



Ultrahigh-Speed Switching Applications

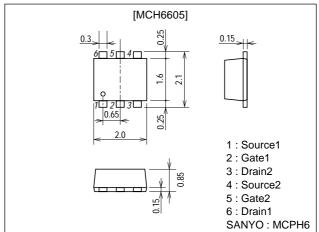
Features

- · Low ON resistance.
- · Ultrahigh-speed swithcing.
- · 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	Α
Drain Current (pulse)	I _{DP}	PW≤10µs, duty cycle≤1%	-0.56	Α
Allowable Power Dissipation	PD	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	Uill
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	μΑ
Gate-to-Source Leakage Current	IGSS	V _{GS} =±16V, V _{DS} =0			±10	μΑ
Cutoff Voltage	V _{GS} (off)	V _{DS} =-10V, I _D =-100μA	-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	$I_D=-20$ mA, $V_{GS}=-4$ V		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 Continued on next page.

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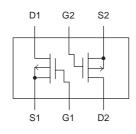
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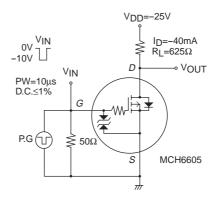
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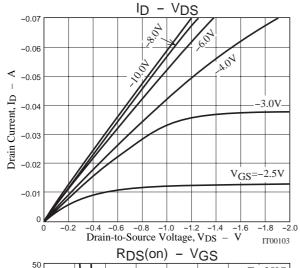
Parameter	Symbol	Conditions	Ratings			Unit
	Symbol		min	typ	max	Ullit
Turn-ON Delay Time	t _d (on)	See specified Test Circuit		13		ns
Rise Time	t _r	See specified Test Circuit		10		ns
Turn-OFF Delay Time	t _d (off)	See specified Test Circuit		100		ns
Fall Time	t _f	See specified Test Circuit		150		ns
Total Gate Charge	Qg	V_{DS} =-10V, V_{GS} =-10V, I_{D} =-70mA		1.32		nC
Gate-to-Source Charge	Qgs	V _{DS} =-10V, V _{GS} =-10V, I _D =-70mA		0.17		nC
Gate-to-Drain "Miller" Charge	Qgd	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

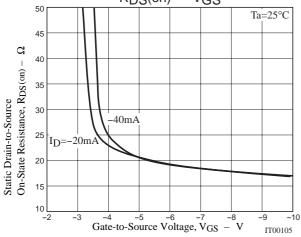
Electrical Connection

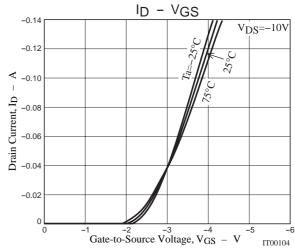
Switching Time Test Circuit

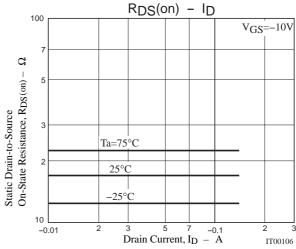




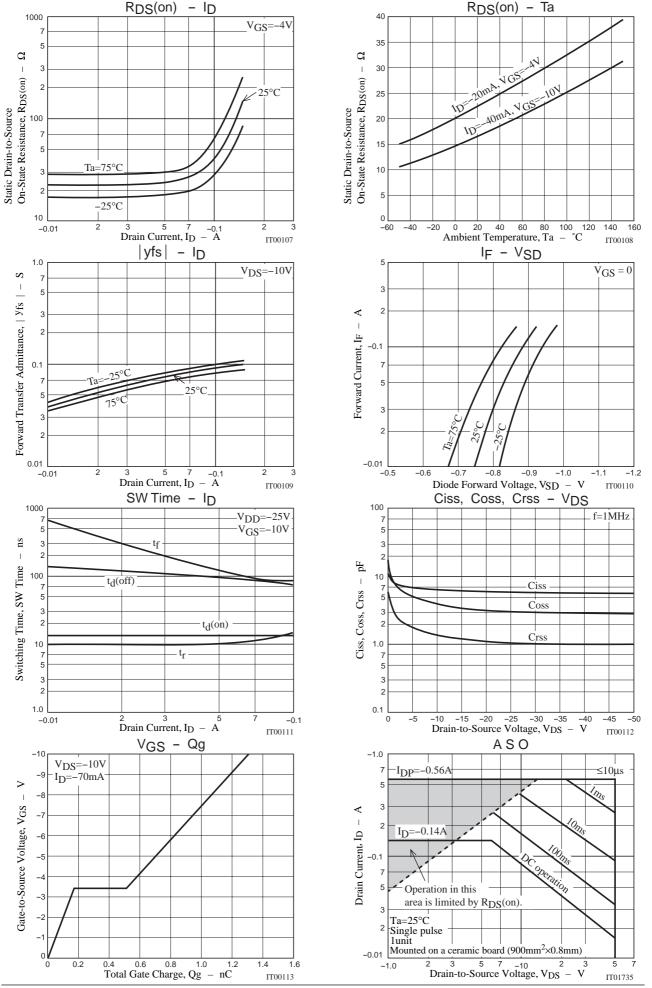




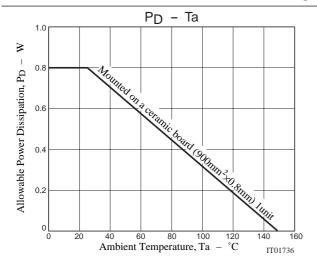




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