



ON Semiconductor®

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DATA SHEET

P-Channel Silicon MOSFET

6LP04MH — 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	V _{DSS}		-60	V
Gate-to-Source Voltage	V _{GSS}		±10	V
Drain Current (DC)	I _D		-100	mA
Drain Current (Pulse)	I _{DP}	PW≤10μs, duty cycle≤1%	-400	mA
Allowable Power Dissipation	P _D	Mounted on a ceramic board (900mm²×0.8mm)	0.6	W
Channel Temperature	T _{ch}		150	°C
Storage Temperature	T _{stg}		-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}	I _D =-1mA, V _{GS} =0V	-60			V
Zero-Gate Voltage Drain Current	I _{DSS}	V _{DS} =-60V, V _{GS} =0V			-1	μA
Gate-to-Source Leakage Current	I _{GSS}	V _{GS} =±8V, V _{DS} =0V			±10	μA
Cutoff Voltage	V _{GS(off)}	V _{DS} =-10V, I _D =-100μA	-0.4		-1.4	V
Forward Transfer Admittance	y _{fs}	V _{DS} =-10V, I _D =-50mA	130	220		mS
Static Drain-to-Source On-State Resistance	R _{DS(on)1}	I _D =-50mA, V _{GS} =-4V		6.5	8.5	Ω
	R _{DS(on)2}	I _D =-30mA, V _{GS} =-2.5V		7.4	11	Ω
	R _{DS(on)3}	I _D =-10mA, V _{GS} =-1.5V		10	20	Ω
Input Capacitance	C _{iss}	V _{DS} =-20V, f=1MHz		15		pF
Output Capacitance	C _{oss}	V _{DS} =-20V, f=1MHz		3.5		pF
Reverse Transfer Capacitance	C _{rss}	V _{DS} =-20V, f=1MHz		1.0		pF
Turn-ON Delay Time	t _{d(on)}	See specified Test Circuit.		75		ns
Rise Time	t _r	See specified Test Circuit.		116		ns
Turn-OFF Delay Time	t _{d(off)}	See specified Test Circuit.		665		ns
Fall Time	t _f	See specified Test Circuit.		270		ns

Marking : QA

Continued on next page.

6LP04MH

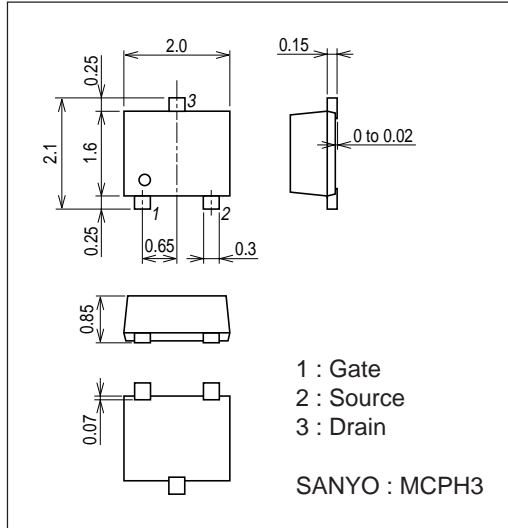
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Total Gate Charge	Qg	$V_{DS}=-30V$, $V_{GS}=-4V$, $I_D=-100mA$		0.58		nC
Gate-to-Source Charge	Qgs	$V_{DS}=-30V$, $V_{GS}=-4V$, $I_D=-100mA$		0.14		nC
Gate-to-Drain "Miller" Charge	Qgd	$V_{DS}=-30V$, $V_{GS}=-4V$, $I_D=-100mA$		0.03		nC
Diode Forward Voltage	V_{SD}	$I_S=-100mA$, $V_{GS}=0V$		-0.91	-1.5	V

