

SANYO Semiconductors DATA SHEET

P-Channel Silicon MOSFET

3HP04MH — General-Purpose Switching Device **Applications**

Features

· 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)	ID		-200	mA
Drain Current (Pulse)	IDP	PW≤10μs, duty cycle≤1%	-800	mA
Allowable Power Dissipation	PD	Mounted on a ceramic board (900mm²X0.8mm)	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	Offic
Drain-to-Source Breakdown Voltage	V(BR)DSS	ID=-1mA, VGS=0V	-30			V
Zero-Gate Voltage Drain Current	IDSS	V _{DS} =-30V, V _{GS} =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 =-100μA	-1.2		-2.6	V
Forward Transfer Admittance	yfs	V _{DS} =-10V, I _D =-100mA	150	250		mS
Static Drain-to-Source On-State Resistance	R _{DS} (on)1	ID=-100mA, VGS=-10V		1.4	1.9	Ω
	RDS(on)2	ID=-50mA, VGS=-4V		2.8	4.0	Ω
Input Capacitance	Ciss	V _{DS} =-10V, f=1MHz		22		pF
Output Capacitance	Coss	V _{DS} =-10V, f=1MHz		6.0		pF
Reverse Transfer Capacitance	Crss	VDS=-10V, f=1MHz		3.5		pF
Turn-ON Delay Time	t _d (on)	See specified Test Circuit.		34		ns
Rise Time	t _r	See specified Test Circuit.		59		ns
Turn-OFF Delay Time	t _d (off)	See specified Test Circuit.		435		ns
Fall Time	tf	See specified Test Circuit.		250		ns

Marking: WZ Continued on next page.

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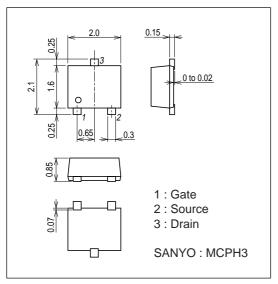
3HP04MH

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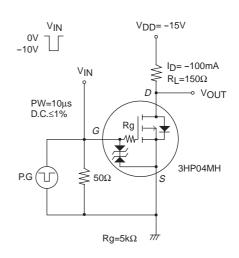
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Onic
Total Gate Charge	Qg	V _{DS} =-10V, V _{GS} =-10V, I _D =-200mA		1.6		nC
Gate-to-Source Charge	Qgs	V _{DS} =-10V, V _{GS} =-10V, I _D =-200mA		0.5		nC
Gate-to-Drain "Miller" Charge	Qgd	V _D S=-10V, V _G S=-10V, I _D =-200mA		0.1		nC
Diode Forward Voltage	VSD	IS=-200mA, VGS=0V		-0.86	-1.2	V

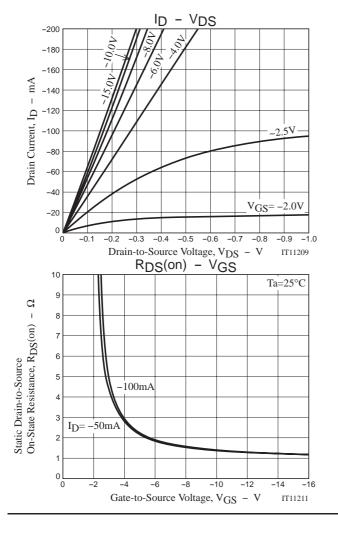
Package Dimensions

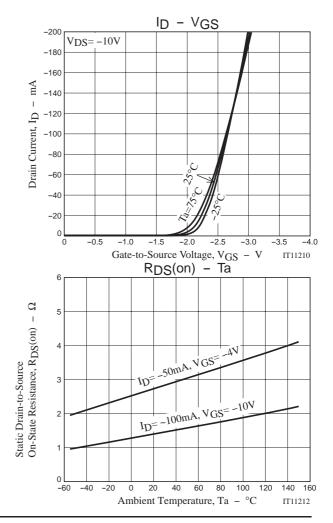
unit : mm 7019A-003



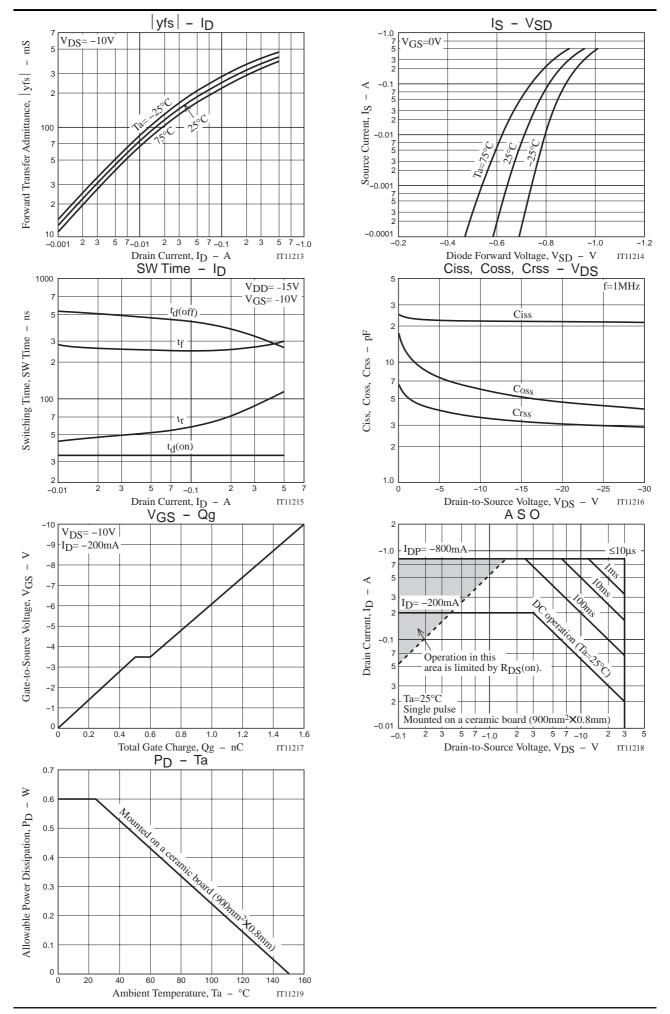
Switching Time Test Circuit







3HP04MH



3HP04MH

Note on usage: Since the 3HP04MH is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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