

SANYO Semiconductors DATA SHEET

N-Channel Silicon MOSFET

MCH3475 — General-Purpose Switching Device **Applications**

Features

- · Ultrahigh-speed switching.
- · 4V drive.

Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	VDSS		30	V
Gate-to-Source Voltage	VGSS		±20	V
Drain Current (DC)	ΙD		1.8	Α
Drain Current (Pulse)	IDP	PW≤10μs, duty cycle≤1%	7.2	Α
Allowable Power Dissipation	PD	Mounted on a ceramic board (900mm ² X0.8mm)	0.8	W
Channel Temperature	Tch		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			11.2
			min	typ	max	Unit
Drain-to-Source Breakdown Voltage	V(BR)DSS	ID=1mA, VGS=0V	30			V
Zero-Gate Voltage Drain Current	IDSS	VDS=30V, VGS=0V			1	μΑ
Gate-to-Source Leakage Current	IGSS	V _{GS} =±16V, V _{DS} =0V			±10	μΑ
Cutoff Voltage	VGS(off)	V _{DS} =10V, I _D =1mA	1.2		2.6	V
Forward Transfer Admittance	yfs	VDS=10V, ID=0.9A	0.66	1.1		S
Static Drain-to-Source On-State Resistance	R _{DS} (on)1	I _D =0.9A, V _G S=10V		135	180	mΩ
	RDS(on)2	I _D =0.5A, V _G S=4V		230	330	mΩ
Input Capacitance	Ciss	VDS=10V, f=1MHz		88		pF
Output Capacitance	Coss	V _{DS} =10V, f=1MHz		19		pF
Reverse Transfer Capacitance	Crss	V _{DS} =10V, f=1MHz		11		pF

Marking: FG Continued on next page.

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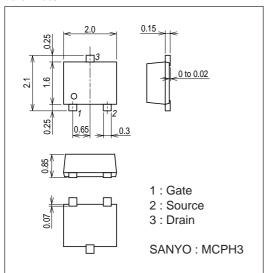
MCH3475

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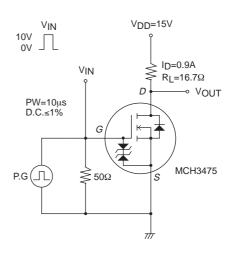
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Offic
Turn-ON Delay Time	t _d (on)	See specified Test Circuit.		3.4		ns
Rise Time	t _r	See specified Test Circuit.		3.6		ns
Turn-OFF Delay Time	t _d (off)	See specified Test Circuit.		10.5		ns
Fall Time	tf	See specified Test Circuit.		4.0		ns
Total Gate Charge	Qg	V _{DS} =10V, V _{GS} =10V, I _D =1.8A		2.0		nC
Gate-to-Source Charge	Qgs	V _{DS} =10V, V _{GS} =10V, I _D =1.8A		0.33		nC
Gate-to-Drain "Miller" Charge	Qgd	V _{DS} =10V, V _{GS} =10V, I _D =1.8A		0.29		nC
Diode Forward Voltage	V _{SD}	I _S =1.8A, V _{GS} =0V		0.86	1.2	٧

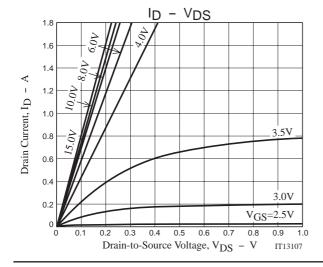
Package Dimensions

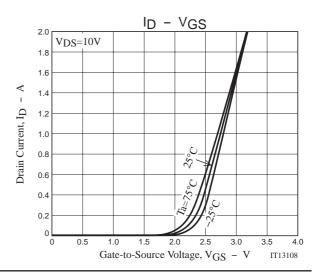
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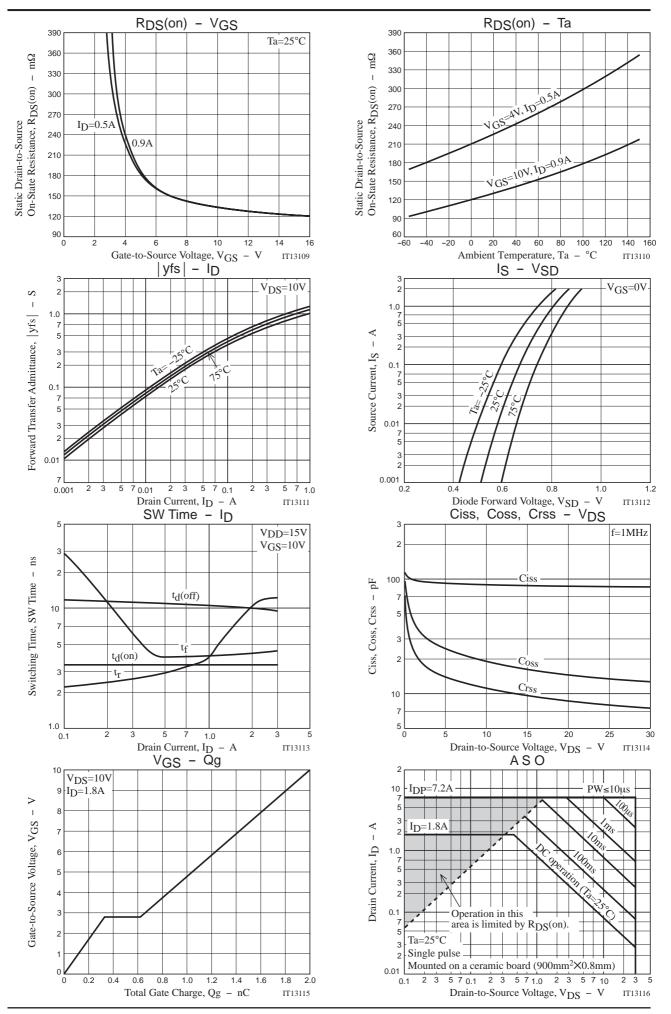


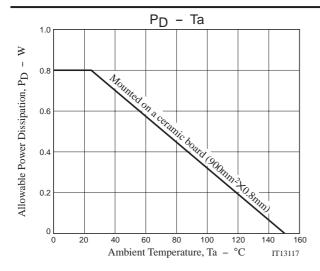
Switching Time Test Circuit











Note on usage: Since the MCH3475 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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