



CPH6603

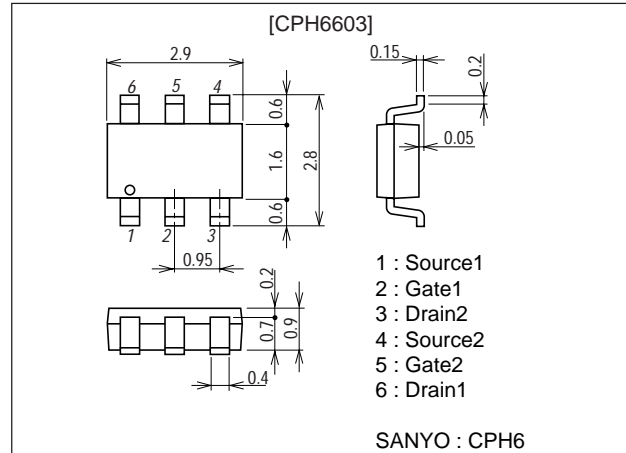
Ultrahigh-Speed Switching Applications

Features

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

Package Dimensions

unit : mm
2202



Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DSS}		-30	V
Gate-to-Source Voltage	V_{GSS}		± 20	V
Drain Current (DC)	I_D		-1.5	A
Drain Current (Pulse)	I_{DP}	$PW \leq 10\mu s$, duty cycle $\leq 1\%$	-6.0	A
Allowable Power Dissipation	P_D	Mounted on a ceramic board (900mm ² X0.8mm)1unit	0.9	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	$V_{(BR)DSS}$	$I_D = -1mA$, $V_{GS} = 0$	-30			V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS} = -30V$, $V_{GS} = 0$			-1	μA
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS} = \pm 16V$, $V_{DS} = 0$			± 10	μA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = -10V$, $I_D = -1mA$	-1.2		-2.6	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS} = -10V$, $I_D = -0.8A$	1.0	1.5		S
Static Drain-to-Source On-State Resistance	$R_{DS(on)1}$	$I_D = -0.8A$, $V_{GS} = -10V$		190	250	$m\Omega$
	$R_{DS(on)2}$	$I_D = -0.4A$, $V_{GS} = -4V$		330	460	$m\Omega$

