



# 6LP04MH — P-Channel Silicon MOSFET

## General-Purpose Switching Device Applications

### Features

- 1.5V 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		-100	mA
Drain Current (Pulse)	IDP	PW≤10μs, duty cycle≤1%	-400	mA
Allowable Power Dissipation	PD	Mounted on a ceramic board (900mm²×0.8mm)	0.6	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	
Drain-to-Source Breakdown Voltage	V(BR)DSS	ID=-1mA, VGS=0V	-60			V
Zero-Gate Voltage Drain Current	IDSS	VDS=-60V, VGS=0V			-1	μA
Gate-to-Source Leakage Current	IGSS	VGS=±8V, VDS=0V			±10	μA
Cutoff Voltage	VGS(off)	VDS=-10V, ID=-100μA	-0.4		-1.4	V
Forward Transfer Admittance	yfs	VDS=-10V, ID=-50mA	130	220		mS
Static Drain-to-Source On-State Resistance	RDS(on)1	ID=-50mA, VGS=-4V		6.5	8.5	Ω
	RDS(on)2	ID=-30mA, VGS=-2.5V		7.4	11	Ω
	RDS(on)3	ID=-10mA, VGS=-1.5V		10	20	Ω
Input Capacitance	Ciss	VDS=-20V, f=1MHz		15		pF
Output Capacitance	Coss	VDS=-20V, f=1MHz		3.5		pF
Reverse Transfer Capacitance	Crss	VDS=-20V, f=1MHz		1.0		pF
Turn-ON Delay Time	td(on)	See specified Test Circuit.		75		ns
Rise Time	tr	See specified Test Circuit.		116		ns
Turn-OFF Delay Time	td(off)	See specified Test Circuit.		665		ns
Fall Time	tf	See specified Test Circuit.		270		ns

Marking : QA

Continued on next page.

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SANYO Semiconductor Co., Ltd.

TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN



6LP04MH

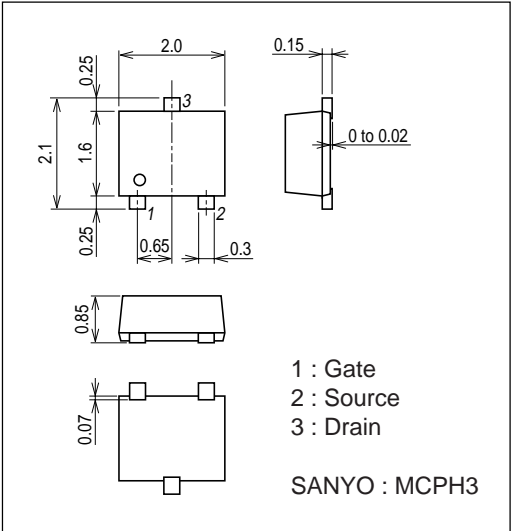
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Total Gate Charge	Qg	V <sub>DS</sub> =-30V, V <sub>GS</sub> =-4V, I <sub>D</sub> =-100mA		0.58		nC
Gate-to-Source Charge	Qgs	V <sub>DS</sub> =-30V, V <sub>GS</sub> =-4V, I <sub>D</sub> =-100mA		0.14		nC
Gate-to-Drain "Miller" Charge	Qgd	V <sub>DS</sub> =-30V, V <sub>GS</sub> =-4V, I <sub>D</sub> =-100mA		0.03		nC
Diode Forward Voltage	V <sub>SD</sub>	I <sub>S</sub> =-100mA, V <sub>GS</sub> =0V		-0.91	-1.5	V

