Ordering number : ENA0114

SANYO Semiconductors

DATA SHEET

An ON Semiconductor Company

P-Channel Silicon MOSFET

CPH3360 — General-Purpose Switching Device Applications

Features

- ON-resistance $R_{DS}(on)1=233m\Omega$(typ.)
- 4V drive
- Halogen free compliance

Specifications

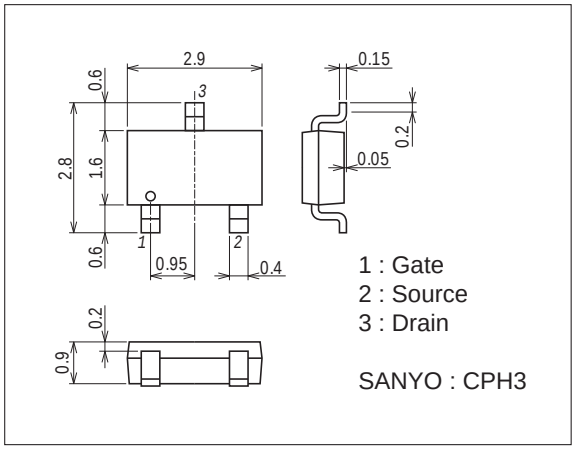
Absolute Maximum Ratings at Ta=25°C

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		−1.6	A
Drain Current (Pulse)	I_{DP}	PW≤10μs, duty cycle≤1%	−6.4	A
Allowable Power Dissipation	P_D	When mounted on ceramic substrate (900mm²×0.8mm)	0.9	W
Channel Temperature	Tch		150	°C
Storage Temperature	Tstg		−55 to +150	°C

Package Dimensions

unit : mm (typ)

