



SANYO Semiconductors

DATA SHEET

P-Channel Silicon MOSFET

MCH6635 — General-Purpose Switching Device Applications

Features

- Low ON-resistance.
- Ultrahigh-speed switching.
- 2.5V drive.
- Composite type with 2 MOSFETs contained in a single package, facilitating high-density mounting.

Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V _{DSS}		-20	V
Gate-to-Source Voltage	V _{GSS}		±10	V
Drain Current (DC)	I _D		-0.8	A
Drain Current (Pulse)	I _{DP}	PW≤10μs, duty cycle≤1%	-3.2	A
Allowable Power Dissipation	P _D	Mounted on a ceramic board(900mm ² X0.8mm) 1unit	0.8	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} =0	-20			V
Zero-Gate Voltage Drain Current	I _{DSS}	V _{DS} =-20V, V _{GS} =0			-1	μA
Gate-to-Source Leakage Current	I _{GSS}	V _{GS} =±8V, V _{DS} =0			±10	μA
Cutoff Voltage	V _{GS(off)}	V _{DS} =-10V, I _D =-100μA	-0.4		-1.3	V
Forward Transfer Admittance	y _{fs}	V _{DS} =-10V, I _D =-400mA	0.5	0.85		S
Static Drain-to-Source On-State Resistance	R _{DS(on)1}	I _D =-400mA, V _{GS} =-4V		0.69	0.9	Ω
	R _{DS(on)2}	I _D =-200mA, V _{GS} =-2.5V		0.96	1.35	Ω
Input Capacitance	C _{iss}	V _{DS} =-10V, f=1MHz		76		pF
Output Capacitance	C _{oss}	V _{DS} =-10V, f=1MHz		17.5		pF
Reverse Transfer Capacitance	C _{rss}	V _{DS} =-10V, f=1MHz		11		pF
Turn-ON Delay Time	t _{d(on)}	See specified Test Circuit		8.2		ns
Rise Time	t _r	See specified Test Circuit		15		ns
Turn-OFF Delay Time	t _{d(off)}	See specified Test Circuit		12		ns
Fall Time	t _f	See specified Test Circuit		11.5		ns

Marking : WK

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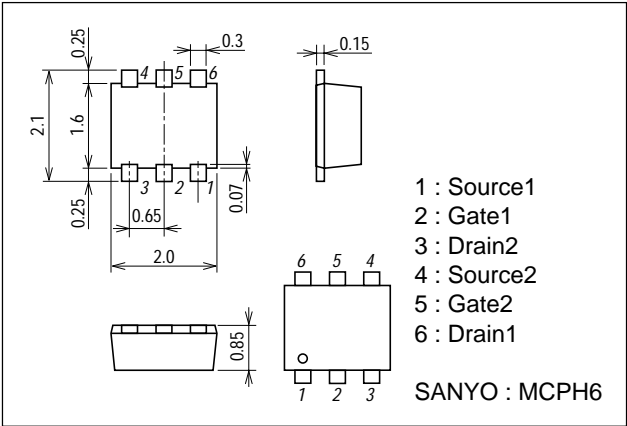
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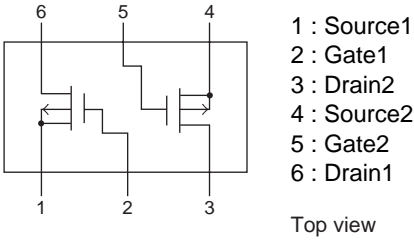
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Total Gate Charge	Qg	V _{DS} =-10V, V _{GS} =-4V, I _D =-800mA		1.18		nC
Gate-to-Source Charge	Qgs	V _{DS} =-10V, V _{GS} =-4V, I _D =-800mA		0.32		nC
Gate-to-Drain "Miller" Charge	Qgd	V _{DS} =-10V, V _{GS} =-4V, I _D =-800mA		0.24		nC
Diode Forward Voltage	V _{SD}	I _S =-800mA, V _{GS} =0		-0.95	-1.5	V

