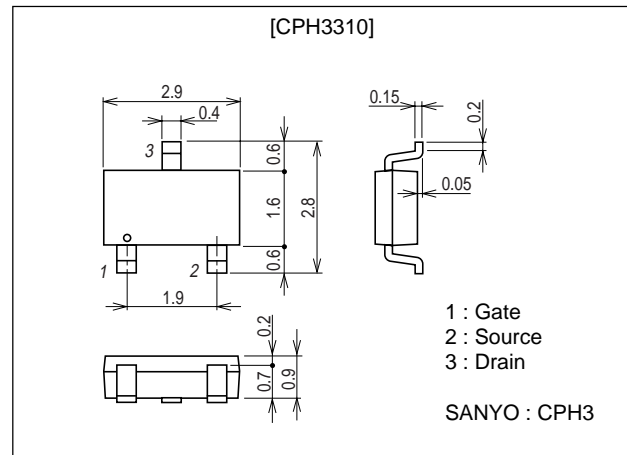


**CPH3310****Ultrahigh-Speed Switching Applications****Features**

- Low ON-resistance.
- Ultrahigh-speed switching.
- 2.5V drive.

Package Dimensionsunit : mm
2152A**Specifications****Absolute Maximum Ratings** at $T_a=25^\circ\text{C}$

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		-1.6	A
Drain Current (Pulse)	I_{DP}	$PW \leq 10\mu\text{s}$, duty cycle $\leq 1\%$	-6.4	A
Allowable Power Dissipation	P_D	Mounted on a ceramic board (900mm ² X0.8mm)	1	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	$V_{(BR)DSS}$	$I_D = -1\text{mA}$, $V_{GS} = 0$	-20			V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS} = -20\text{V}$, $V_{GS} = 0$			-1	μA
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS} = \pm 8\text{V}$, $V_{DS} = 0$			± 10	μA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = -10\text{V}$, $I_D = -1\text{mA}$	-0.4		-1.4	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS} = -10\text{V}$, $I_D = -0.8\text{A}$	1.6	2.3		S
Static Drain-to-Source On-State Resistance	$R_{DS(on)1}$	$I_D = -0.8\text{A}$, $V_{GS} = -4\text{V}$		175	230	$\text{m}\Omega$
	$R_{DS(on)2}$	$I_D = -0.4\text{A}$, $V_{GS} = -2.5\text{V}$		260	360	$\text{m}\Omega$

