

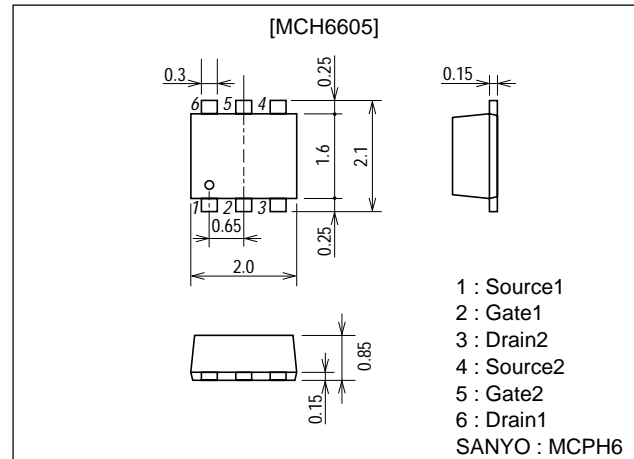
**MCH6605****Ultrahigh-Speed Switching Applications****Features**

- Low ON resistance.
- Ultrahigh-speed switching.
- 4V drive.
- Composite type with 2 MOSFETs contained in one package, facilitating high-density mounting.

Package Dimensions

unit:mm

2173

**Specifications****Absolute Maximum Ratings** at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DSS}		-50	V
Gate-to-Source Voltage	V_{GSS}		±20	V
Drain Current (DC)	I_D		-0.14	A
Drain Current (pulse)	I_{DP}	PW≤10μs, duty cycle≤1%	-0.56	A
Allowable Power Dissipation	P_D	Mounted on a ceramic board (900mm ² ×0.8mm) 1unit	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			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D=-1mA, V_{GS}=0$	-50			V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS}=-50V, V_{GS}=0$			-10	μA
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS}=\pm 16V, V_{DS}=0$			±10	μA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS}=-10V, I_D=-100\mu A$	-1		-2.5	V
Forward Transfer Admittance	yfs	$V_{DS}=-10V, I_D=-40mA$	50	70		mS
Static Drain-to-Source On-State Resistance	$R_{DS(on)1}$	$I_D=-40mA, V_{GS}=-10V$		17	22	Ω
	$R_{DS(on)2}$	$I_D=-20mA, V_{GS}=-4V$		23	32	Ω
Input Capacitance	Ciss	$V_{DS}=-10V, f=1MHz$		6.2		pF
Output Capacitance	Coss	$V_{DS}=-10V, f=1MHz$		4.0		pF
Reverse Transfer Capacitance	Crss	$V_{DS}=-10V, f=1MHz$		1.3		pF

