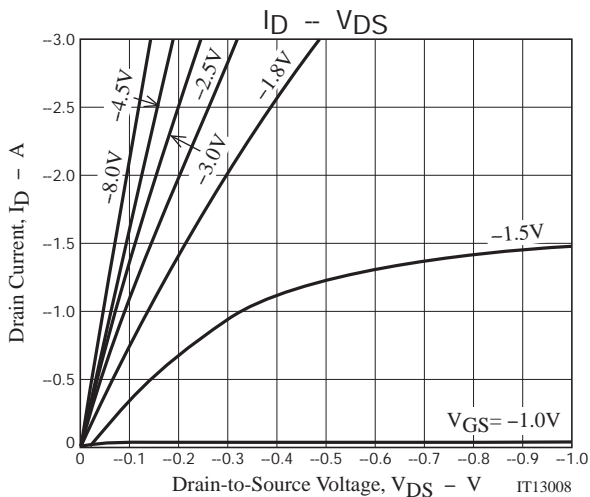
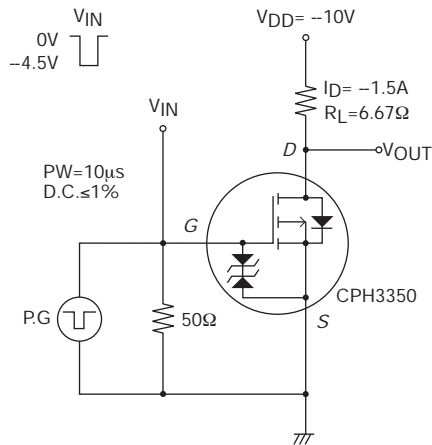


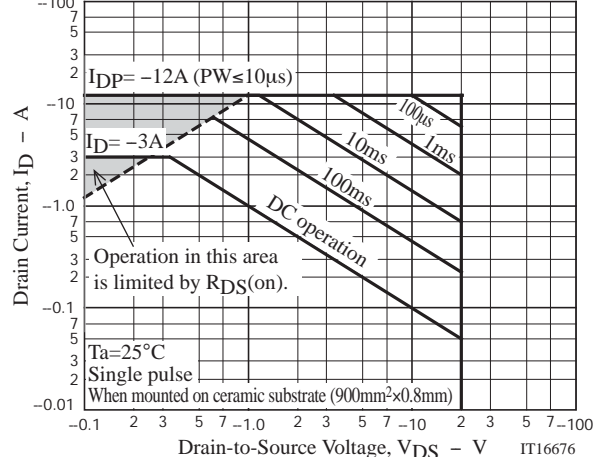
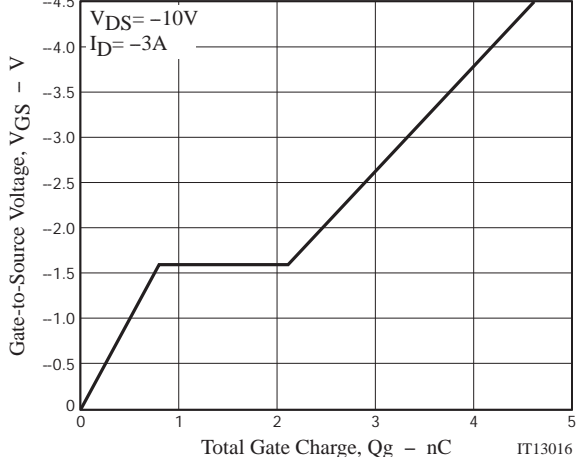
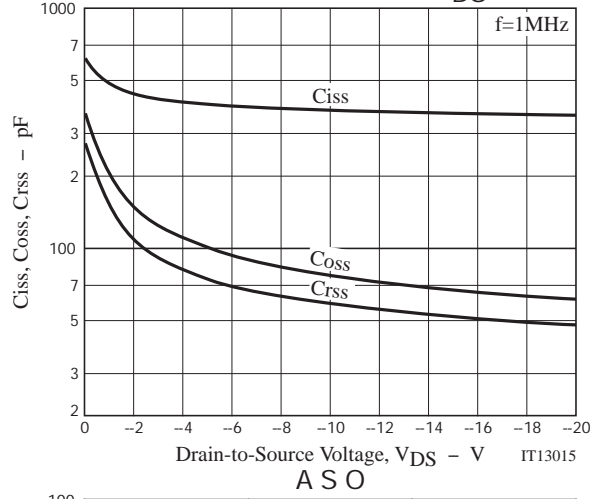
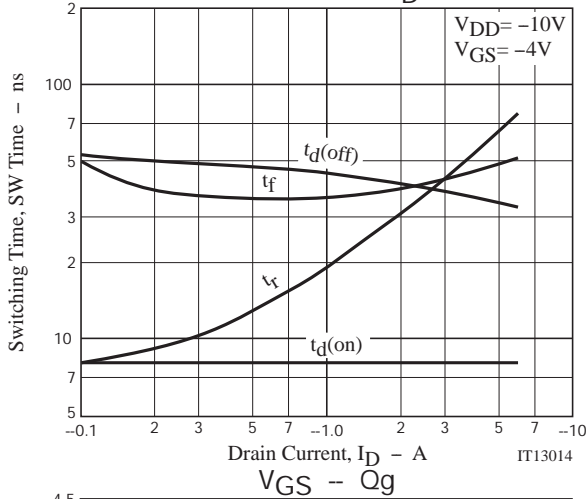
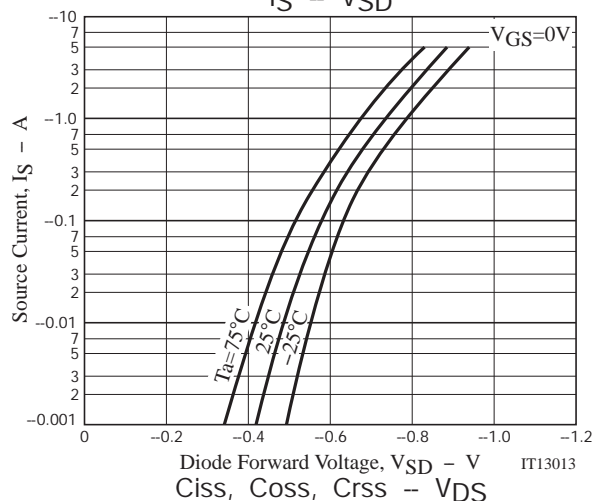
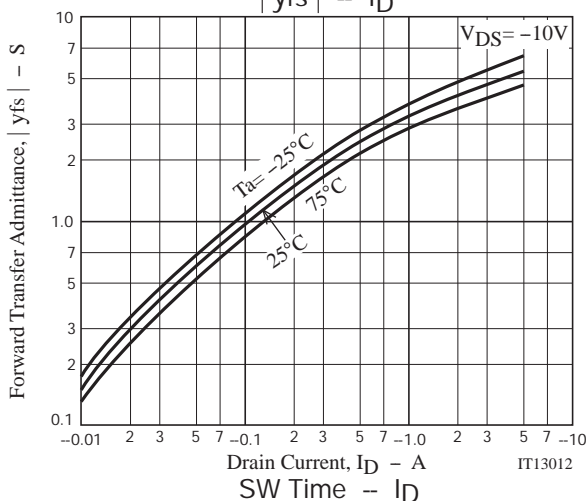
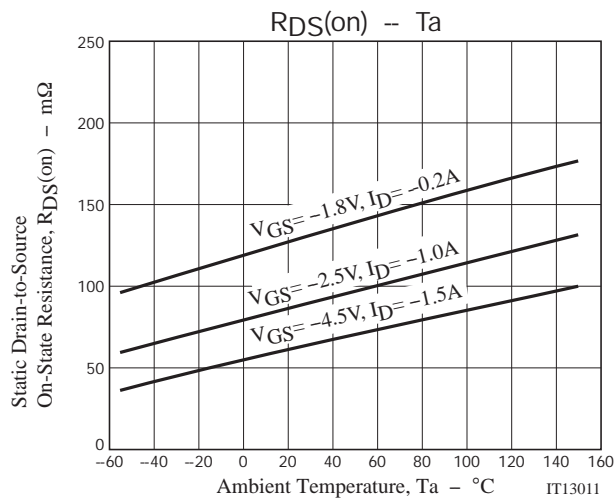
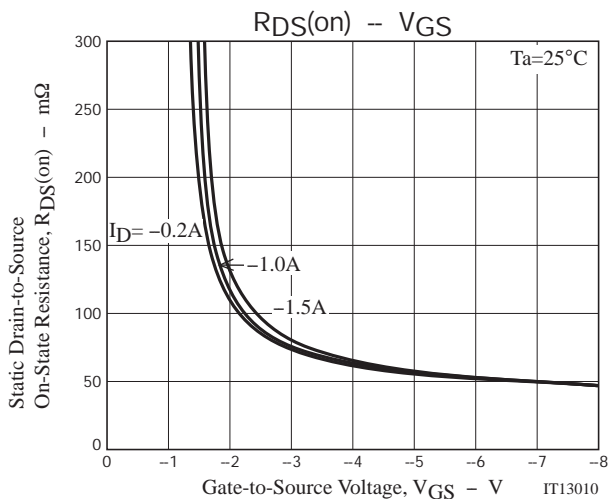
CPH3350

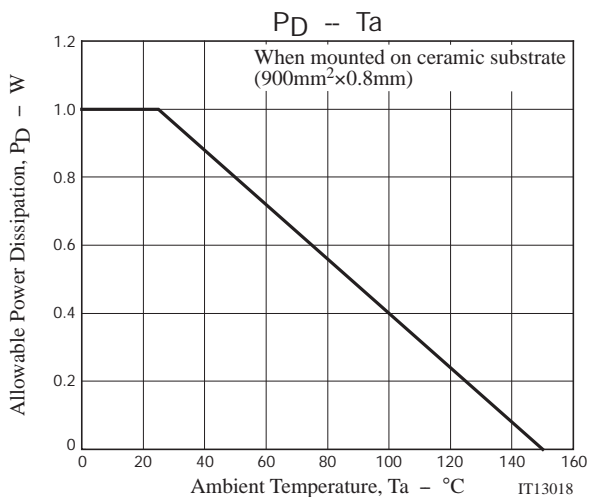
Electrical Characteristics at $T_a=25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D=-1\text{mA}, V_{GS}=0\text{V}$	-20			V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS}=-20\text{V}, V_{GS}=0\text{V}$			-1	μA
