

SANYO Semiconductors DATA SHEET

N-Channel Silicon MOSFET

CPH3453 — General-Purpose Switching Device Applications

Features

- · Low ON-resistance.
- · 2.5V drive.
- · Halogen free compliance.

Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V _{DSS}		250	V
Gate-to-Source Voltage	VGSS		±10	V
Drain Current (DC)	ID		300	mA
Drain Current (Pulse)	IDP	PW≤10μs, duty cycle≤1%	1.2	Α
Allowable Power Dissipation	PD	When mounted on ceramic substrate (900mm ² x0.8mm)	1.0	W
Channel Temperature	Tch		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Offic
Drain-to-Source Breakdown Voltage	V(BR)DSS	I _D =1mA, V _{GS} =0V	250			V
Zero-Gate Voltage Drain Current	IDSS	V _{DS} =250V, V _{GS} =0V			100	μΑ
Gate-to-Source Leakage Current	IGSS	V _{GS} =±8V, V _{DS} =0V			±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 =150mA	0.6	1		S
Static Drain-to-Source On-State Resistance	R _{DS} (on)1	I _D =150mA, V _G S=4.5V		8.5	11	Ω
	R _{DS} (on)2	I _D =75mA, V _{GS} =2.5V		8.5	11	Ω

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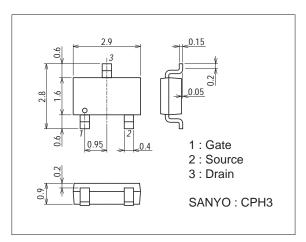
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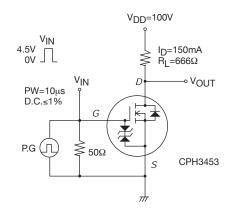
Parameter	Symbol	Conditions	Ratings			Linit
			min	typ	max	Unit
Input Capacitance	Ciss	V _{DS} =20V, f=1MHz		130		pF
Output Capacitance	Coss	V _{DS} =20V, f=1MHz		9.6		pF
Reverse Transfer Capacitance	Crss	V _{DS} =20V, f=1MHz		5.1		pF
Turn-ON Delay Time	t _d (on)	See specified Test Circuit.		6.3		ns
Rise Time	t _r	See specified Test Circuit.		6.0		ns
Turn-OFF Delay Time	t _d (off)	See specified Test Circuit.		21		ns
Fall Time	tf	See specified Test Circuit.		42		ns
Total Gate Charge	Qg	V _{DS} =125V, V _{GS} =4.5V, I _D =300mA		2.2		nC
Gate-to-Source Charge	Qgs	V _{DS} =125V, V _{GS} =4.5V, I _D =300mA		0.3		nC
Gate-to-Drain "Miller" Charge	Qgd	V _{DS} =125V, V _{GS} =4.5V, I _D =300mA		0.8		nC
Diode Forward Voltage	VSD	IS=300mA, VGS=0V		0.8	1.2	V

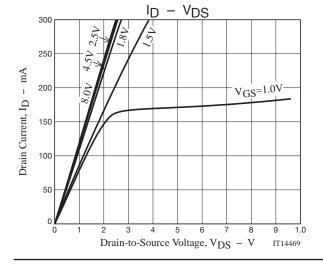
Package Dimensions

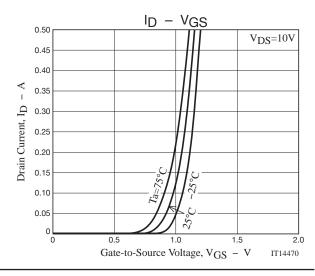
unit : mm (typ) 7015A-004

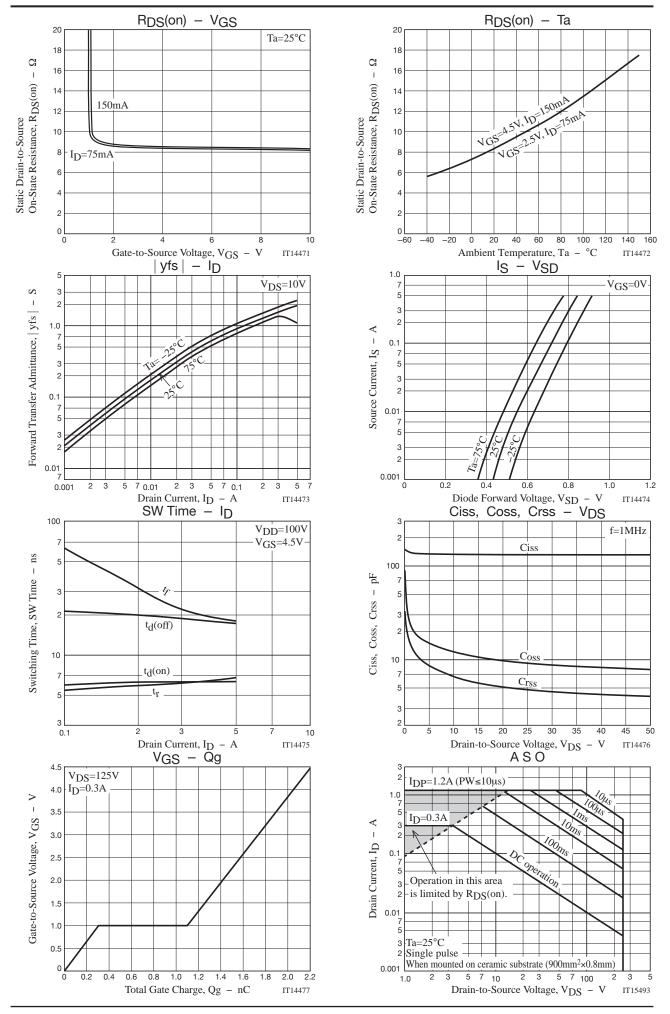


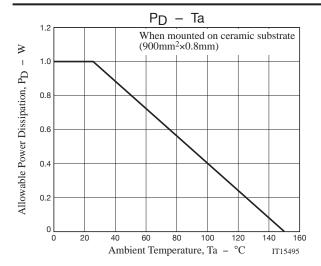
Switching Time Test Circuit











Note on usage: Since the CPH3453 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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