Package Dimensions

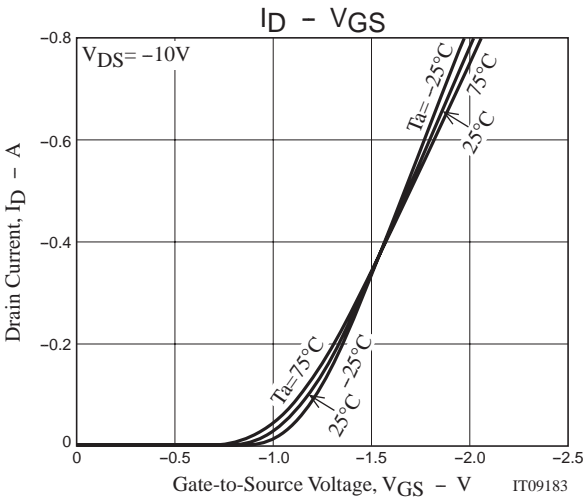
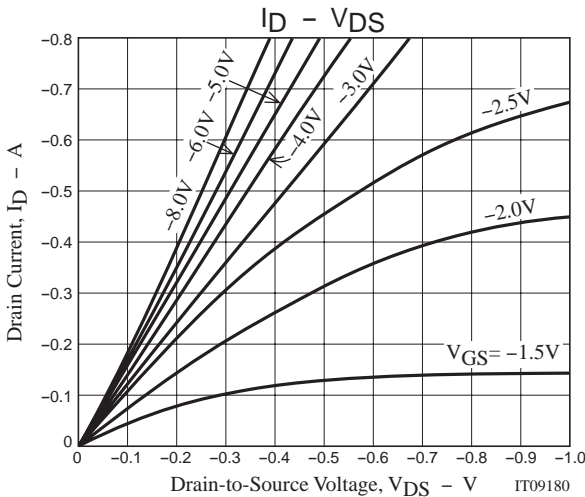
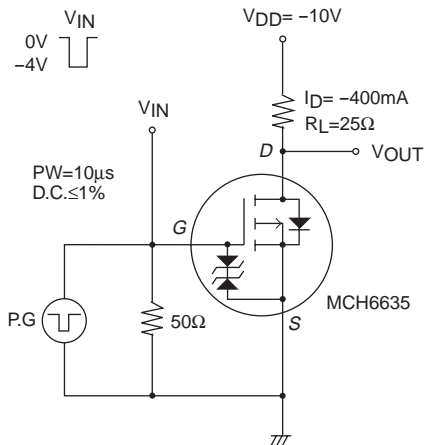
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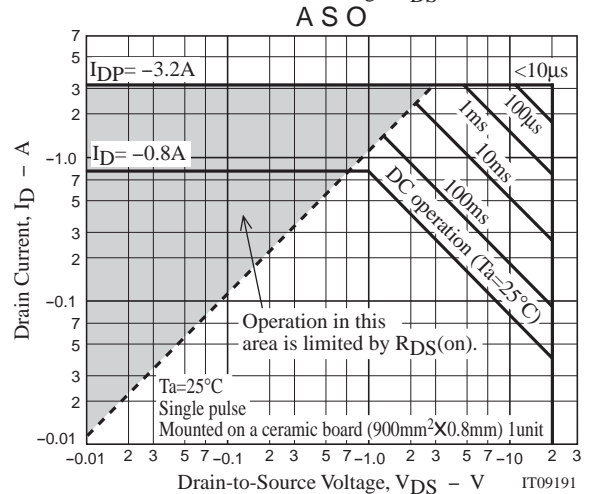