Marking : FE

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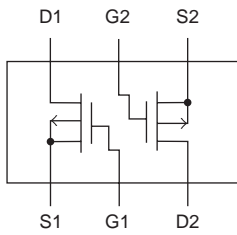
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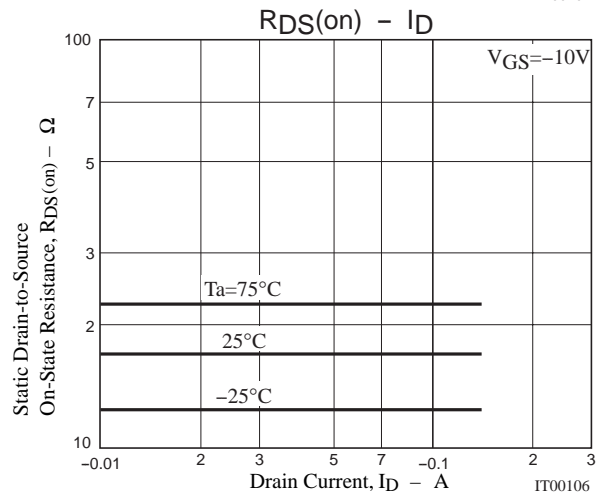
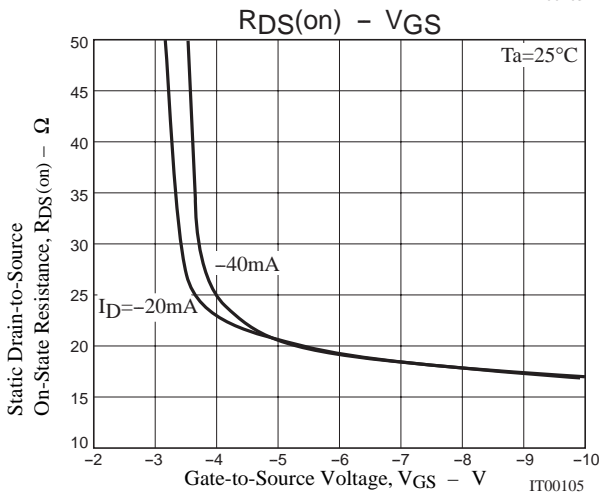
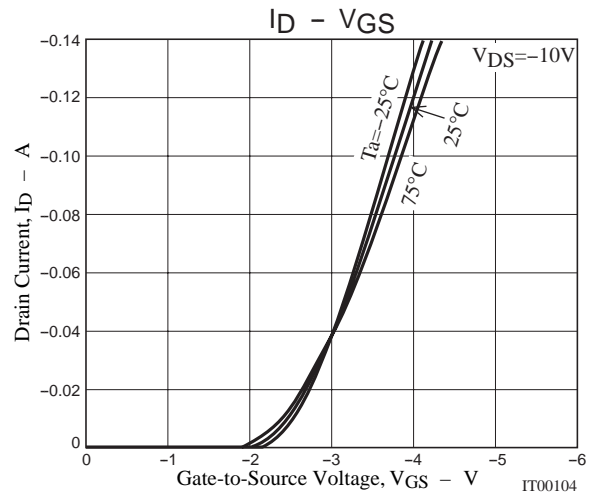
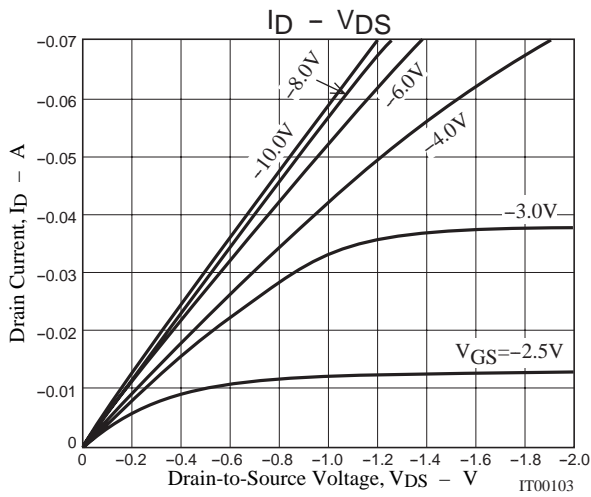
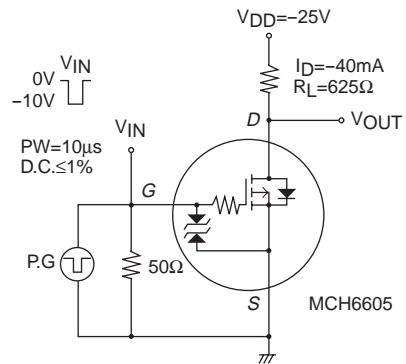
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit		13		ns
Rise Time	t_r	See specified Test Circuit		10		ns
Turn-OFF Delay Time	$t_{d(off)}$	See specified Test Circuit		100		ns
Fall Time	t_f	See specified Test Circuit		150		ns
Total Gate Charge	Q_g	$V_{DS}=-10V, V_{GS}=-10V, I_D=-70mA$		1.32		nC
Gate-to-Source Charge	Q_{gs}	$V_{DS}=-10V, V_{GS}=-10V, I_D=-70mA$		0.17		nC
Gate-to-Drain "Miller" Charge	Q_{gd}	$V_{DS}=-10V, V_{GS}=-10V, I_D=-70mA$		0.34		nC
Diode Forward Voltage	V_{SD}	$I_S=-70mA, V_{GS}=0$		0.85	1.2	V