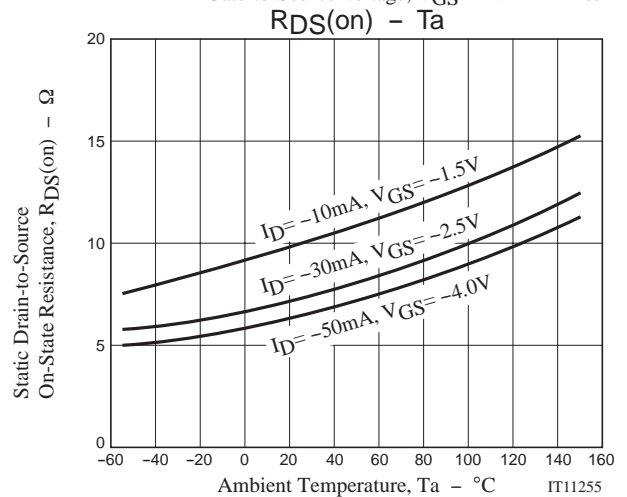
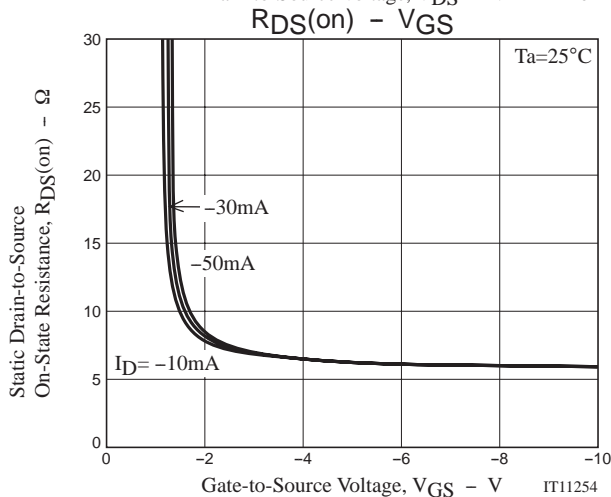
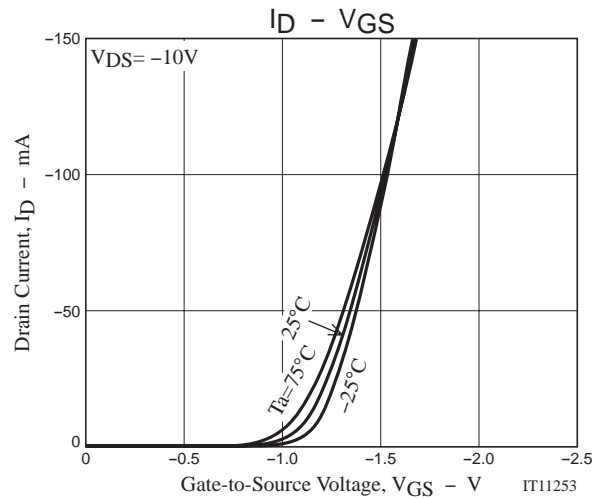
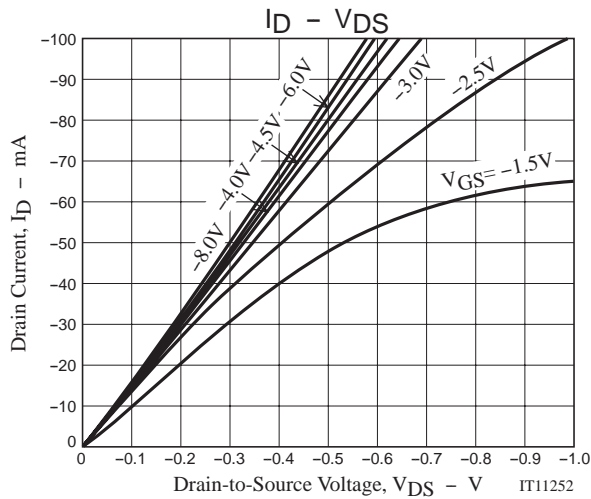
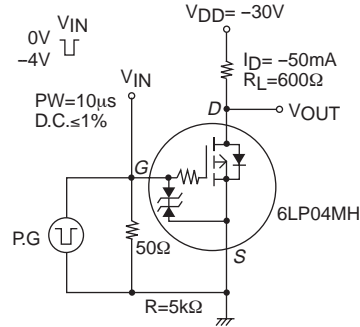
Package Dimensions