Marking : FN

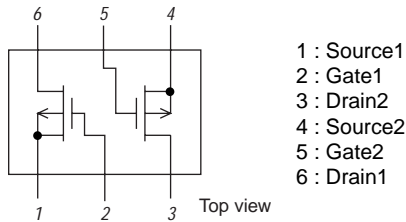
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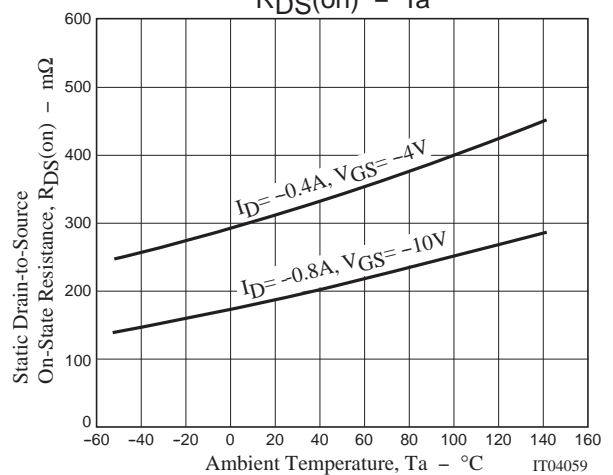
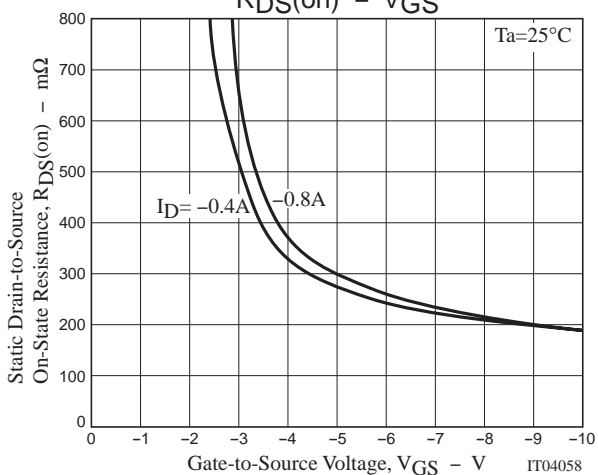
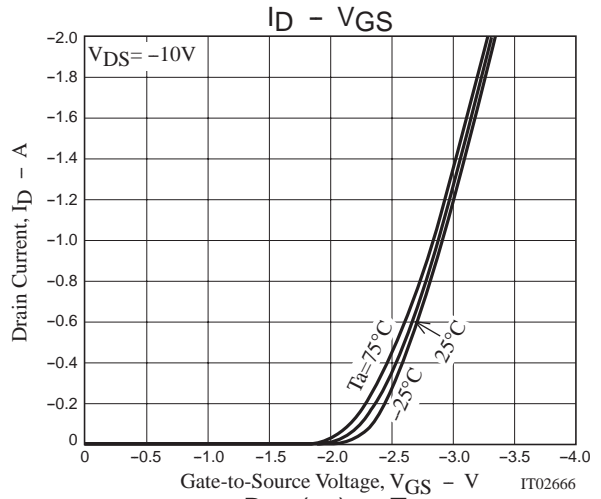
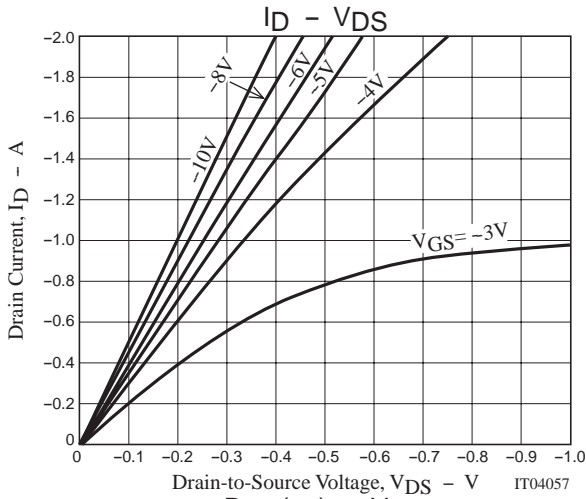
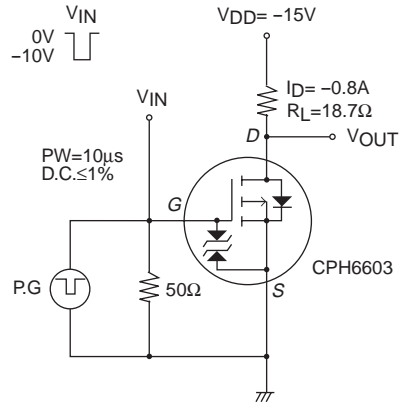
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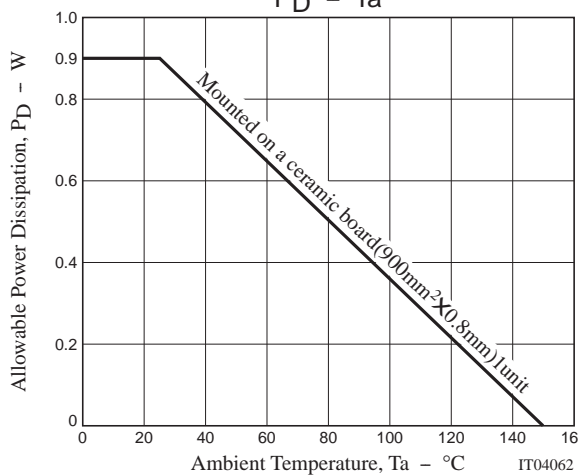
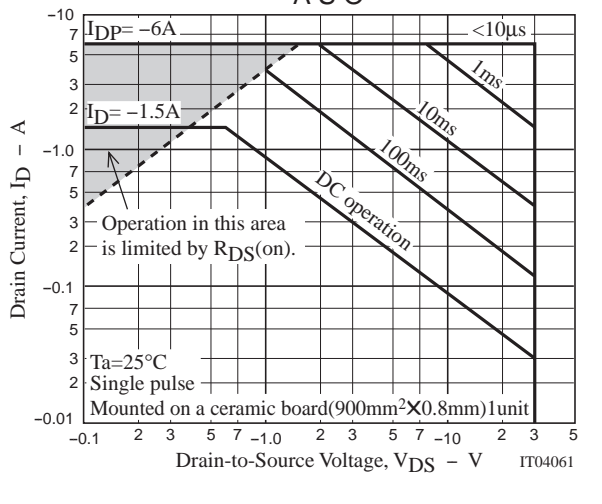
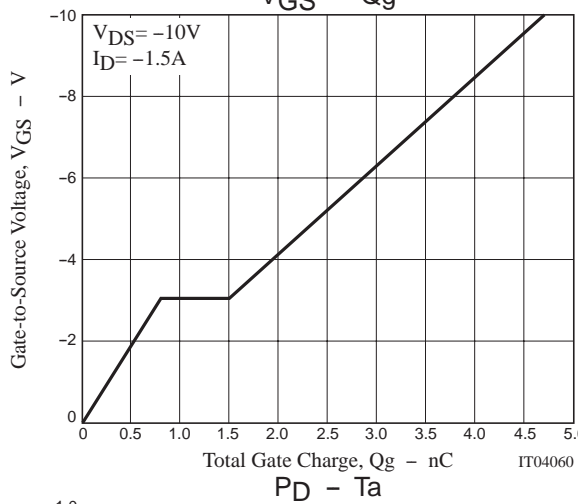
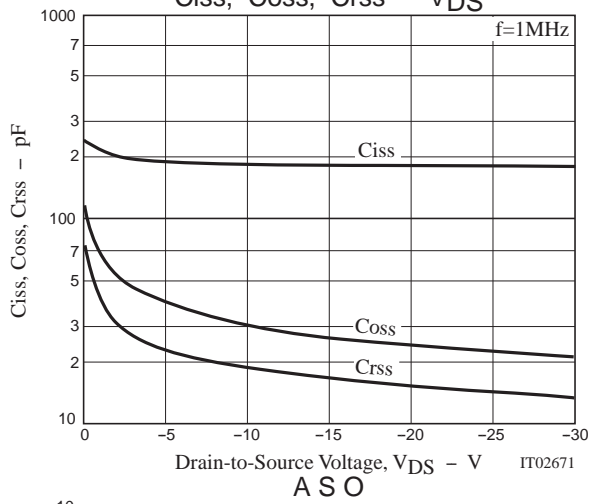
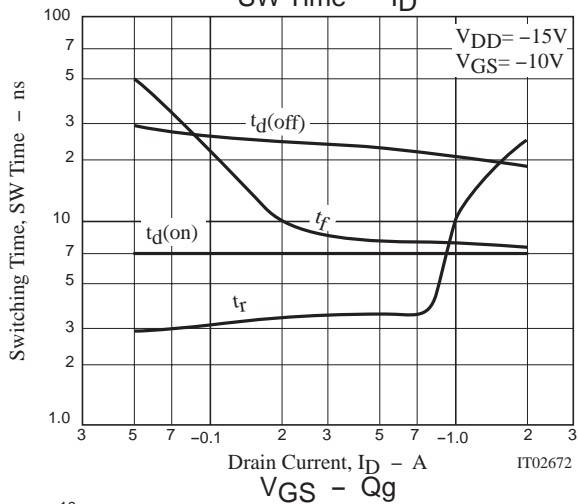
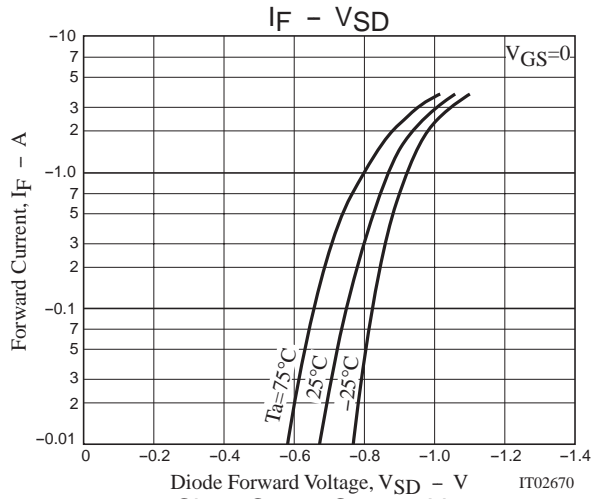
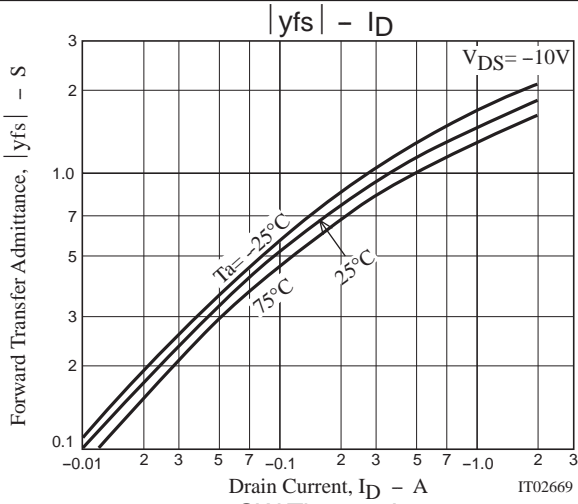
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Input Capacitance	Ciss	VDS=-10V, f=1MHz		185		pF
Output Capacitance	Coss	VDS=-10V, f=1MHz		30		pF
Reverse Transfer Capacitance	Crss	VDS=-10V, f=1MHz		20		pF
Turn-ON Delay Time	td(on)	See specified Test Circuit.		7		ns
Rise Time	tr	See specified Test Circuit.		4		ns
Turn-OFF Delay Time	td(off)	See specified Test Circuit.		22		ns
Fall Time	tf	See specified Test Circuit.		8		ns
Total Gate Charge	Qg	VDS=-10V, VGS=-10V, ID=-1.5A		4.7		nC
Gate-to-Source Charge	Qgs	VDS=-10V, VGS=-10V, ID=-1.5A		0.8		nC
Gate-to-Drain "Miller" Charge	Qgd	VDS=-10V, VGS=-10V, ID=-1.5A		0.7		nC
Diode Forward Voltage	VSD	IS=-1.5A, VGS=0		-0.88	-1.5	V

Electrical Connection



Switching Time Test Circuit





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