



CPH3321

N-Channel Silicon MOSFET

General-Purpose Switching Device Applications

Features

- Low ON-resistance.
- Ultrahigh-speed switching.
- 1.8V drive.

Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V _{DSS}		-12	V
Gate-to-Source Voltage	V _{GSS}		±8	V
Drain Current (DC)	I _D		-2.6	A
Drain Current (Pulse)	I _{DP}	PW≤10μs, duty cycle≤1%	-10.4	A
Allowable Power Dissipation	P _D	Mounted on a ceramic board (900mm ² X0.8mm)	1.0	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	-12			V
Zero-Gate Voltage Drain Current	I _{DSS}	V _{DS} = -12V, V _{GS} =0			-10	μA
Gate-to-Source Leakage Current	I _{GSS}	V _{GS} = ±6.4V, V _{DS} =0			±10	μA
Cutoff Voltage	V _{GS(off)}	V _{DS} = -6V, I _D = -1mA	-0.3		-1.0	V
Forward Transfer Admittance	y _{fs}	V _{DS} = -6V, I _D = -1.3A	2.9	4.2		S
Static Drain-to-Source On-State Resistance	R _{DS(on)1}	I _D = -1.3A, V _{GS} = -4.5V		75	98	mΩ
	R _{DS(on)2}	I _D = -0.7A, V _{GS} = -2.5V		110	155	mΩ
	R _{DS(on)3}	I _D = -0.3A, V _{GS} = -1.8V		150	225	mΩ
Input Capacitance	C _{iss}	V _{DS} = -6V, f=1MHz		450		pF
Output Capacitance	C _{oss}	V _{DS} = -6V, f=1MHz		100		pF
Reverse Transfer Capacitance	C _{rss}	V _{DS} = -6V, f=1MHz		85		pF

