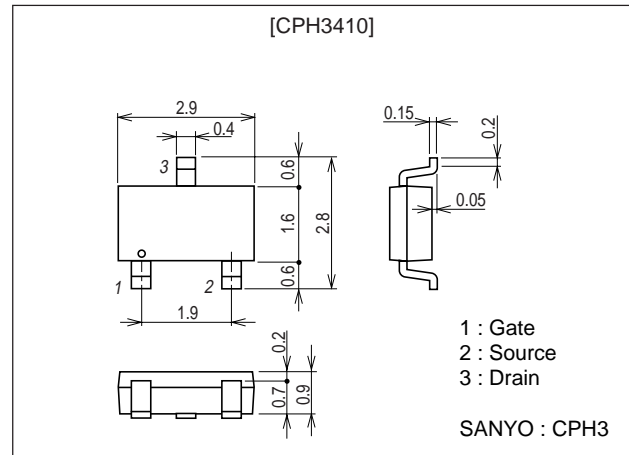


**CPH3410****Ultrahigh-Speed Switching Applications****Features**

- 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		2.5	A
Drain Current (Pulse)	I_{DP}	$PW \leq 10\mu\text{s}$, duty cycle $\leq 1\%$	10	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		1.3	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS}=10\text{V}$, $I_D=1.2\text{A}$	2.8	4		S
Static Drain-to-Source On-State Resistance	$R_{DS(on)1}$	$I_D=1.2\text{A}$, $V_{GS}=4\text{V}$		80	105	$\text{m}\Omega$
	$R_{DS(on)2}$	$I_D=0.6\text{A}$, $V_{GS}=2.5\text{V}$		110	155	$\text{m}\Omega$

Marking : KK

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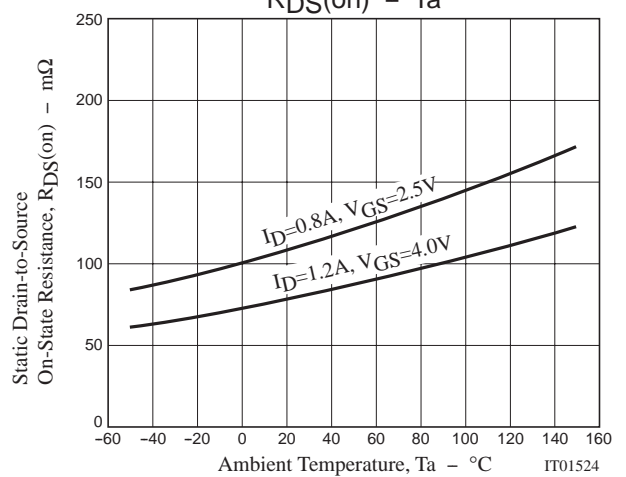
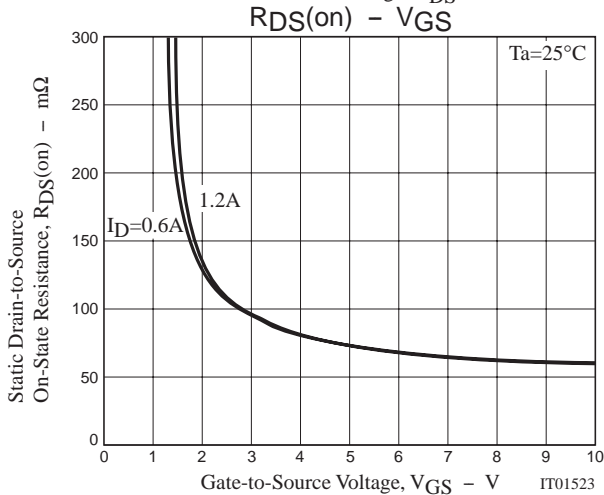
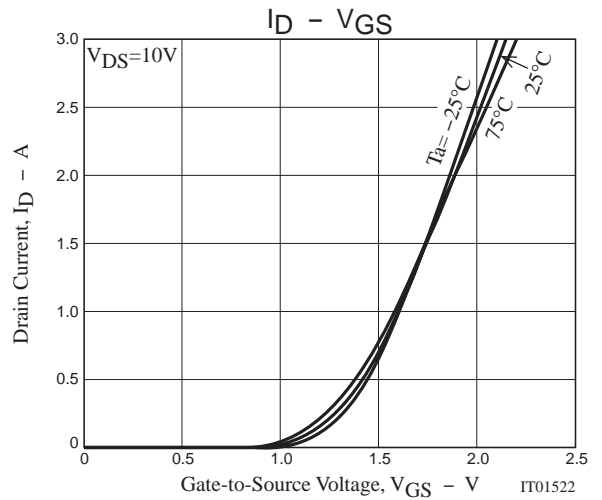
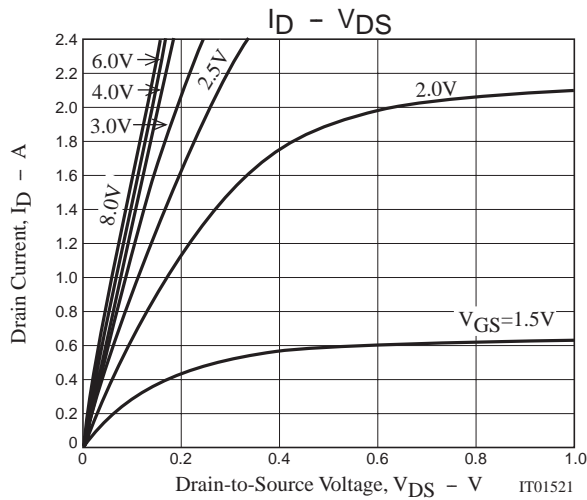
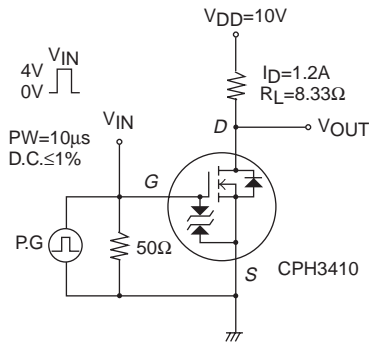
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- SANYO assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all SANYO products described or contained herein.