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS}=\pm 8\text{V}, V_{DS}=0\text{V}$			± 10	μA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS}=-10\text{V}, I_D=-1\text{mA}$	-0.4		-1.3	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS}=-10\text{V}, I_D=-1.5\text{A}$		4.3		S
Static Drain-to-Source On-State Resistance	$R_{DS(on)1}$	$I_D=-1.5\text{A}, V_{GS}=-4.5\text{V}$		64	83	$\text{m}\Omega$
	$R_{DS(on)2}$	$I_D=-1\text{A}, V_{GS}=-2.5\text{V}$		89	124	$\text{m}\Omega$
	$R_{DS(on)3}$	$I_D=-0.2\text{A}, V_{GS}=-1.8\text{V}$		131	196	$\text{m}\Omega$
Input Capacitance	C_{iss}	$V_{DS}=-10\text{V}, f=1\text{MHz}$		375		pF
Output Capacitance	C_{oss}			77		pF
Reverse Transfer Capacitance	C_{rss}			58		pF
Turn-ON Delay Time	$t_d(on)$			8.1		ns
Rise Time	t_r	See specified Test Circuit.		26		ns
Turn-OFF Delay Time	$t_d(off)$			42		ns
Fall Time	t_f			37		ns
Total Gate Charge	Q_g	$V_{DS}=-10\text{V}, V_{GS}=-4.5\text{V}, I_D=-3\text{A}$		4.6		nC
Gate-to-Source Charge	Q_{gs}			0.8		nC
Gate-to-Drain "Miller" Charge	Q_{gd}			1.3		nC
Diode Forward Voltage	V_{SD}		$I_S=-3\text{A}, V_{GS}=0\text{V}$		-0.83	-1.2

Switching Time Test Circuit







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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