Marking : JK

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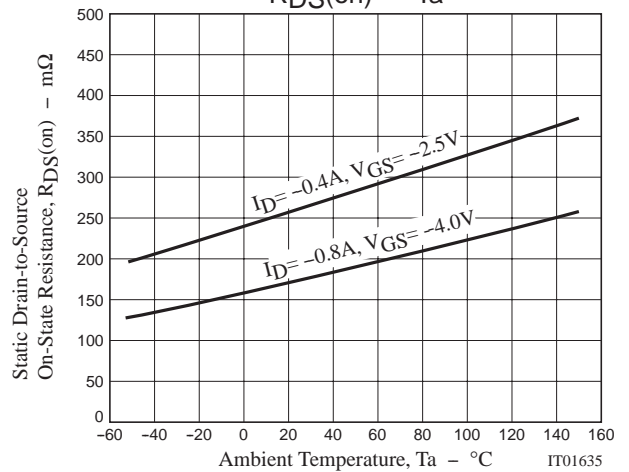
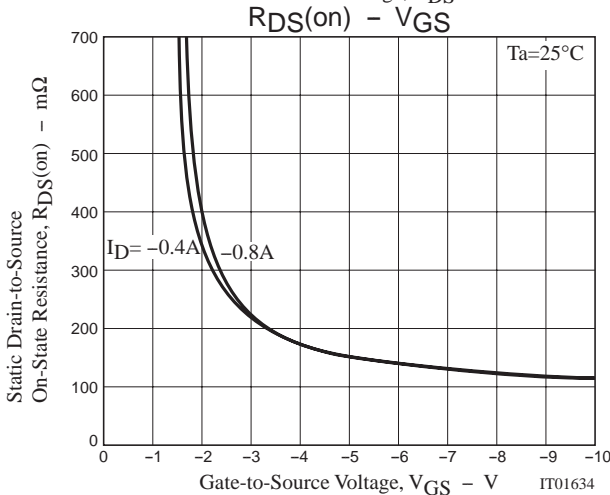
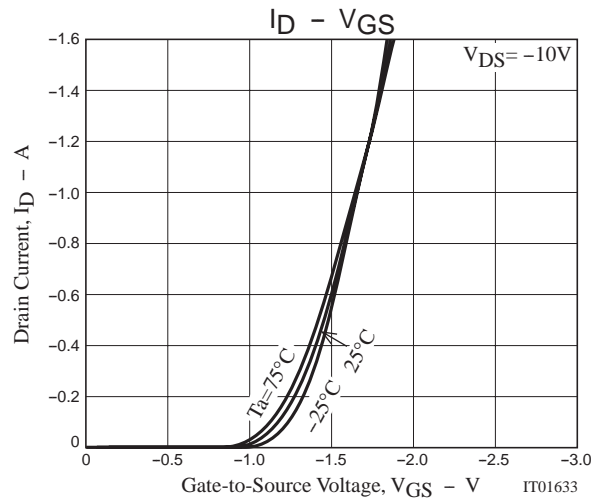
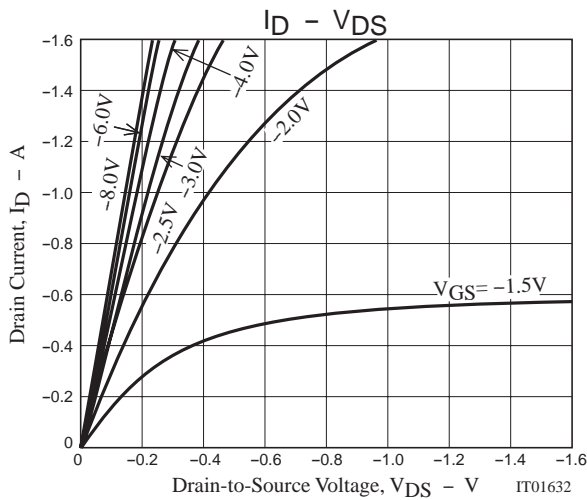
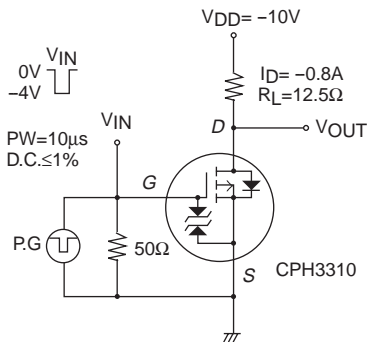
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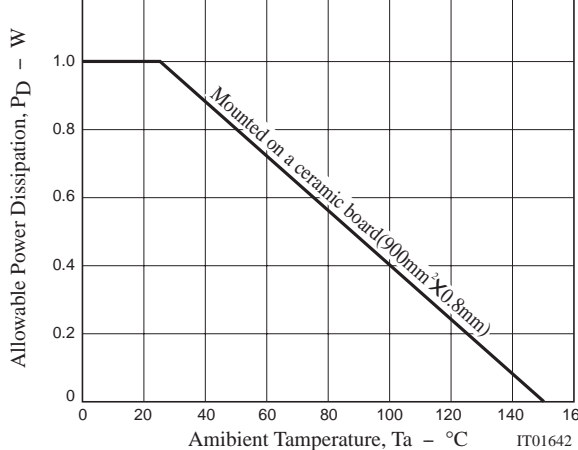
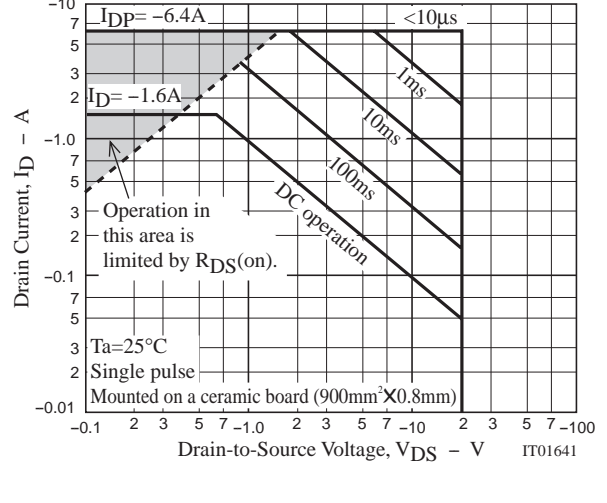
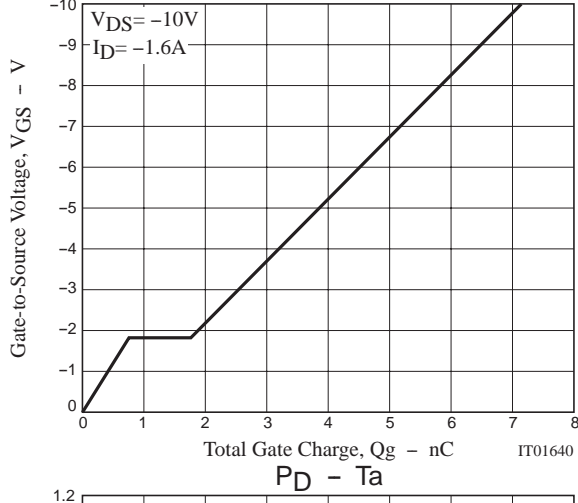
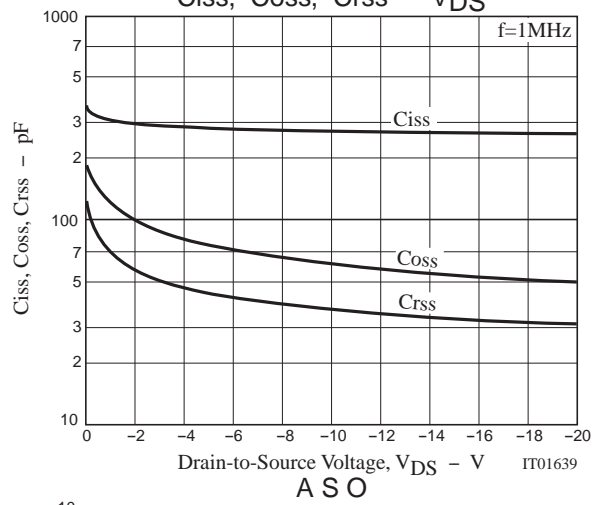
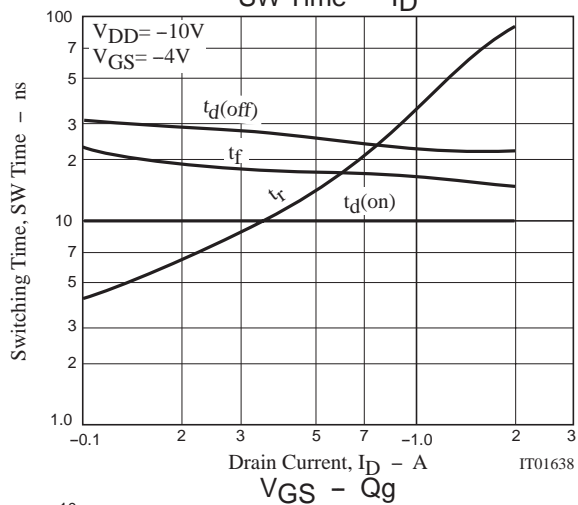
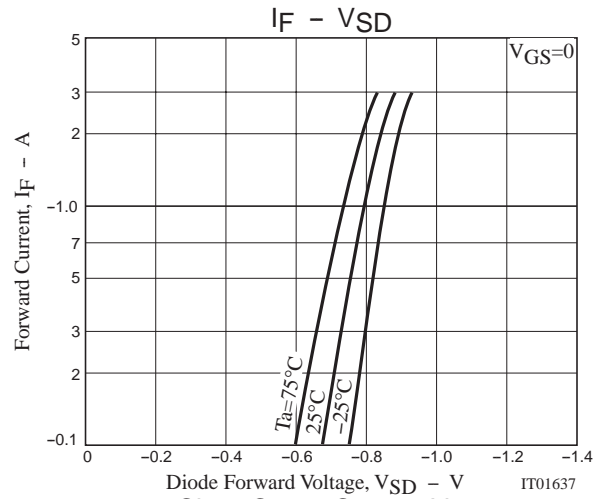
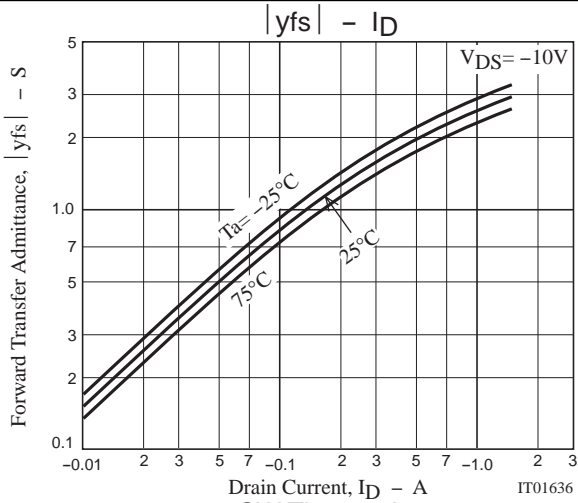
CPH3310

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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Input Capacitance	Ciss	V _{DS} =-10V, f=1MHz		275		pF
Output Capacitance	Coss	V _{DS} =-10V, f=1MHz		60		pF
Reverse Transfer Capacitance	Crss	V _{DS} =-10V, f=1MHz		35		pF
Turn-ON Delay Time	t _{d(on)}	See specified Test Circuit		10		ns
Rise Time	t _r	See specified Test Circuit		25		ns
Turn-OFF Delay Time	t _{d(off)}	See specified Test Circuit		24		ns
Fall Time	t _f	See specified Test Circuit		17		ns
Total Gate Charge	Q _g	V _{DS} =-10V, V _{GS} =-10V, I _D =-1.6A		7.2		nC
Gate-to-Source Charge	Q _{gs}	V _{DS} =-10V, V _{GS} =-10V, I _D =-1.6A		0.8		nC
Gate-to-Drain "Miller" Charge	Q _{gd}	V _{DS} =-10V, V _{GS} =-10V, I _D =-1.6A		0.9		nC
Diode Forward Voltage	V _{SD}	I _S =-1.6A, V _{GS} =0	-0.83		-1.5	V

Switching Time Test Circuit





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