



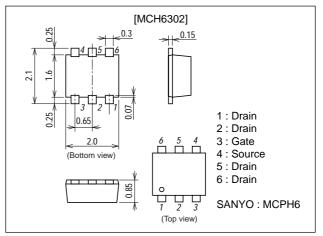
Ultrahigh-Speed Switching Applications

Features

- · Low ON-resistance.
- · Ultrahigh-speed switching.
- 4V drive.

Package Dimensions

unit : mm 2193A



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		-3	Α
Drain Current (Pulse)	IDP	PW≤10μs, duty cycle≤1%	-12	Α
Allowable Power Dissipation	PD	Mounted on a ceramic board (900mm ² X0.8mm)	1.5	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	I _D =-1mA, V _G S=0	-30			V
Zero-Gate Voltage Drain Current	IDSS	V _{DS} =-30V, V _{GS} =0			-1	μΑ
Gate-to-Source Leakage Current	IGSS	V _{GS} =±16V, V _{DS} =0			±10	μΑ
Cutoff Voltage	VGS(off)	V _{DS} =-10V, I _D =-1mA	-1.0		-2.4	V
Forward Transfer Admittance	yfs	V _{DS} =-10V, I _D =-1.5A	1.9	2.8		S
Static Drain-to-Source On-State Resistance	R _{DS} (on)1	I _D =-1.5A, V _G S=-10V		85	110	mΩ
	R _{DS} (on)2	I _D =-0.7A, V _G S=-4V		150	210	mΩ

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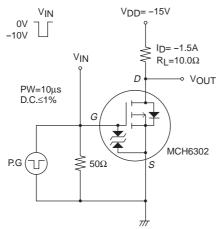
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Offic
Input Capacitance	Ciss	V _{DS} =-10V, f=1MHz		370		pF
Output Capacitance	Coss	V _{DS} =-10V, f=1MHz		100		pF
Reverse Transfer Capacitance	Crss	V _{DS} =-10V, f=1MHz		65		pF
Turn-ON Delay Time	t _d (on)	See specified Test Circuit.		8		ns
Rise Time	t _r	See specified Test Circuit.		20		ns
Turn-OFF Delay Time	t _d (off)	See specified Test Circuit.		32		ns
Fall Time	tf	See specified Test Circuit.		31		ns
Total Gate Charge	Qg	V _{DS} =-10V, V _{GS} =-10V, I _D =-3.0A		8.6		nC
Gate-to-Source Charge	Qgs	V _{DS} =-10V, V _{GS} =-10V, I _D =-3.0A		1.2		nC
Gate-to-Drain "Miller" Charge	Qgd	V _{DS} =-10V, V _{GS} =-10V, I _D =-3.0A		1.8		nC
Diode Forward Voltage	V _{SD}	IS=-3.0A, VGS=0		-0.85	-1.5	V

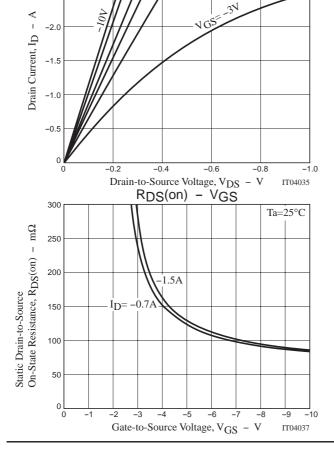
Switching Time Test Circuit

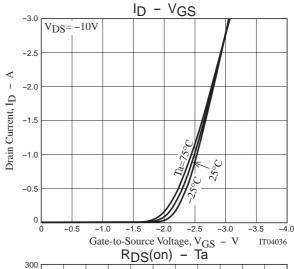
-3.0

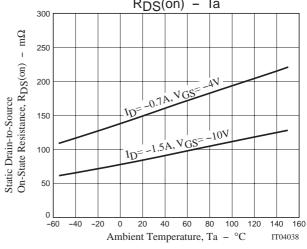
-2.5

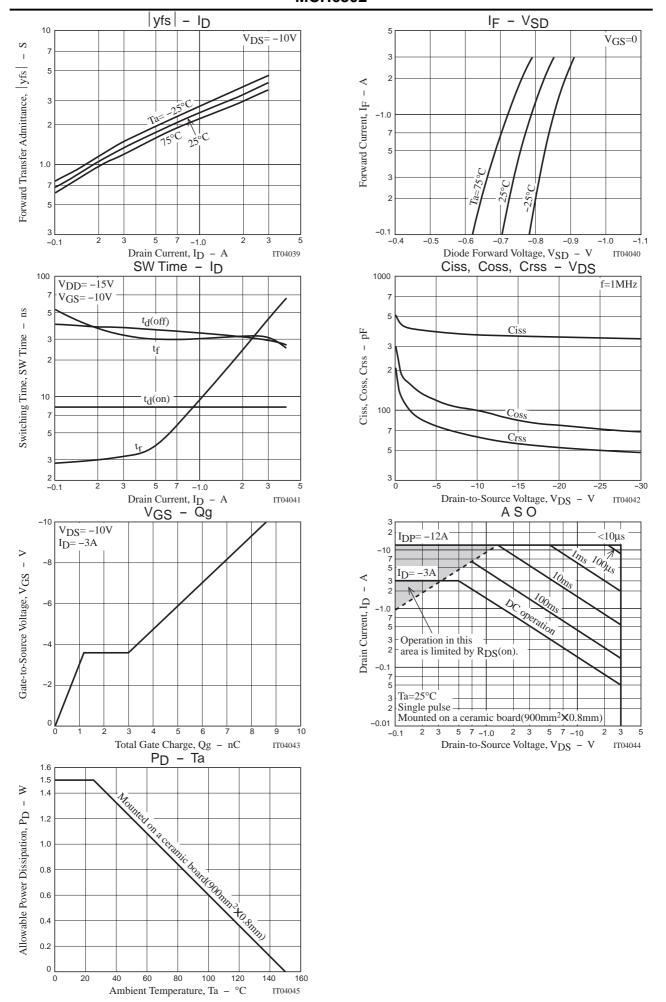


ID - VDS









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