



CPH6328

Ultrahigh-Speed Switching Applications

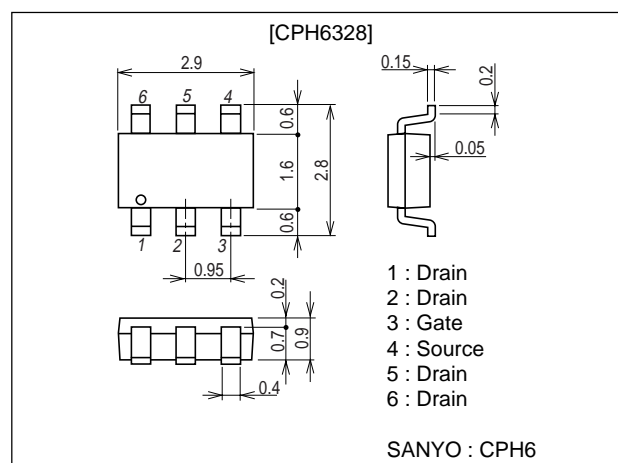
Features

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

Package Dimensions

unit : mm

2151A



Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DSS}		-100	V
Gate-to-Source Voltage	V_{GSS}		± 20	V
Drain Current (DC)	I_D		-1.6	A
Drain Current (Pulse)	I_{DP}	$PW \leq 10\mu s$, duty cycle $\leq 1\%$	-6.4	A
Allowable Power Dissipation	P_D	Mounted on a ceramic board (900mm ² X0.8mm)	1.6	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	$V_{(BR)DSS}$	$I_D = -1mA$, $V_{GS} = 0$	-100			V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS} = -100V$, $V_{GS} = 0$			-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} $	$V_{DS} = -10V$, $I_D = -0.8A$	1.5	2.3		S
Static Drain-to-Source On-State Resistance	$R_{DS(on)1}$	$I_D = -0.8A$, $V_{GS} = -10V$		410	530	$m\Omega$
	$R_{DS(on)2}$	$I_D = -0.8A$, $V_{GS} = -4V$		530	730	$m\Omega$

