

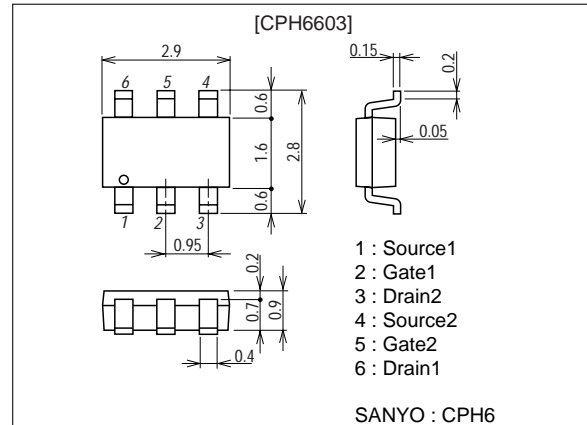
SANYO**CPH6603****Ultrahigh-Speed Switching Applications****Features**

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

Package Dimensions

unit : mm

2202

**Specifications****Absolute Maximum Ratings** at $T_a=25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DS}		-30	V
Gate-to-Source Voltage	V_{GS}		± 20	V
Drain Current (DC)	I_D		-1.5	A
Drain Current (Pulse)	I_{DP}	$PW \leq 10\mu\text{s}$, 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	$^\circ\text{C}$
Storage Temperature	T_{stg}		-55 to +150	$^\circ\text{C}$

Electrical Characteristics at $T_a=25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D=-1\text{mA}$, $V_{GS}=0$	-30			V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS}=-30\text{V}$, $V_{GS}=0$			-1	μA
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS}=\pm 16\text{V}$, $V_{DS}=0$			± 10	μA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS}=-10\text{V}$, $I_D=-1\text{mA}$	-1.2		-2.6	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS}=-10\text{V}$, $I_D=-0.8\text{A}$	1.0	1.5		S
Static Drain-to-Source On-State Resistance	$R_{DS(on)1}$	$I_D=-0.8\text{A}$, $V_{GS}=-10\text{V}$		190	250	$\text{m}\Omega$
	$R_{DS(on)2}$	$I_D=-0.4\text{A}$, $V_{GS}=-4\text{V}$		330	460	$\text{m}\Omega$

Marking : FN

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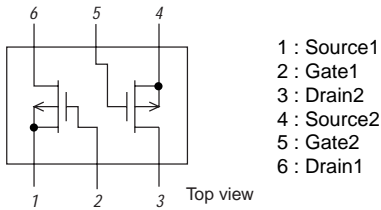
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CPH6603