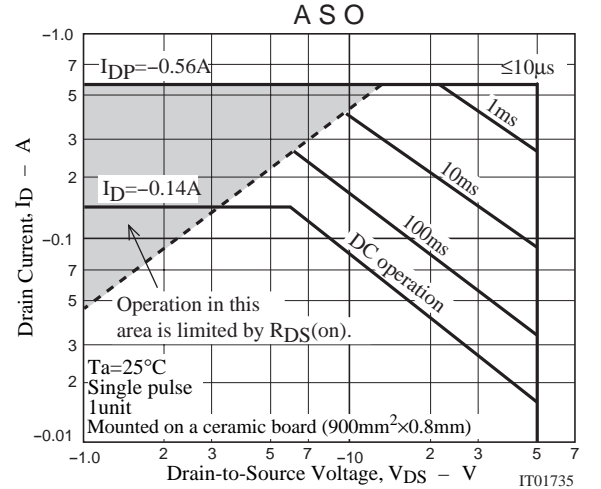
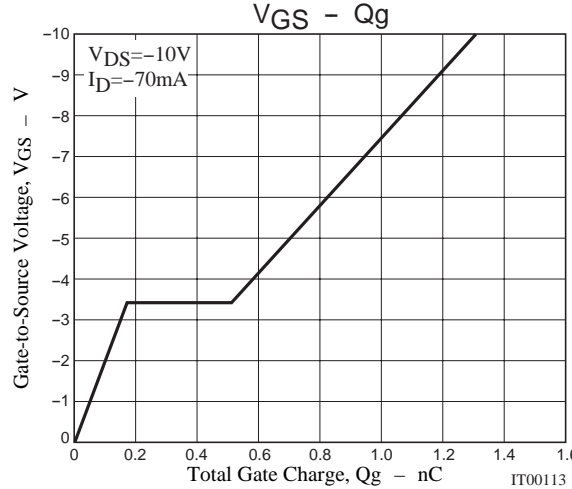
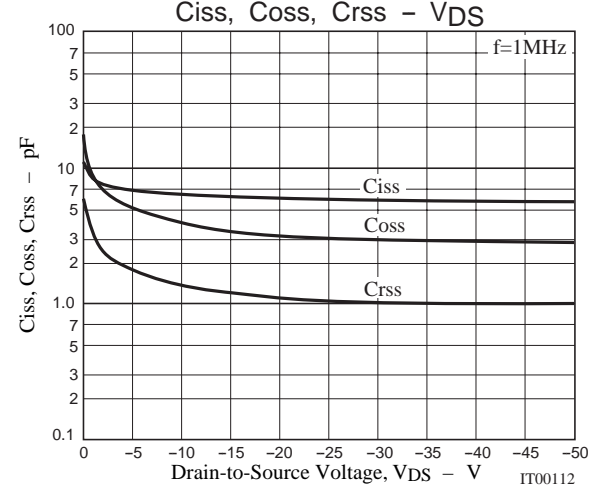
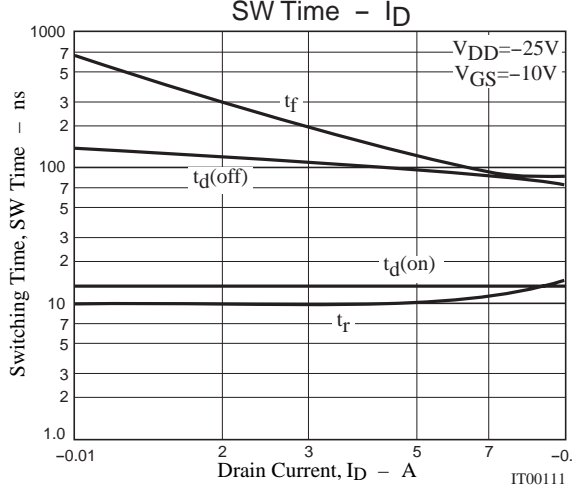
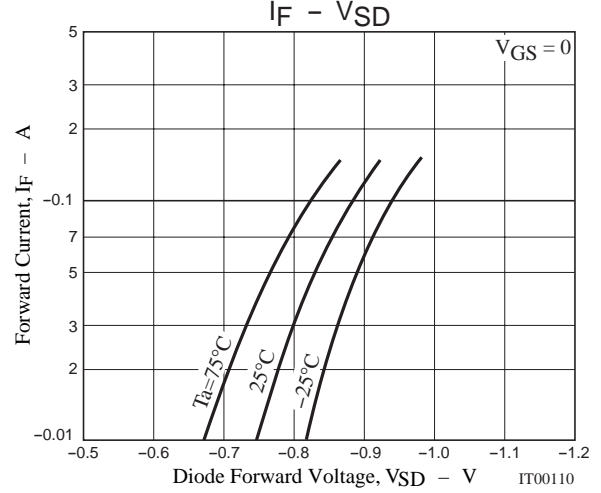
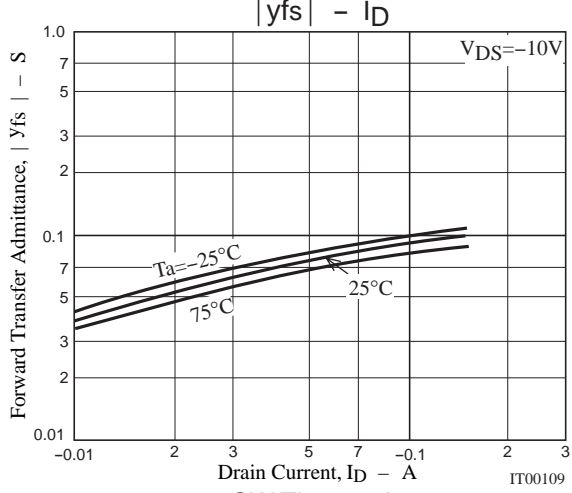