Marking : JW

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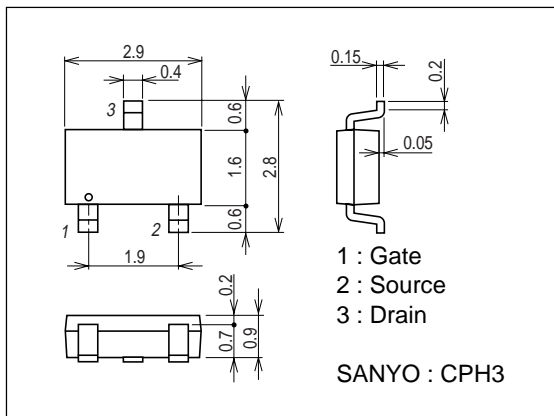
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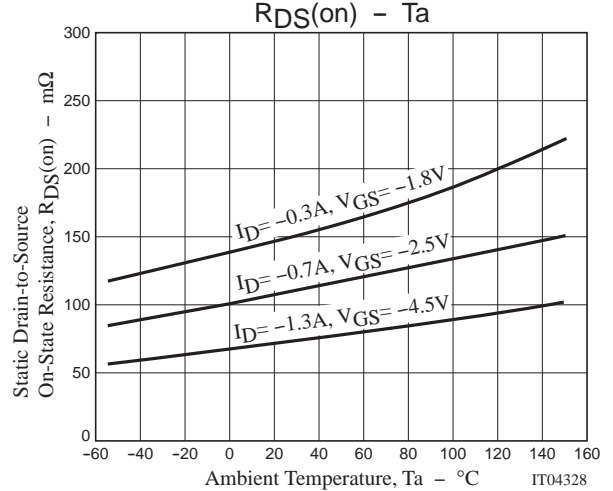
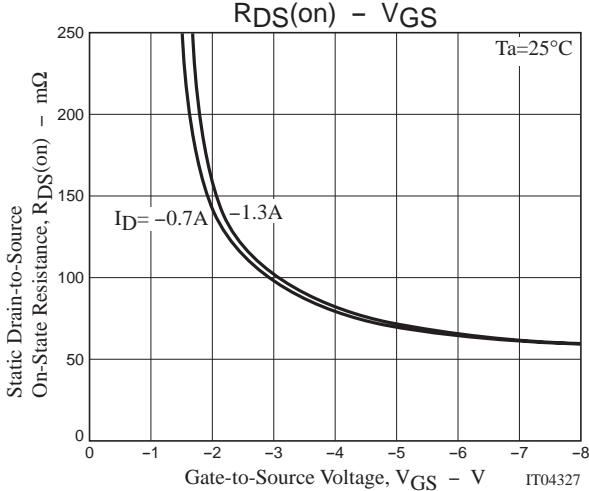
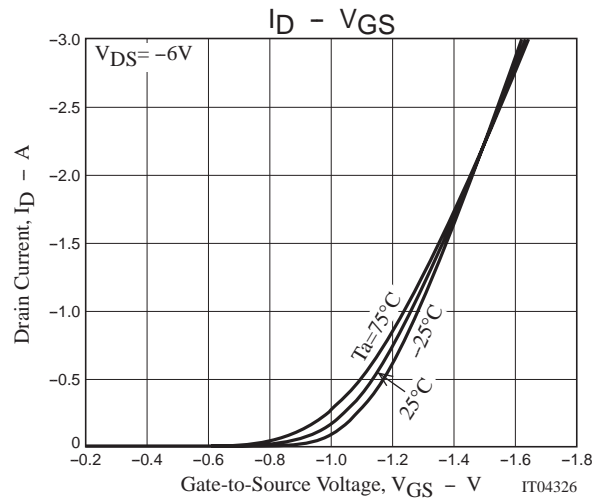
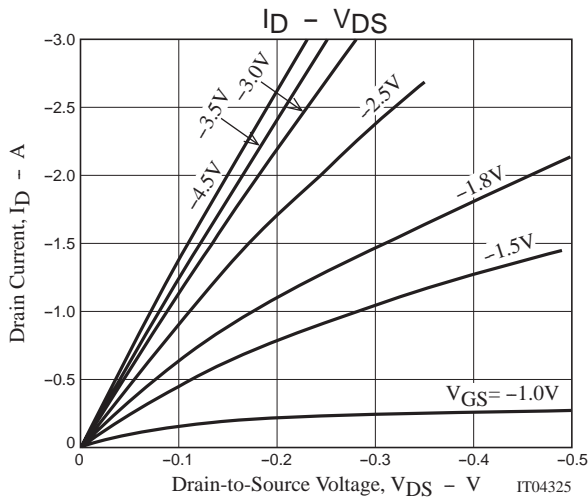
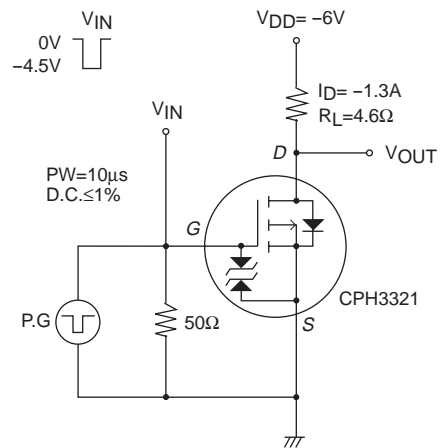
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit.		15		ns
Rise Time	t_r	See specified Test Circuit.		70		ns
Turn-OFF Delay Time	$t_{d(off)}$	See specified Test Circuit.		65		ns
Fall Time	t_f	See specified Test Circuit.		50		ns
Total Gate Charge	Q_g	$V_{DS} = -6V, V_{GS} = -4.5V, I_D = -2.6A$		6.5		nC
Gate-to-Source Charge	Q_{gs}	$V_{DS} = -6V, V_{GS} = -4.5V, I_D = -2.6A$		0.8		nC
Gate-to-Drain "Miller" Charge	Q_{gd}	$V_{DS} = -6V, V_{GS} = -4.5V, I_D = -2.6A$		2.0		nC
Diode Forward Voltage	V_{SD}	$I_S = -2.6A, V_{GS} = 0$		-0.87	-1.5	V