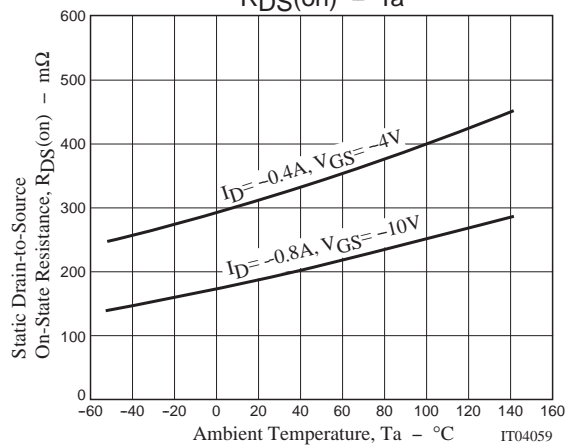
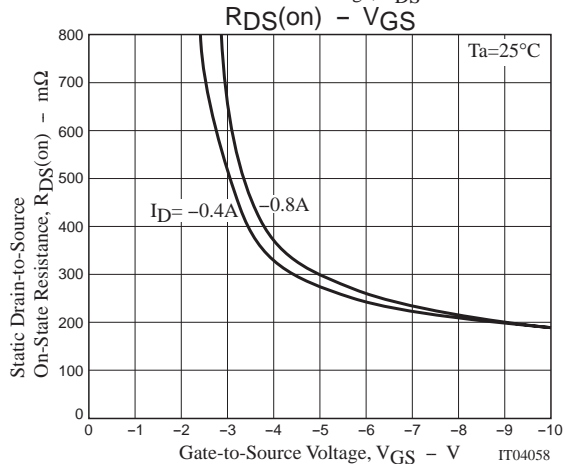
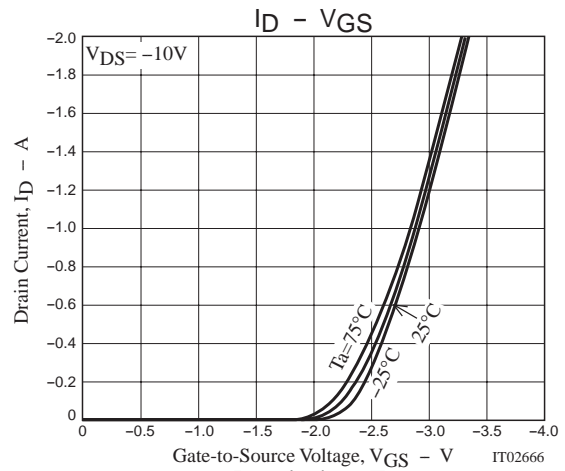
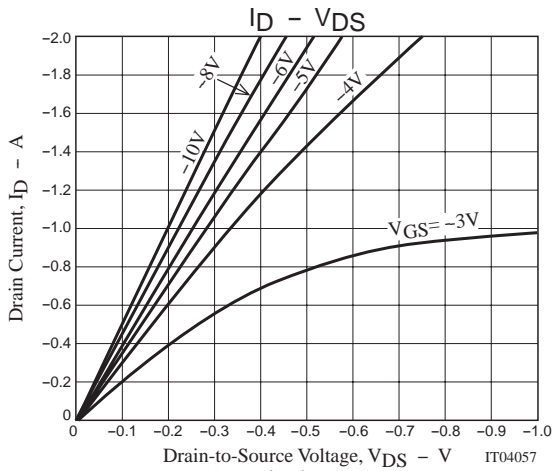
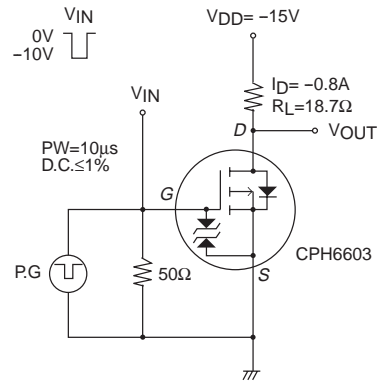
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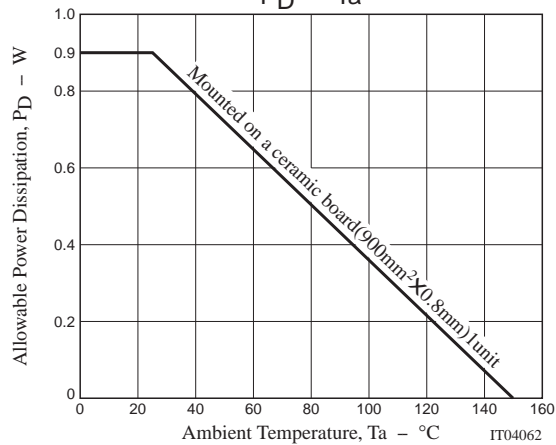
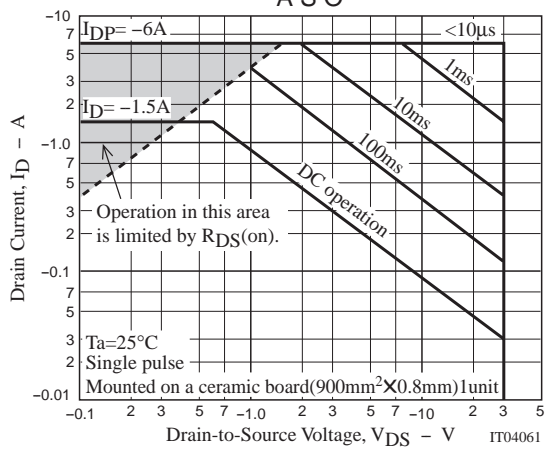
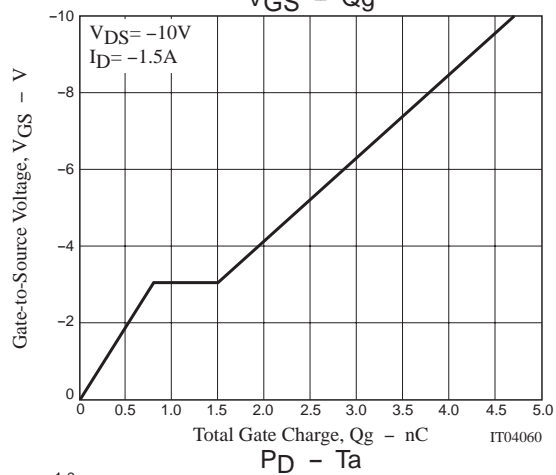
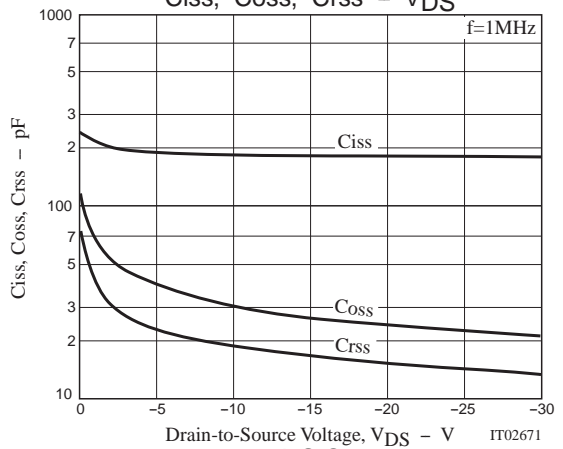
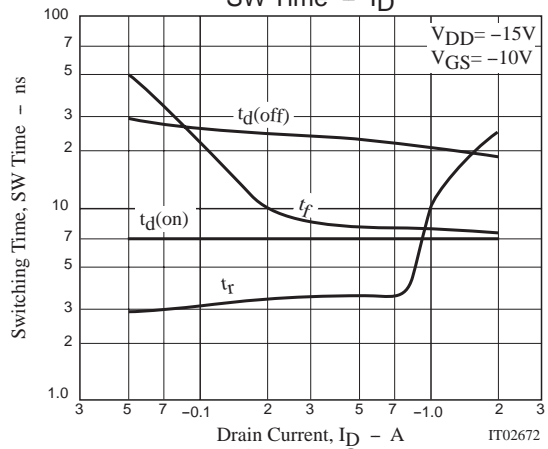
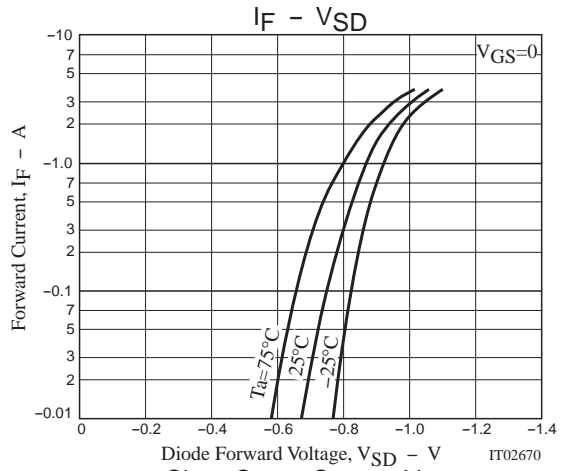
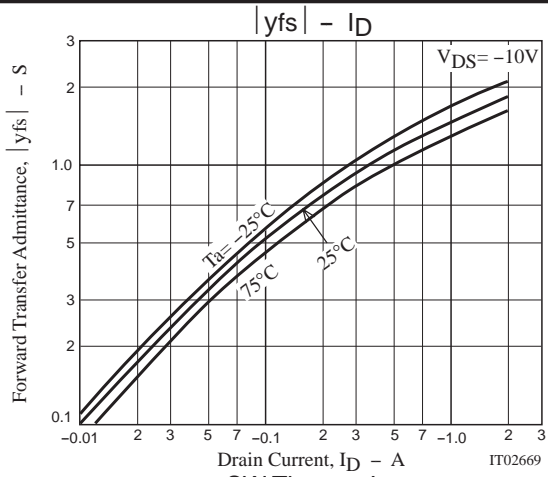
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Input Capacitance	Ciss	V _{DS} =-10V, f=1MHz		185		pF
Output Capacitance	Coss	V _{DS} =-10V, f=1MHz		30		pF
Reverse Transfer Capacitance	Crss	V _{DS} =-10V, f=1MHz		20		pF
Turn-ON Delay Time	t _{d(on)}	See specified Test Circuit.		7		ns
Rise Time	t _r	See specified Test Circuit.		4		ns
Turn-OFF Delay Time	t _{d(off)}	See specified Test Circuit.		22		ns
Fall Time	t _f	See specified Test Circuit.		8		ns
Total Gate Charge	Q _g	V _{DS} =-10V, V _{GS} =-10V, I _D =-1.5A		4.7		nC
Gate-to-Source Charge	Q _{gs}	V _{DS} =-10V, V _{GS} =-10V, I _D =-1.5A		0.8		nC
Gate-to-Drain "Miller" Charge	Q _{gd}	V _{DS} =-10V, V _{GS} =-10V, I _D =-1.5A		0.7		nC
Diode Forward Voltage	V _{SD}	I _S =-1.5A, V _{GS} =0		-0.88	-1.5	V

Electrical Connection



Switching Time Test Circuit





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