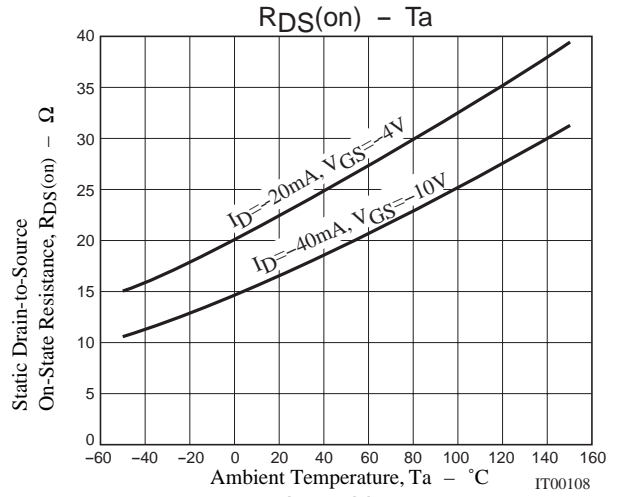
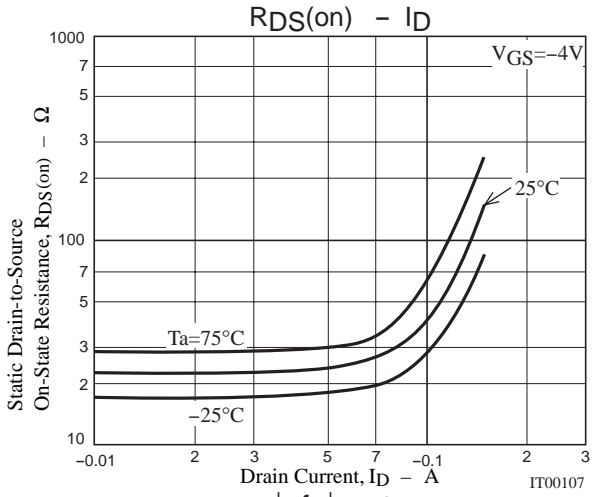
Electrical Connection



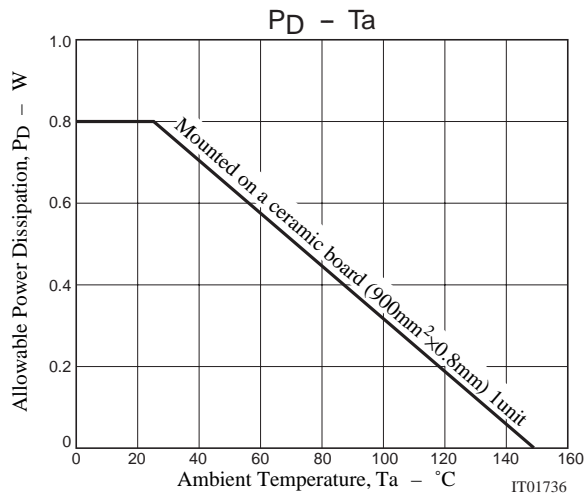
Switching Time Test Circuit



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