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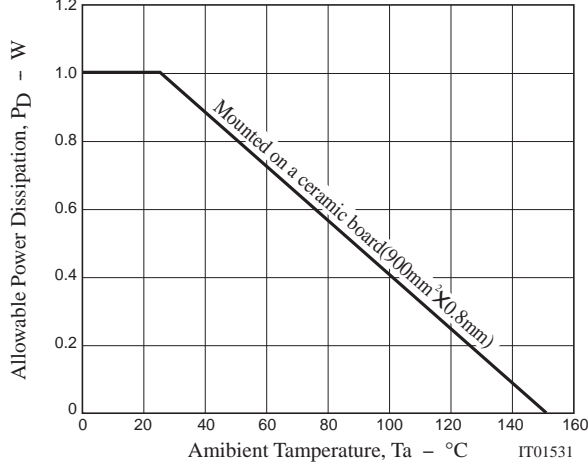
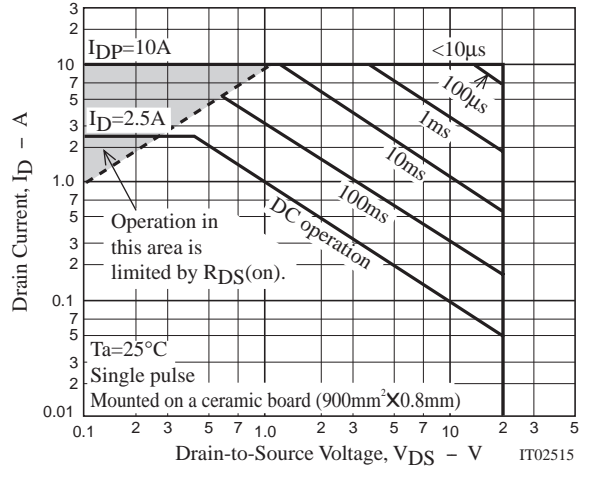
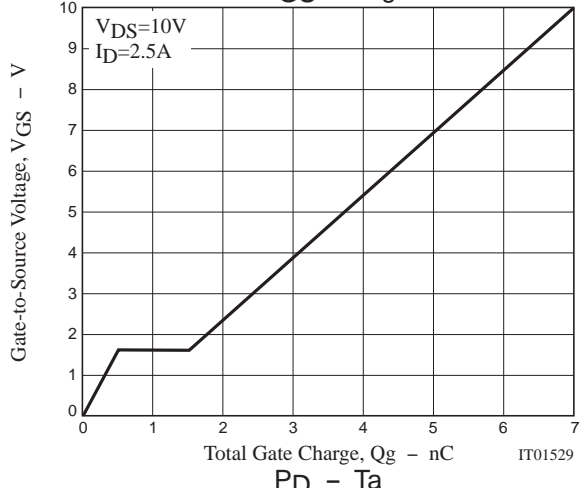
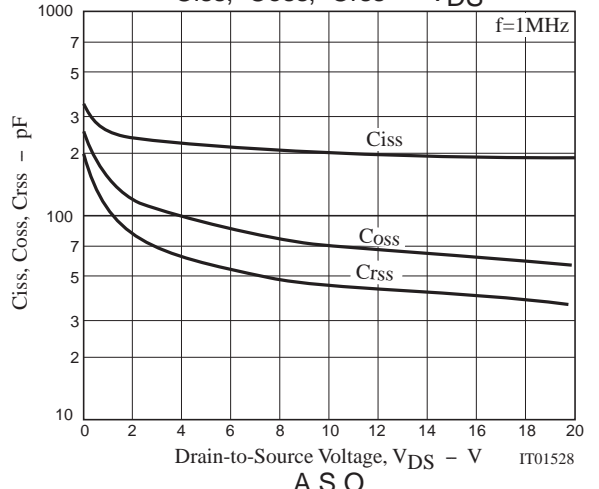
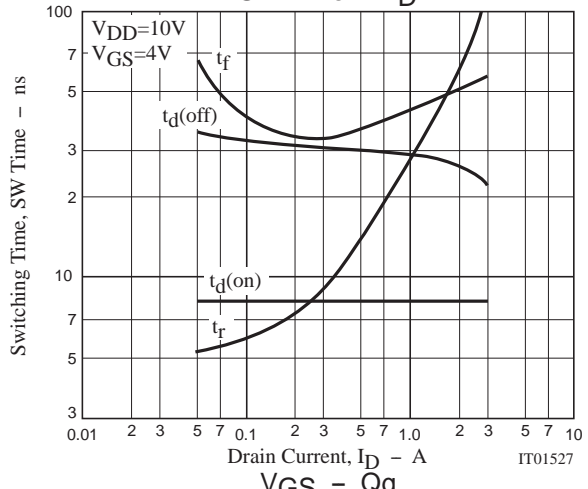
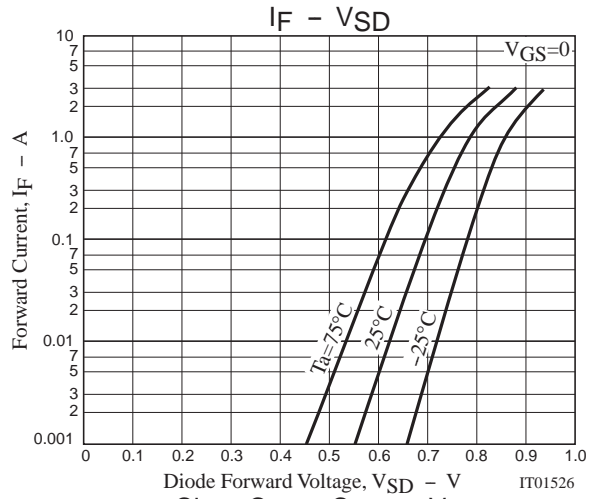
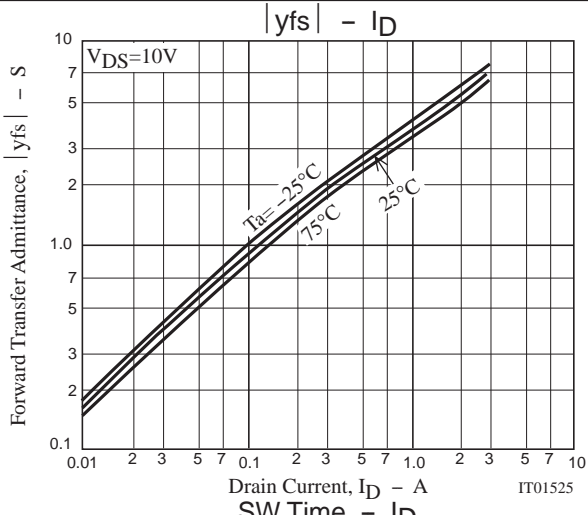
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Input Capacitance	Ciss	V _{DS} =10V, f=1MHz		200		pF
Output Capacitance	Coss	V _{DS} =10V, f=1MHz		70		pF
Reverse Transfer Capacitance	Crss	V _{DS} =10V, f=1MHz		45		pF
Turn-ON Delay Time	t _{d(on)}	See specified Test Circuit		8		ns
Rise Time	t _r	See specified Test Circuit		30		ns
Turn-OFF Delay Time	t _{d(off)}	See specified Test Circuit		28		ns
Fall Time	t _f	See specified Test Circuit		42		ns
Total Gate Charge	Q _g	V _{DS} =10V, V _{GS} =10V, I _D =2.5A		7		nC
Gate-to-Source Charge	Q _{gs}	V _{DS} =10V, V _{GS} =10V, I _D =2.5A		0.5		nC
Gate-to-Drain "Miller" Charge	Q _{gd}	V _{DS} =10V, V _{GS} =10V, I _D =2.5A		1		nC
Diode Forward Voltage	V _{SD}	I _S =2.5A, V _{GS} =0	0.85	1.2		V

Switching Time Test Circuit



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