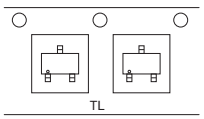
7015A-004



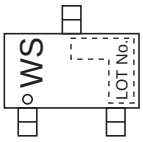
Product & Package Information

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

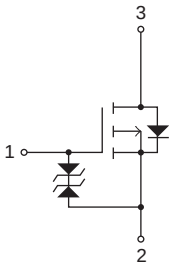
Packing Type: TL



Marking



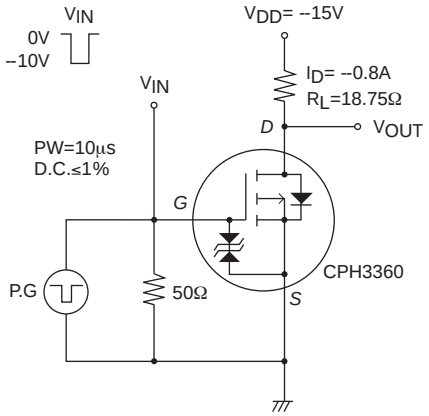
Electrical Connection

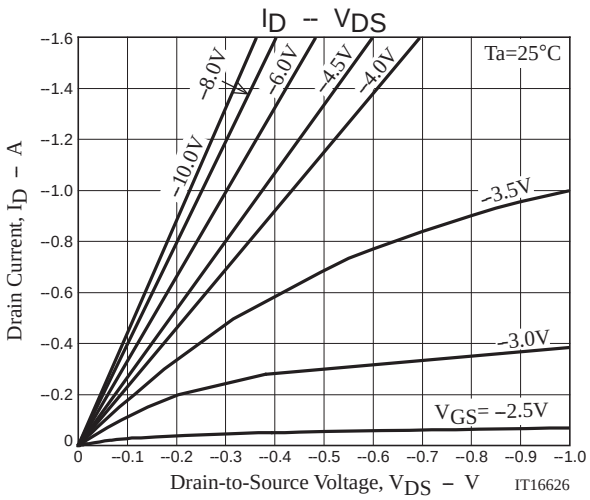


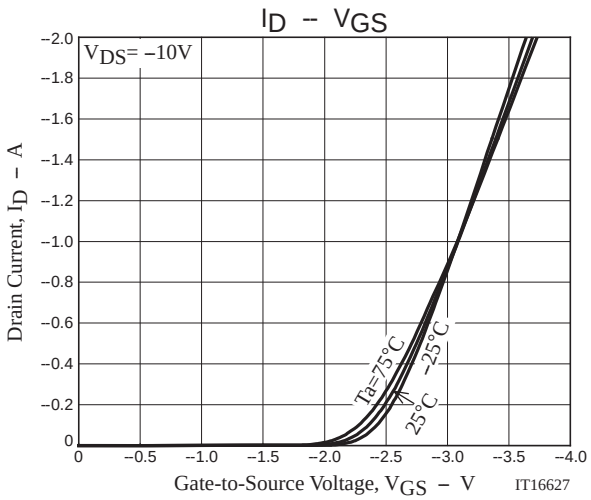
Electrical Characteristics at Ta=25°C

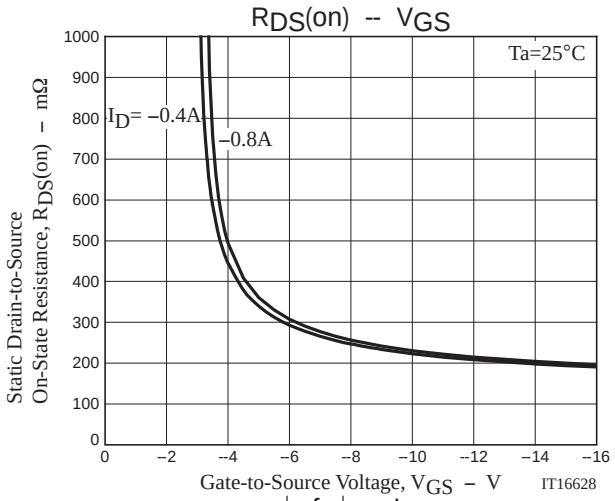
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	I_D=−1mA, V_{GS}=0V	−30			V
Zero-Gate Voltage Drain Current	I_{DSS}	V_{DS}=−30V, V_{GS}=0V			−1	μA
Gate-to-Source Leakage Current	I_{GSS}	V_{GS}=±16V, V_{DS}=0V			±10	μA
Cutoff Voltage	V_{GS}(off)	V_{DS}=−10V, I_D=−1mA	−1.2		−2.6	V
Forward Transfer Admittance	| yfs |	V_{DS}=−10V, I_D=−0.8A		1.3		S
Static Drain-to-Source On-State Resistance	R_{DS}(on)1	I_D=−0.8A, V_{GS}=−10V		233	303	mΩ
	R_{DS}(on)2	I_D=−0.4A, V_{GS}=−4.5V		380	532	mΩ
	R_{DS}(on)3	I_D=−0.4A, V_{GS}=−4V		441	617	mΩ
Input Capacitance	Ciss	V_{DS}=−10V, f=1MHz		82		pF
Output Capacitance	Coss			22		pF
Reverse Transfer Capacitance	Crss			16		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit.		4.0		ns
Rise Time	t_r			3.3		ns
Turn-OFF Delay Time	$t_{d(off)}$			12		ns
Fall Time	t_f			5.4		ns
Total Gate Charge	Qg	V_{DS}=−15V, V_{GS}=−10V, I_D=−1.6A		2.2		nC
Gate-to-Source Charge	Qgs			0.36		nC
Gate-to-Drain “Miller” Charge	Qgd			0.49		nC
Diode Forward Voltage	V_{SD}	I_S=−1.6A, V_{GS}=0V		−0.9	−1.5	V