Marking : YE

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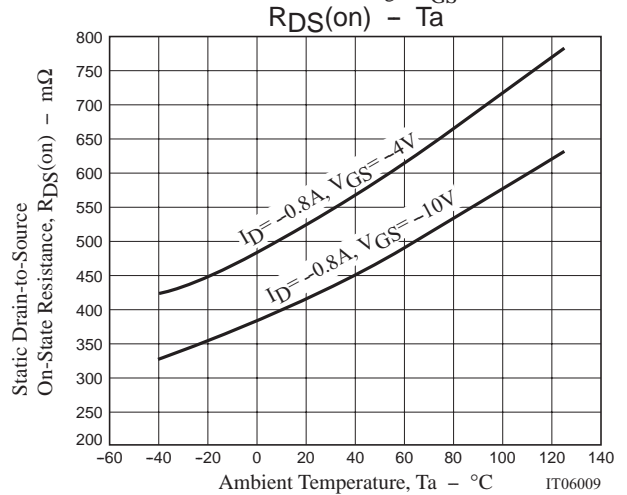
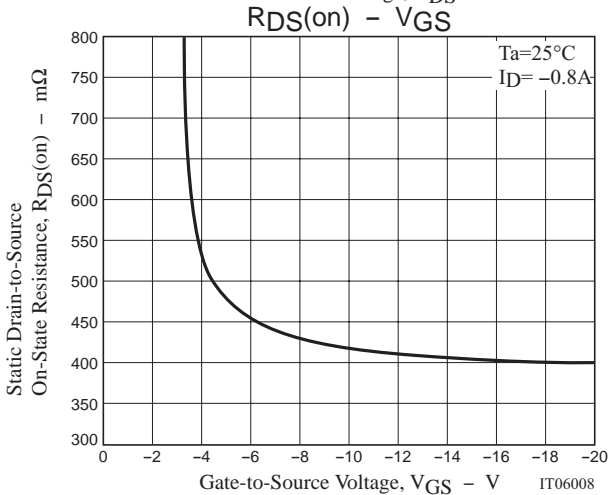
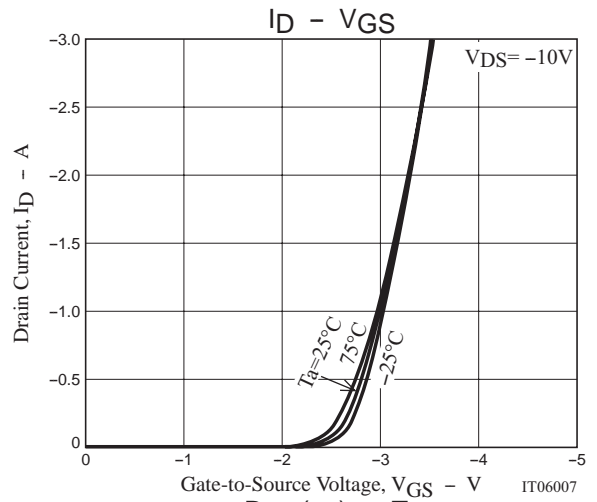
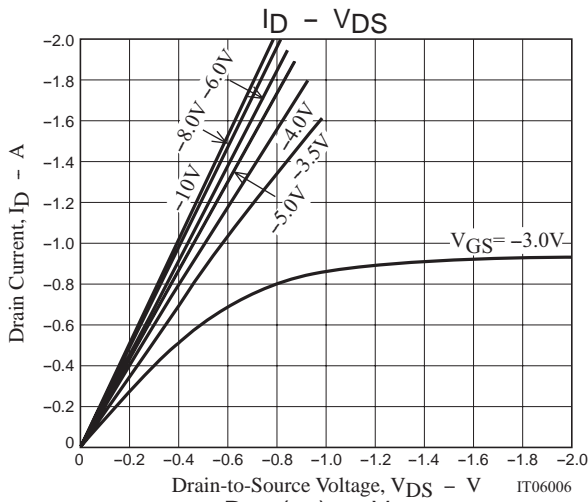
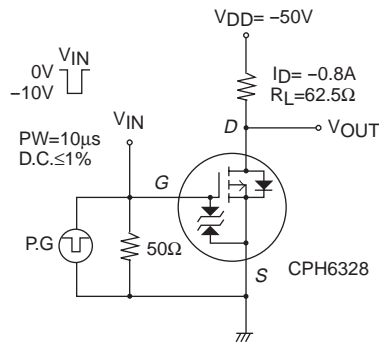
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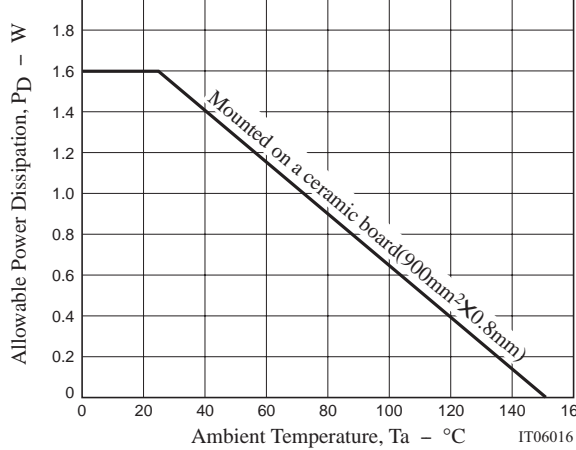
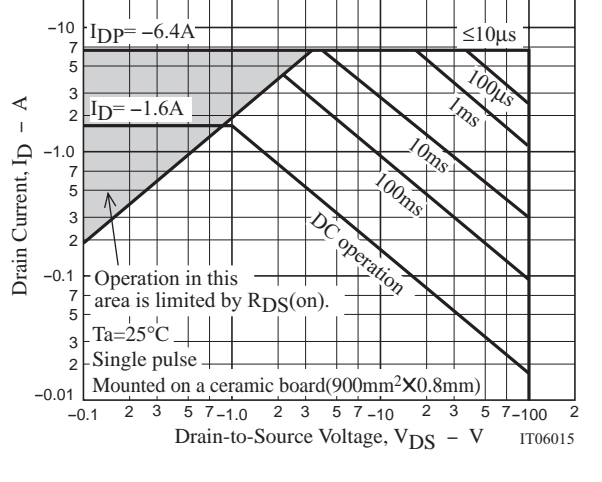
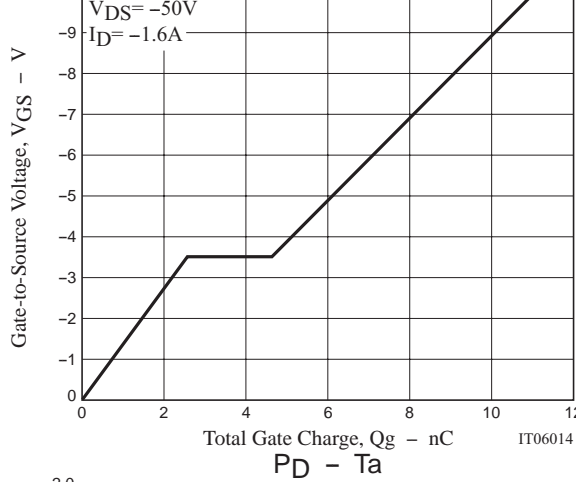
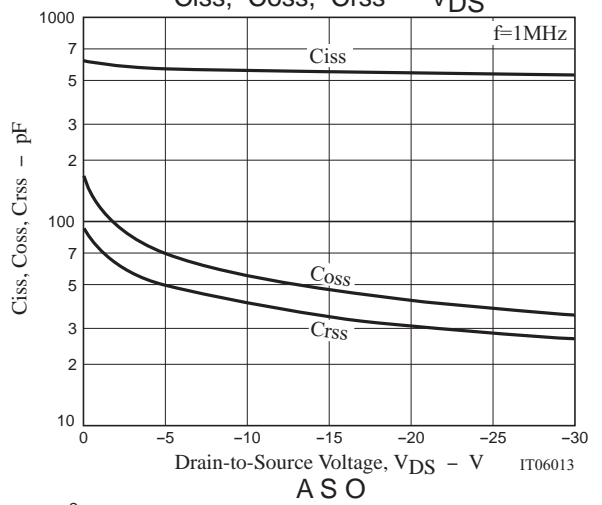
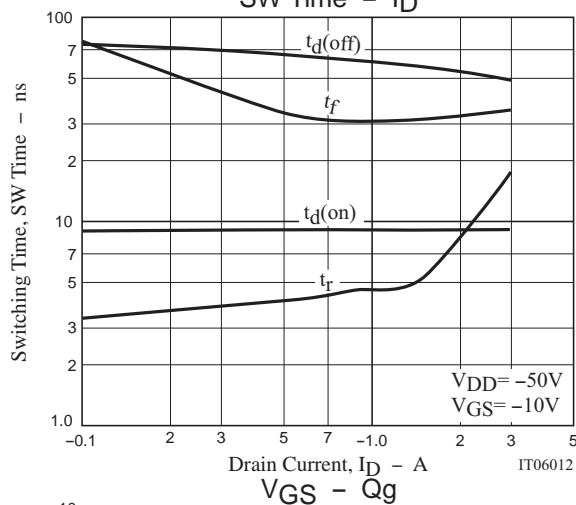
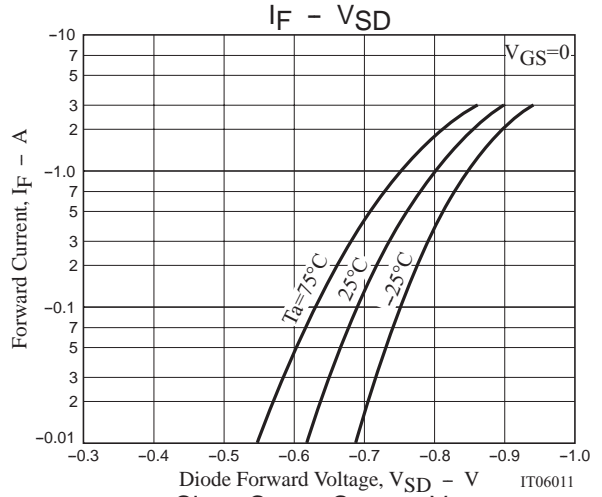
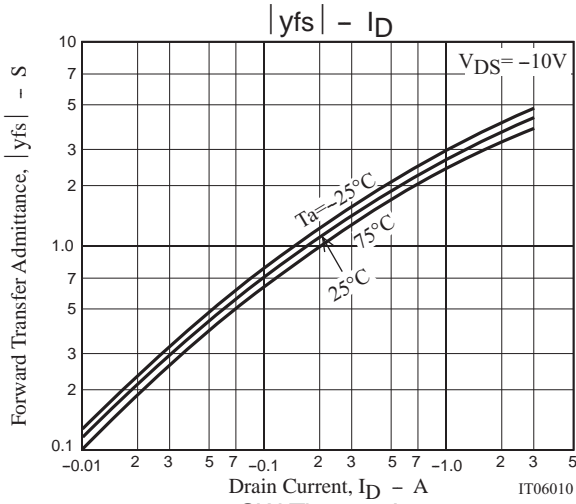
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Input Capacitance	Ciss	V _{DS} =-20V, f=1MHz		535		pF
Output Capacitance	Coss	V _{DS} =-20V, f=1MHz		43		pF
Reverse Transfer Capacitance	Crss	V _{DS} =-20V, f=1MHz		31		pF
Turn-ON Delay Time	t _{d(on)}	See specified Test Circuit.		9		ns
Rise Time	t _r	See specified Test Circuit.		5		ns
Turn-OFF Delay Time	t _{d(off)}	See specified Test Circuit.		62		ns
Fall Time	t _f	See specified Test Circuit.		34		ns
Total Gate Charge	Q _g	V _{DS} =-50V, V _{GS} =-10V, I _D =-1.6A		11		nC
Gate-to-Source Charge	Q _{gs}	V _{DS} =-50V, V _{GS} =-10V, I _D =-1.6A		2.6		nC
Gate-to-Drain "Miller" Charge	Q _{gd}	V _{DS} =-50V, V _{GS} =-10V, I _D =-1.6A		2		nC
Diode Forward Voltage	V _{SD}	I _S =-1.6A, V _{GS} =0	-0.83		-1.2	V

Switching Time Test Circuit





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