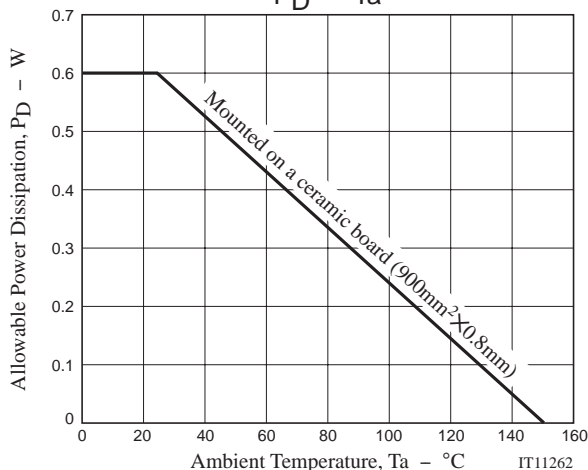
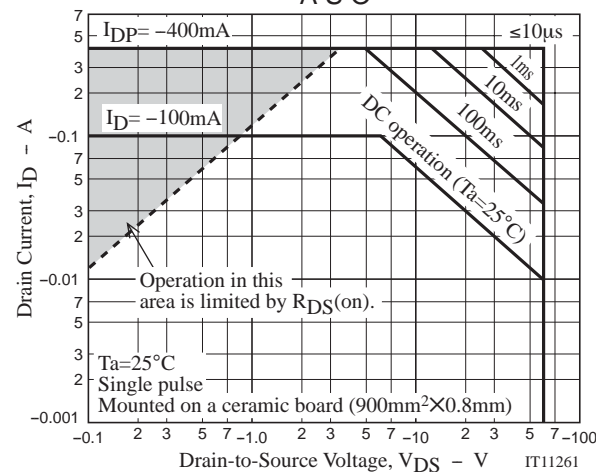
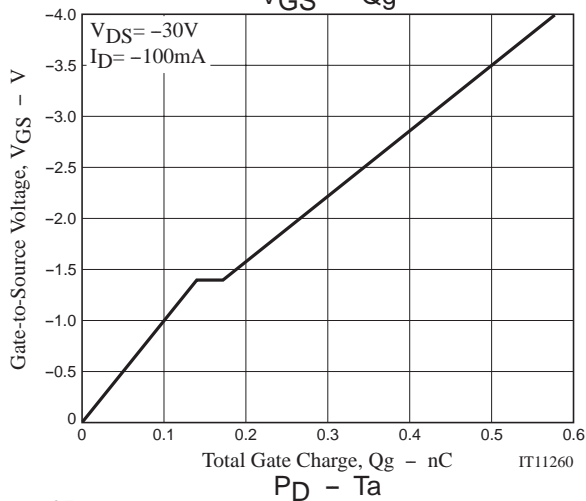
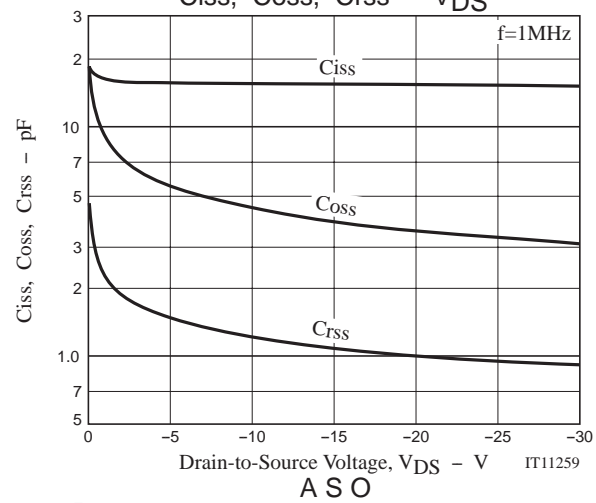
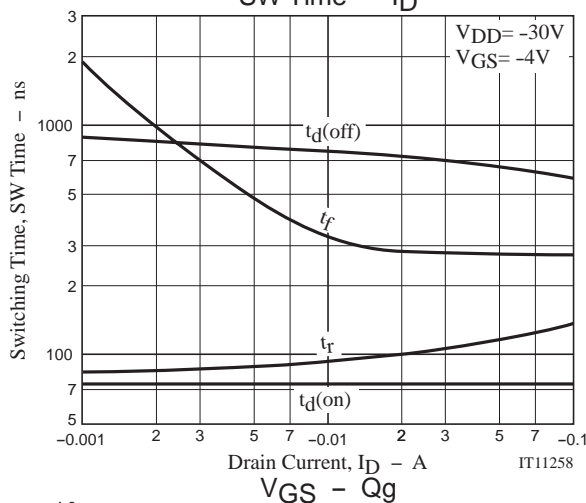
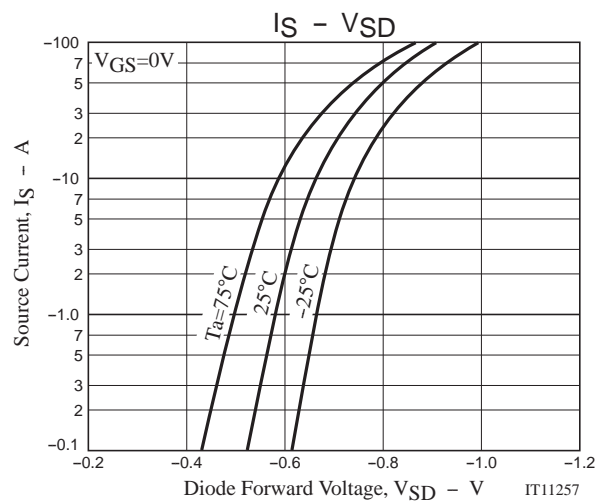
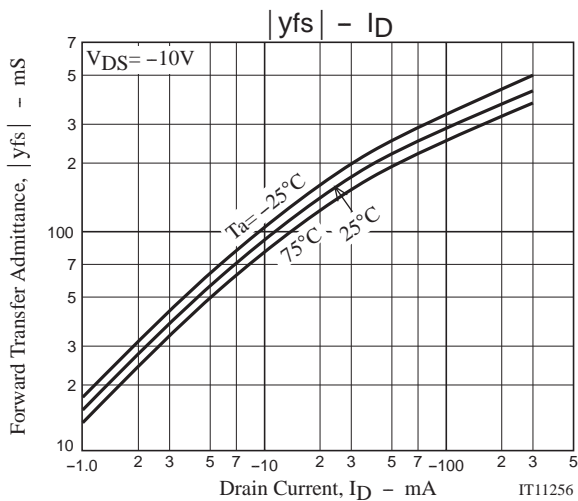
unit : mm (typ)

7019A-003



Switching Time Test Circuit





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