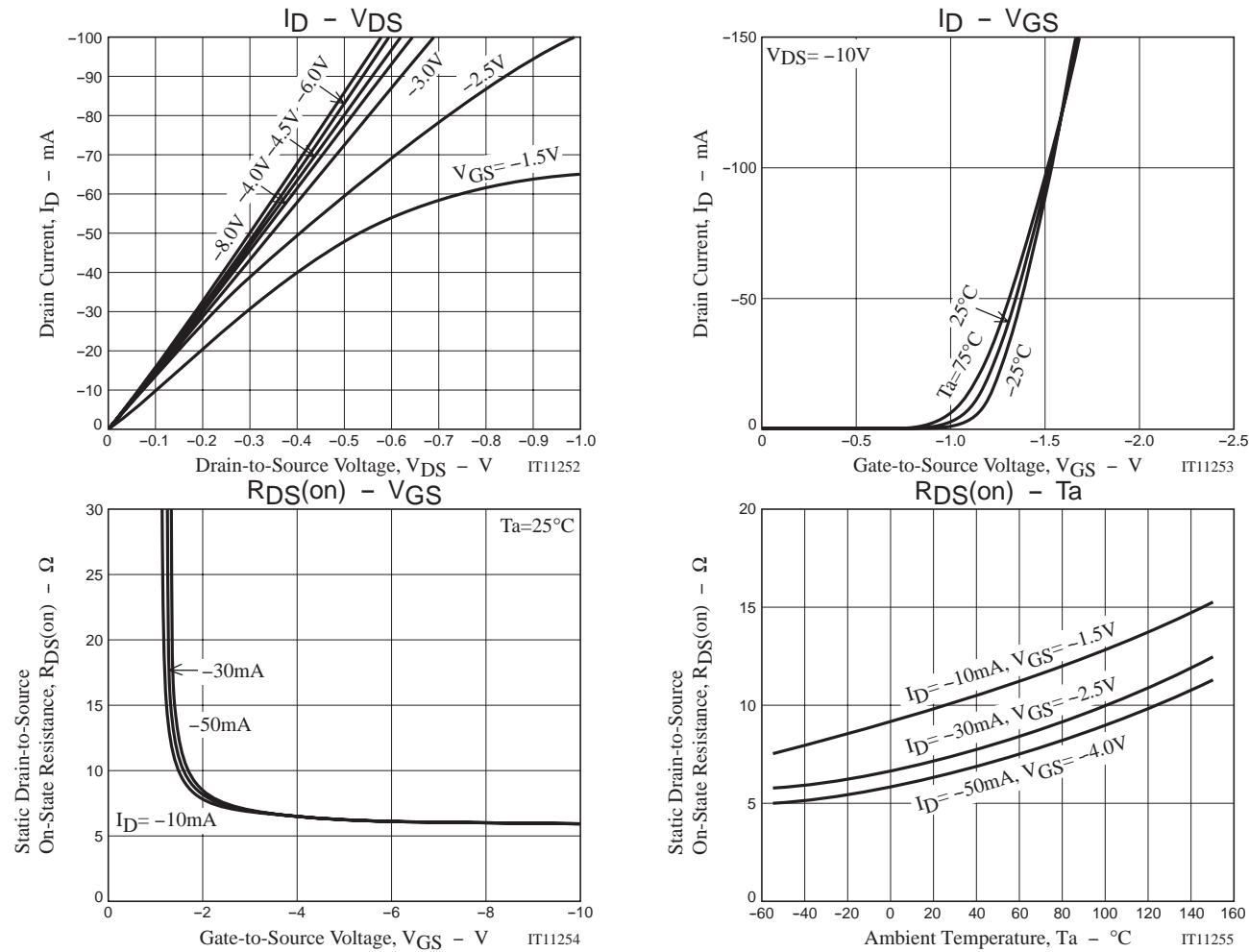
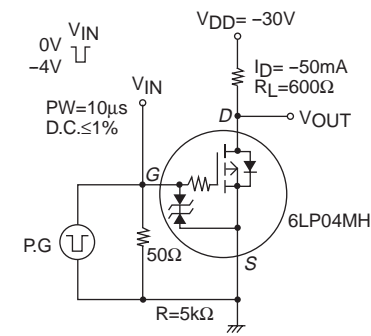
Package Dimensions

unit : mm (typ)