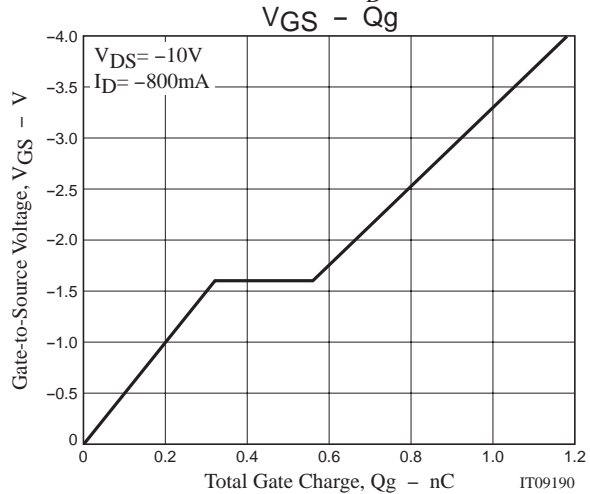
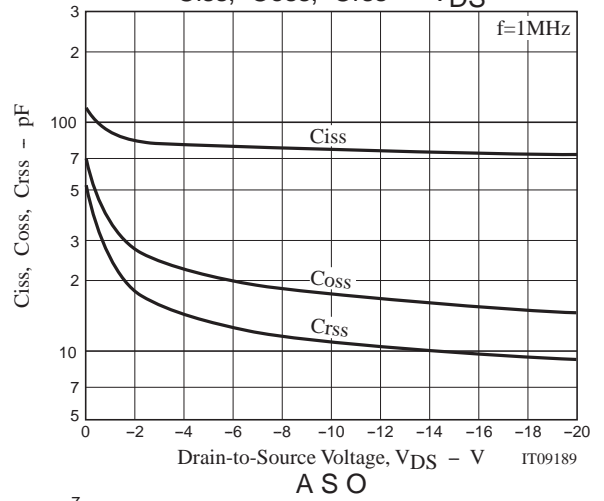
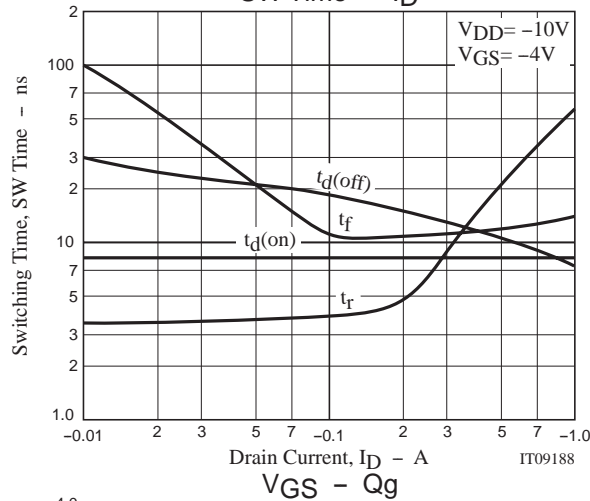
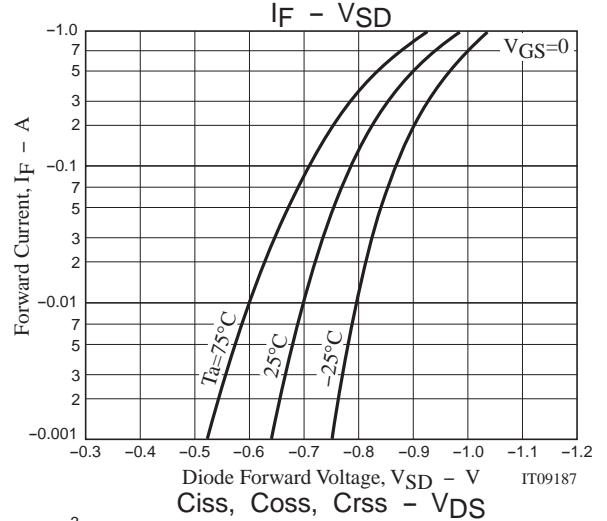
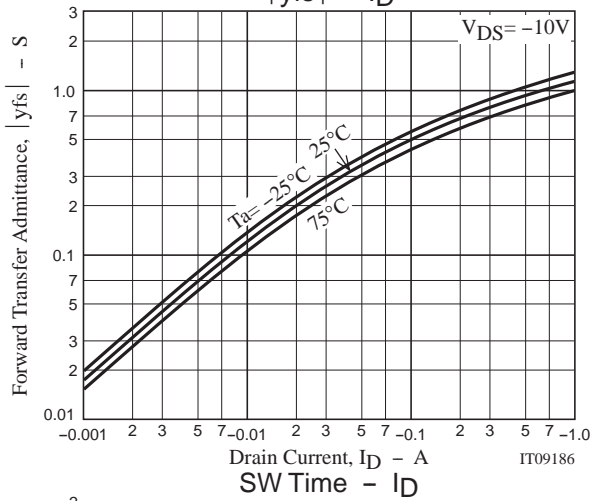
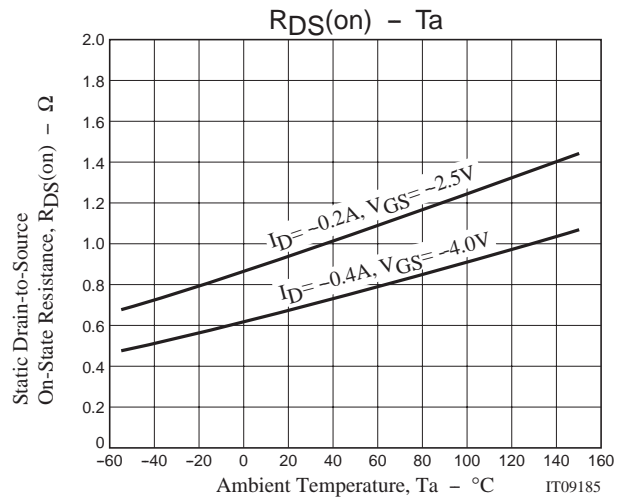
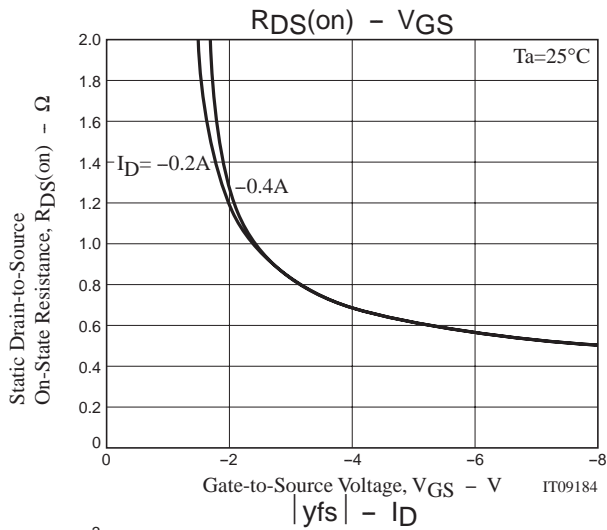


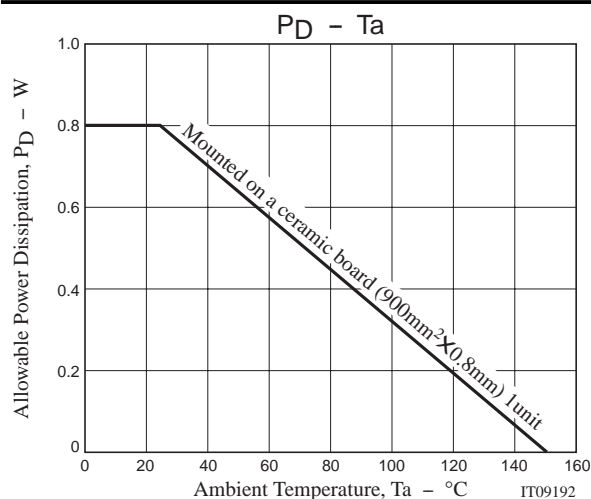
Electrical Connection



Switching Time Test Circuit







Note on usage : Since the MCH6635 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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