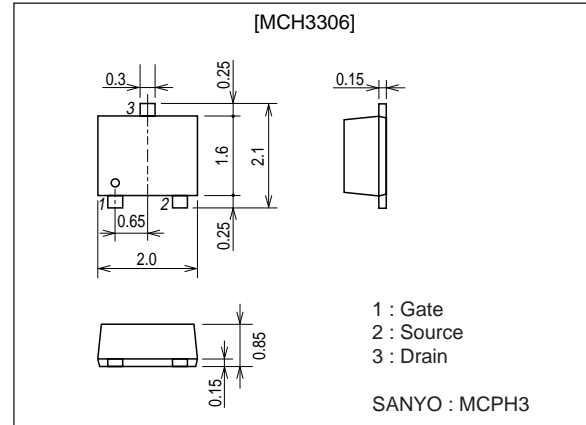


**MCH3306****Ultrahigh-Speed Switching Applications****Features**

- Low ON-resistance.
- Ultrahigh-speed switching.
- 1.8V drive.

Package Dimensionsunit : mm
2167**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		-2	A
Drain Current (Pulse)	I _{DP}	PW≤10μs, duty cycle≤1%	-8	A
Allowable Power Dissipation	P _D	Mounted on a ceramic board (900mm²X0.8mm)	1	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			-10	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 =-1mA	-0.3		-1.0	V
Forward Transfer Admittance	y _{fs}	V _{DS} =-10V, I _D =-1A	2.1	3.0		S
Static Drain-to-Source On-State Resistance	R _{DS(on)1}	I _D =-1A, V _{GS} =-4V		110	145	mΩ
	R _{DS(on)2}	I _D =-0.5A, V _{GS} =-2.5V		140	200	mΩ
	R _{DS(on)3}	I _D =-0.1A, V _{GS} =-1.8V		180	260	mΩ

Marking : JF

Continued on next page.

■ Any and all SANYO products described or contained herein do not have specifications that can handle applications that require extremely high levels of reliability, such as life-support systems, aircraft's control systems, or other applications whose failure can be reasonably expected to result in serious physical and/or material damage. Consult with your SANYO representative nearest you before using any SANYO products described or contained herein in such applications.

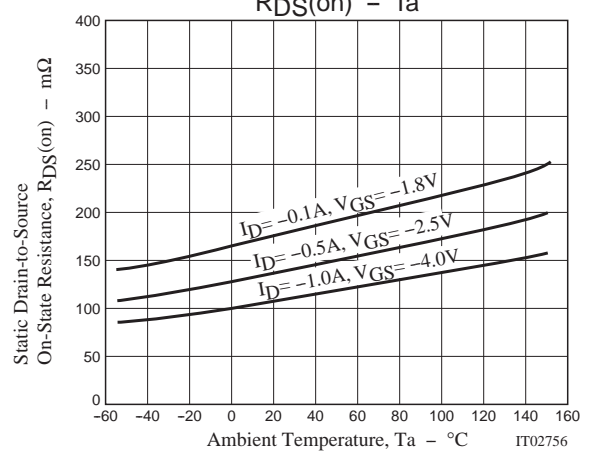
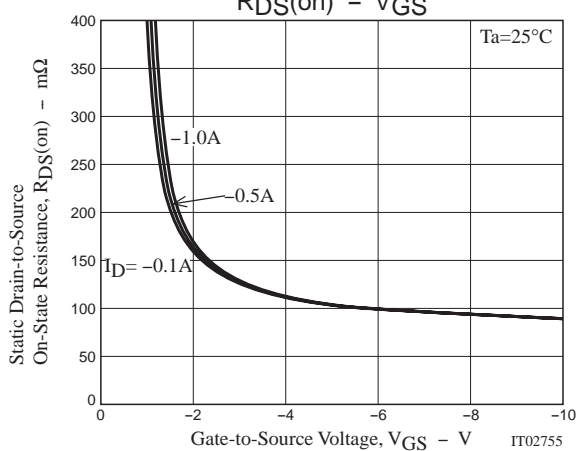
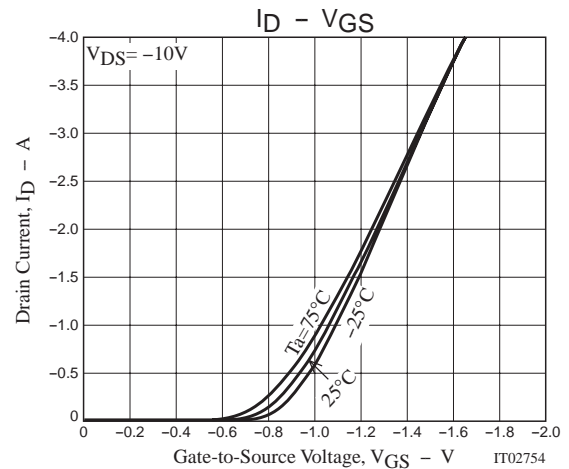
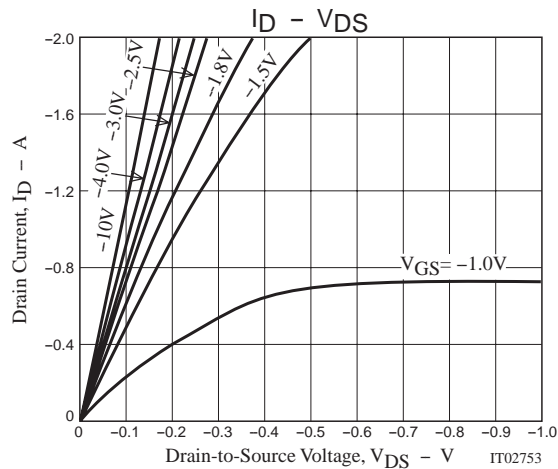
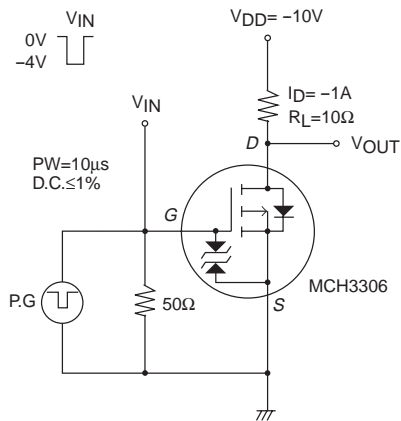
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MCH3306