7019A-003

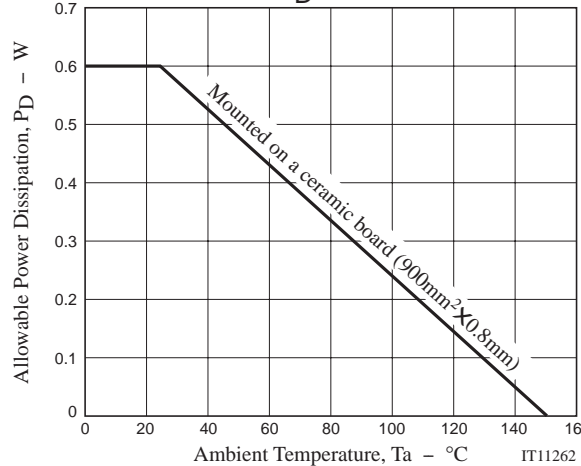
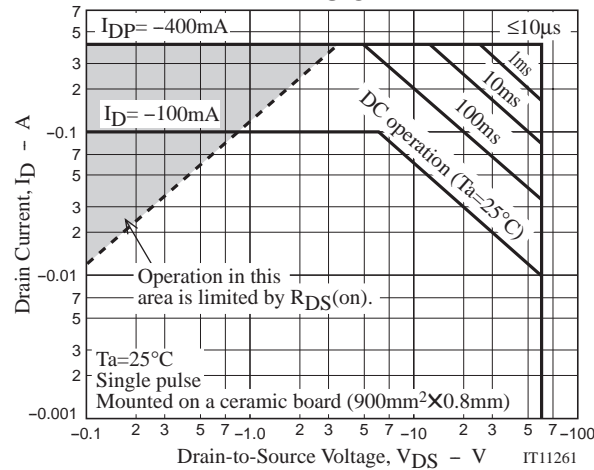
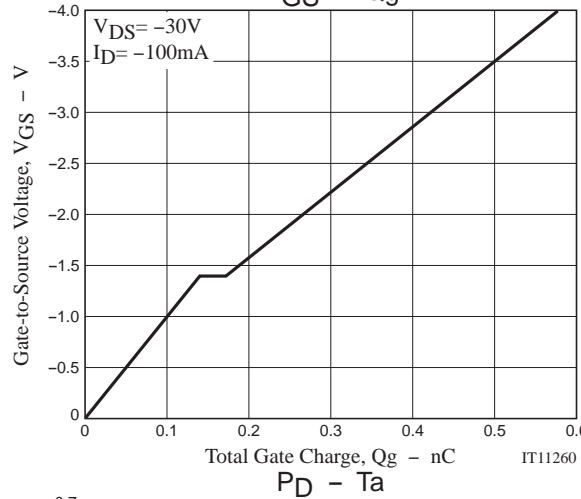
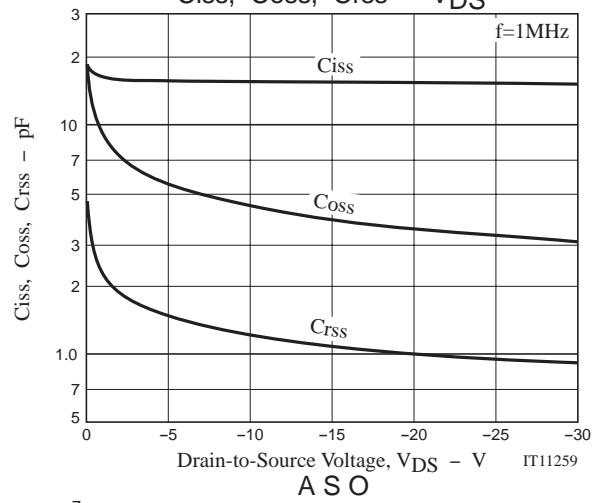
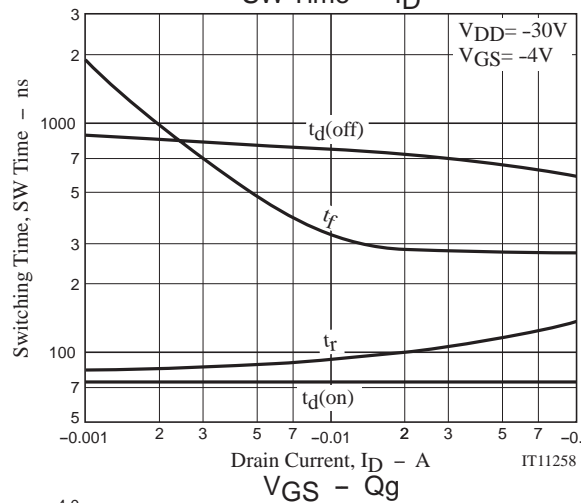
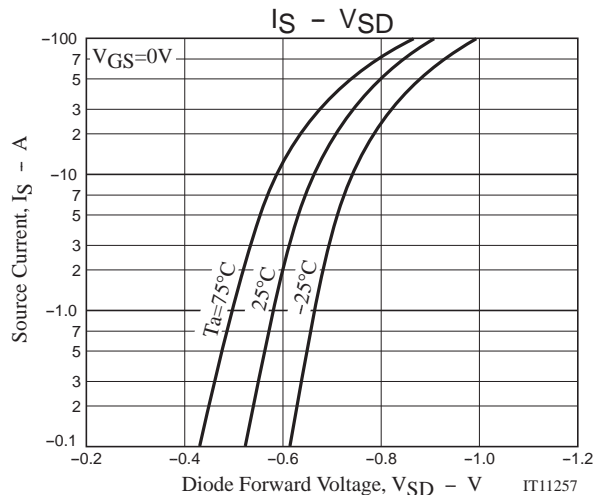
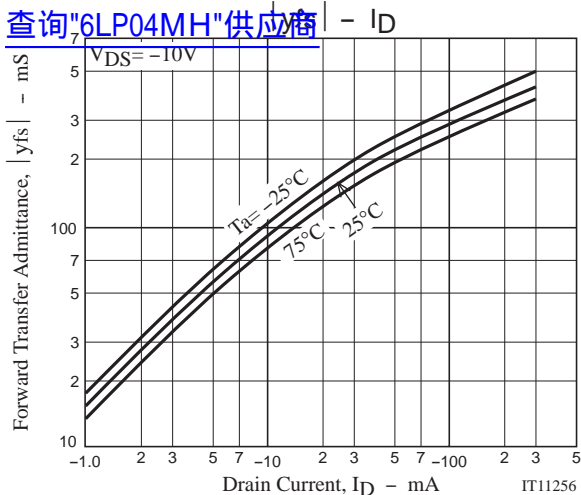


Switching Time Test Circuit



6LP04MH

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Note on usage : Since the 6LP04MH is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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