

SANYO Semiconductors DATA SHEET

CPH3430

N-Channel Silicon MOSFET

30 — General-Purpose Switching Device Applications

Features

- · Low ON-resistance.
- · Ultrahigh-speed switching.
- 2.5V drive.

Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	VDSS		60	V
Gate-to-Source Voltage	VGSS		±10	V
Drain Current (DC)	ID		2	Α
Drain Current (Pulse)	IDP	PW≤10μs, duty cycle≤1%	8	Α
Allowable Power Dissipation	PD	Mounted on a ceramic board (900mm ² X0.8mm)	1	W
Channel Temperature	Tch		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			1.1
			min	typ	max	Unit
Drain-to-Source Breakdown Voltage	V(BR)DSS	ID=1mA, VGS=0	60			V
Zero-Gate Voltage Drain Current	IDSS	V _{DS} =60V, V _{GS} =0			1	μΑ
Gate-to-Source Leakage Current	IGSS	V _{GS} =±8V, V _{DS} =0			±10	μΑ
Cutoff Voltage	VGS(off)	V _{DS} =10V, I _D =1mA	0.4		1.3	V
Forward Transfer Admittance	yfs	V _{DS} =10V, I _D =1A	1.8	3.6		S
Static Drain-to-Source On-State Resistance	R _{DS} (on)1	I _D =1A, V _G S=4V		170	220	mΩ
	RDS(on)2	ID=1A, VGS=2.5V		190	270	mΩ
Input Capacitance	Ciss	V _{DS} =20V, f=1MHz		325		pF
Output Capacitance	Coss	V _{DS} =20V, f=1MHz		29		pF
Reverse Transfer Capacitance	Crss	V _{DS} =20V, f=1MHz		21		pF
Turn-ON Delay Time	t _d (on)	See specified Test Circuit.		11		ns
Rise Time	t _r	See specified Test Circuit.		17		ns
Turn-OFF Delay Time	t _d (off)	See specified Test Circuit.		40		ns
Fall Time	tf	See specified Test Circuit.		27		ns

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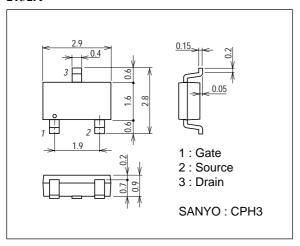
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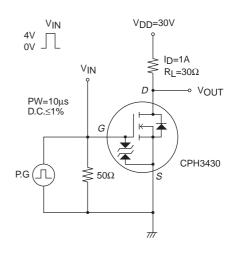
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Onit
Total Gate Charge	Qg	V _{DS} =30V, V _{GS} =4V, I _D =2A		4.2		nC
Gate-to-Source Charge	Qgs	V _{DS} =30V, V _{GS} =4V, I _D =2A		1.1		nC
Gate-to-Drain "Miller" Charge	Qgd	VDS=30V, VGS=4V, ID=2A		1.1		nC
Diode Forward Voltage	VSD	IS=2A, VGS=0		0.86	1.2	V

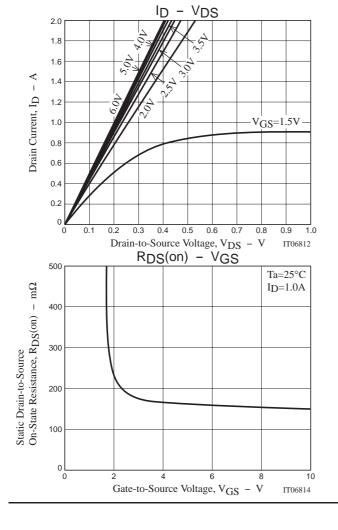
Package Dimensions

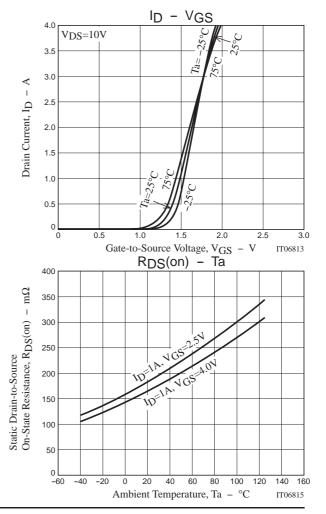
unit : mm 2152A

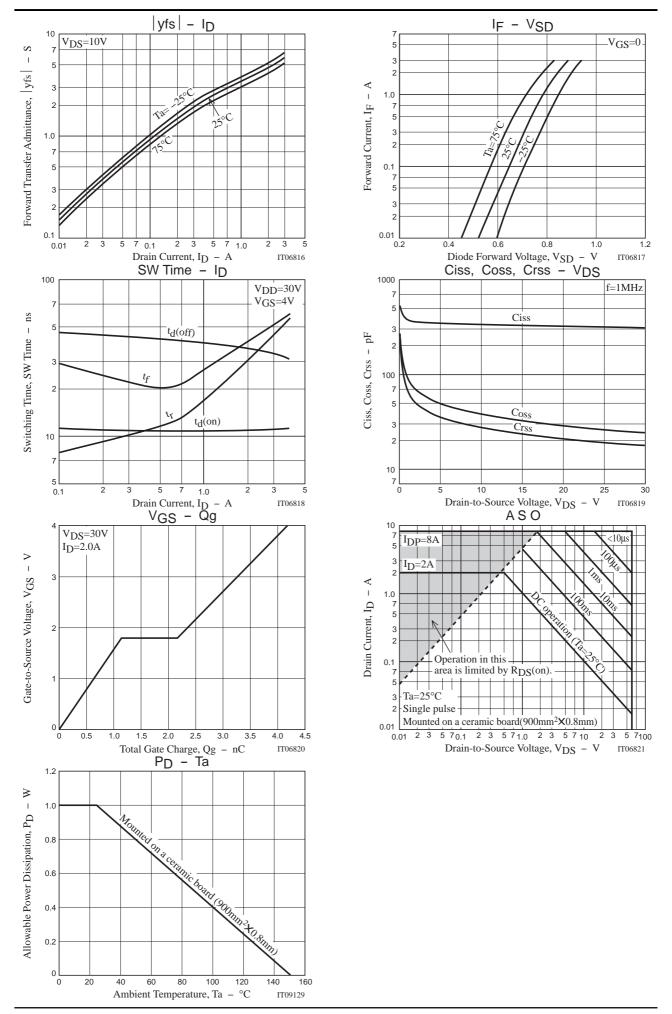


Switching Time Test Circuit









Note on usage: Since the CPH3430 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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