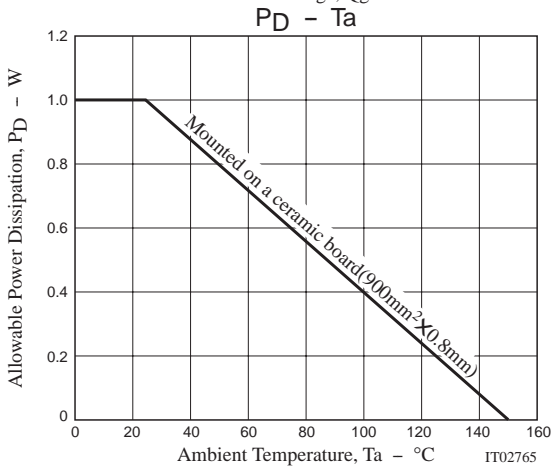
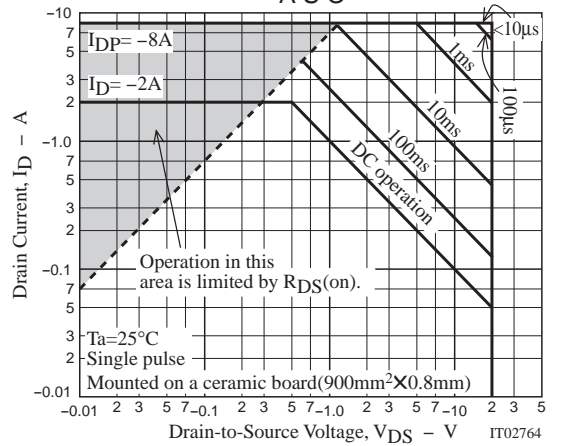
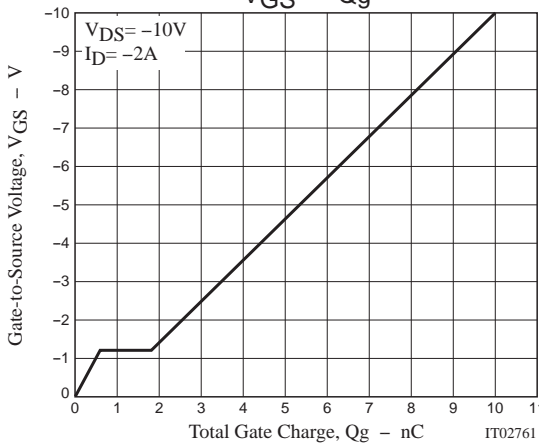
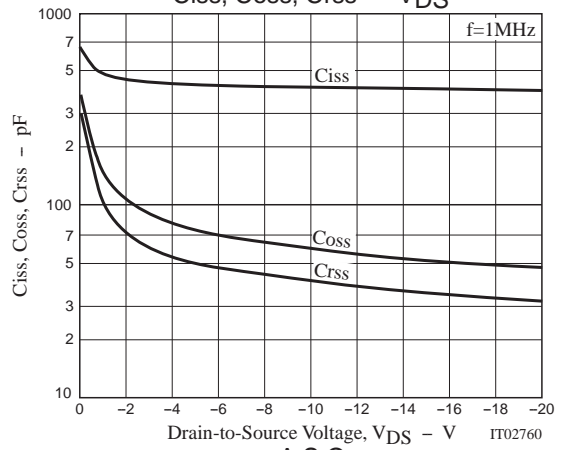
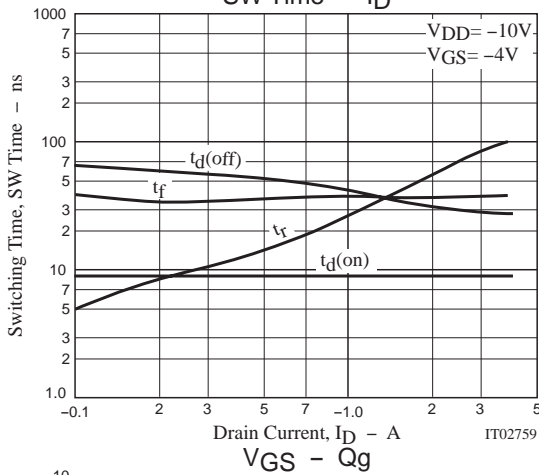
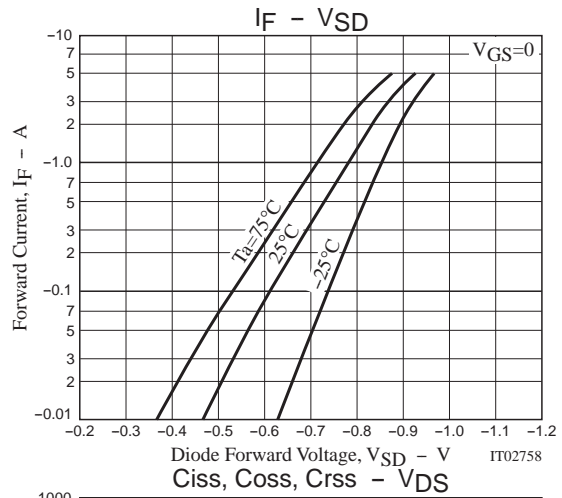
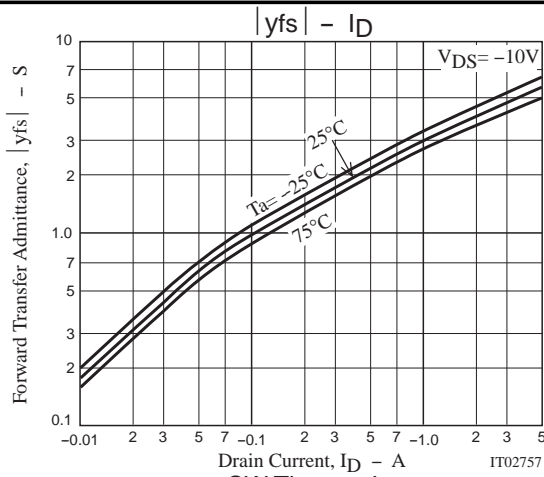
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Input Capacitance	Ciss	$V_{DS}=-10V, f=1MHz$		410		pF
Output Capacitance	Coss	$V_{DS}=-10V, f=1MHz$		60		pF
Reverse Transfer Capacitance	Crss	$V_{DS}=-10V, f=1MHz$		40		pF
Turn-ON Delay Time	$t_d(on)$	See specified Test Circuit		9		ns
Rise Time	t_r	See specified Test Circuit		27		ns
Turn-OFF Delay Time	$t_d(off)$	See specified Test Circuit		42		ns
Fall Time	t_f	See specified Test Circuit		38		ns
Total Gate Charge	Qg	$V_{DS}=-10V, V_{GS}=-10V, I_D=-2A$		10		nC
Gate-to-Source Charge	Qgs	$V_{DS}=-10V, V_{GS}=-10V, I_D=-2A$		0.6		nC
Gate-to-Drain "Miller" Charge	Qgd	$V_{DS}=-10V, V_{GS}=-10V, I_D=-2A$		1.2		nC
Diode Forward Voltage	V_{SD}	$I_S=-2A, V_{GS}=0$		-0.88	-1.2	V

Switching Time Test Circuit



MCH3306



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