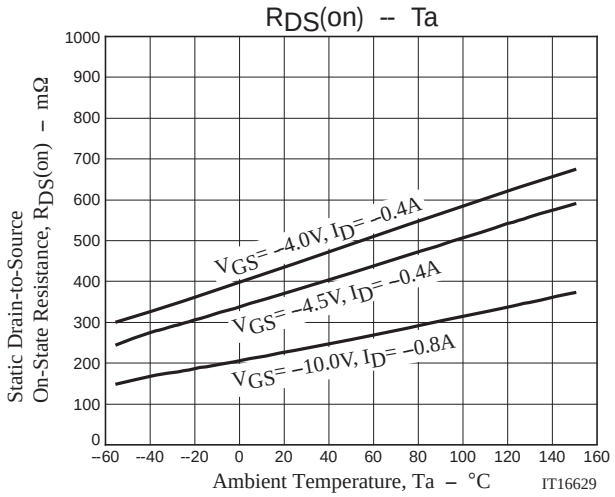
Switching Time Test Circuit

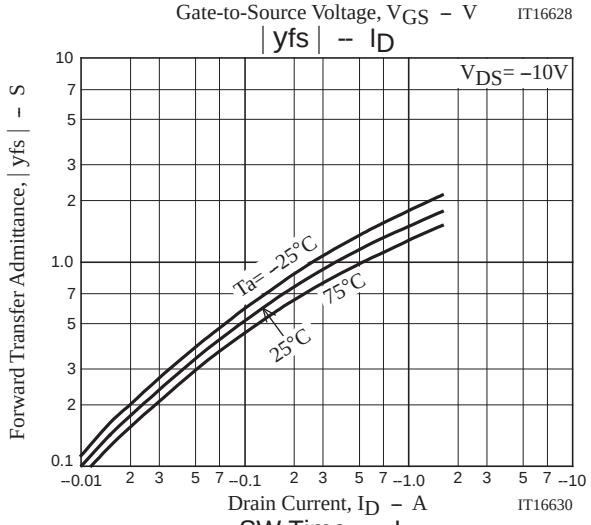


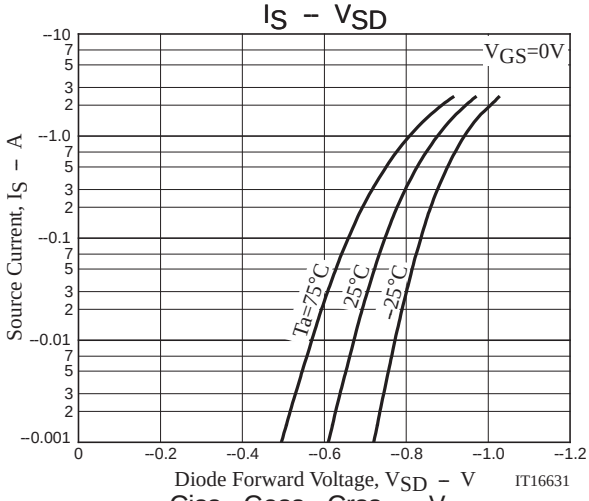


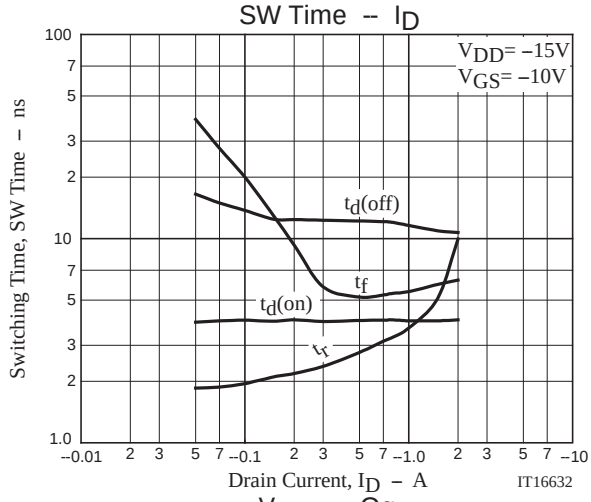


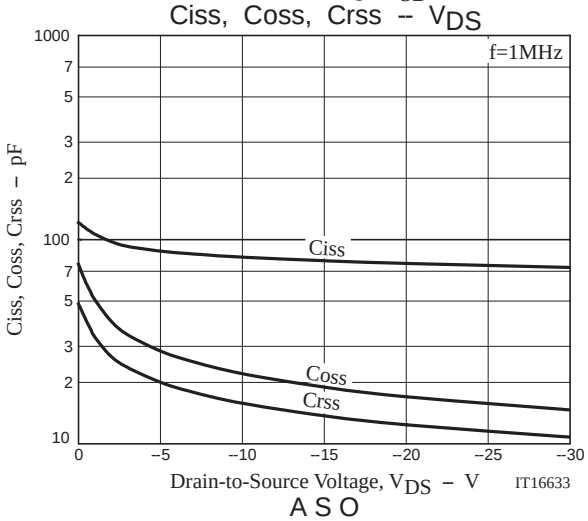

RDS(on) -- VGS
Ta=25°C
ID= –0.4A
–0.8A
Static Drain-to-Source On-State Resistance, RDS(on) – mΩ
Gate-to-Source Voltage, VGS – V
IT16628

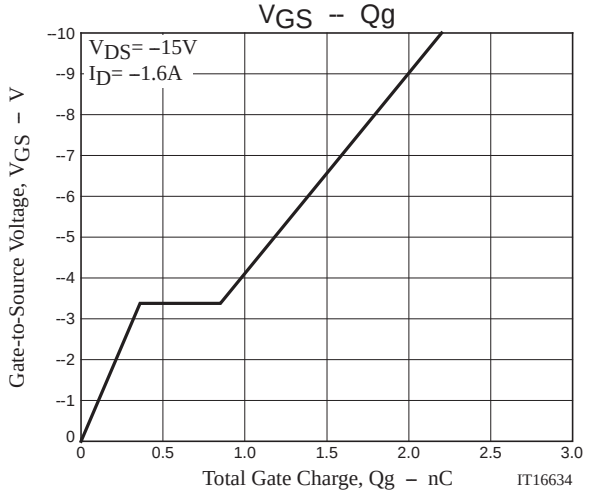

RDS(on) -- Ta
VGS= –4.0V, ID= –0.4A
VGS= –4.5V, ID= –0.4A
VGS= –10.0V, ID= –0.8A
Static Drain-to-Source On-State Resistance, RDS(on) – mΩ
Ambient Temperature, Ta – °C
IT16629

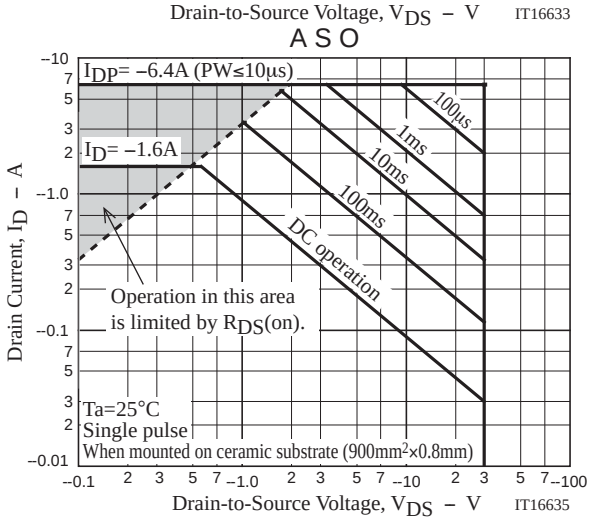

| yfs | -- ID
VDS= –10V
Ta= –25°C
75°C
25°C
Forward Transfer Admittance, | yfs | – S
Drain Current, ID – A
IT16630

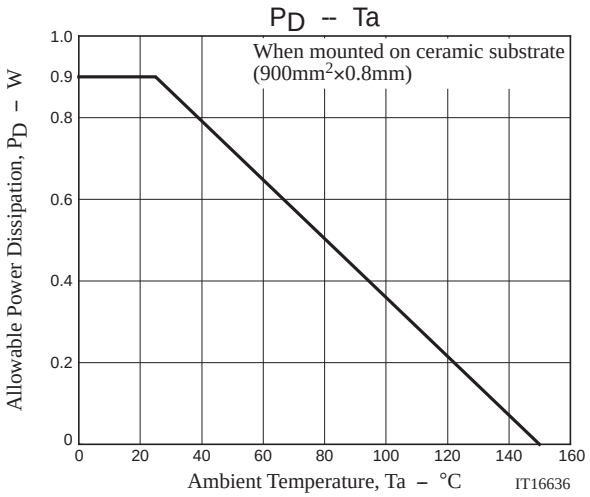

IS – VSD
VGS=0V
Ta=75°C
25°C
–25°C
Source Current, IS – A
Diode Forward Voltage, VSD – V
IT16631


SW Time -- ID
VDD= –15V
VGS= –10V
td(off)
tf
td(on)
tr
Switching Time, SW Time – ns
Drain Current, ID – A
IT16632


Ciss, Coss, Crss -- VDS
f=1MHz
Ciss
Coss
Crss
Ciss, Coss, Crss – pF
Drain-to-Source Voltage, VDS – V
IT16633


VGS -- Qg
VDS= –15V
ID= –1.6A
Gate-to-Source Voltage, VGS – V
Total Gate Charge, Qg – nC
IT16634


ASO
IDP= –6.4A (PW≤10μs)
ID= –1.6A
100μs
1ms
10ms
100ms
DC operation
Operation in this area is limited by RDS(on).
Ta=25°C
Single pulse
When mounted on ceramic substrate (900mm²×0.8mm)
Drain Current, ID – A
Drain-to-Source Voltage, VDS – V
IT16635



Note on usage : Since the CPH3360 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

This catalog provides information as of November, 2011. Specifications and information herein are subject to change without notice.