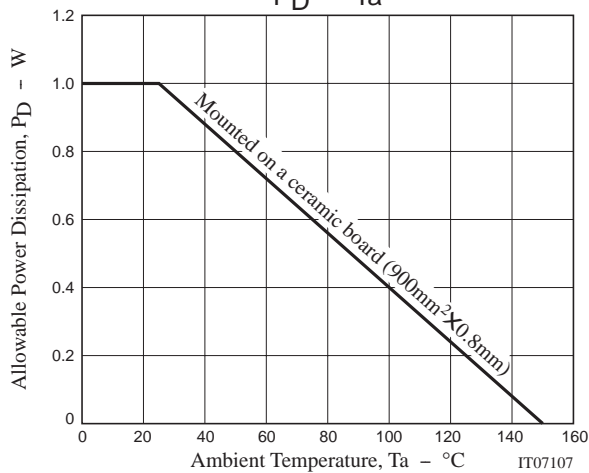
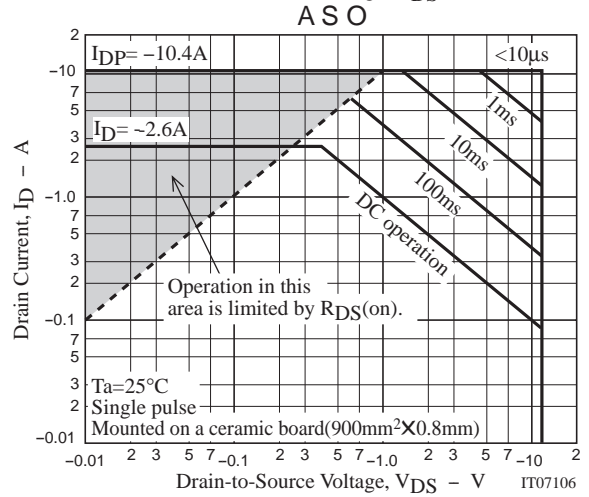
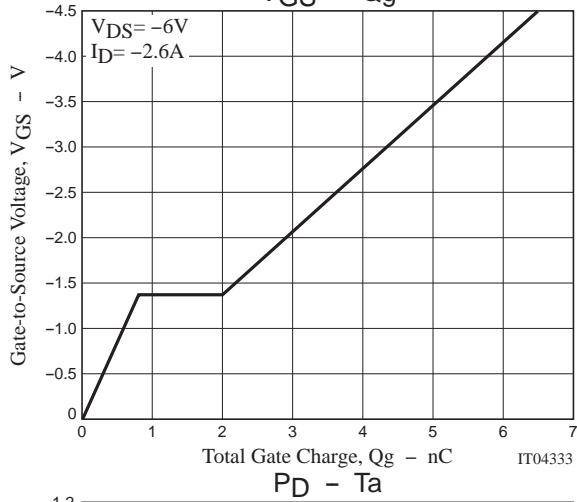
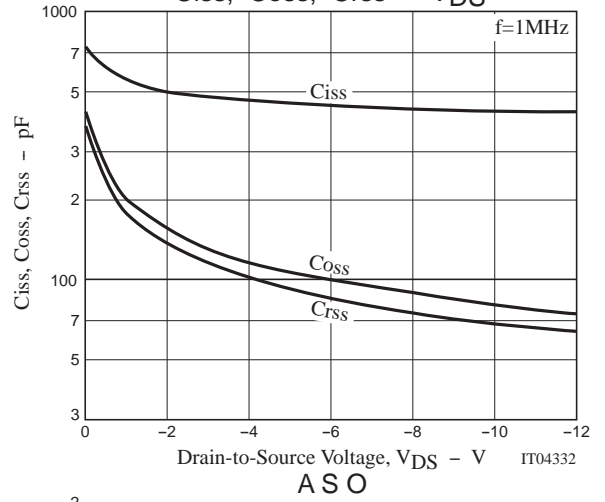
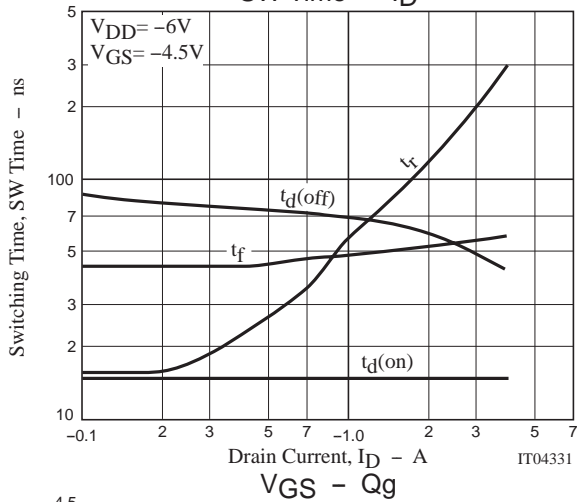
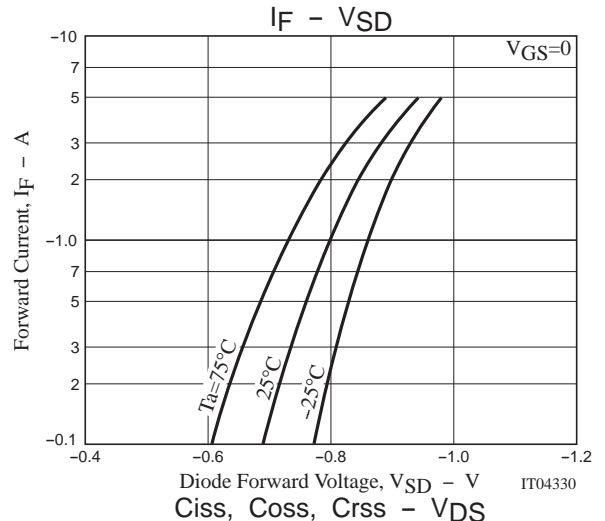
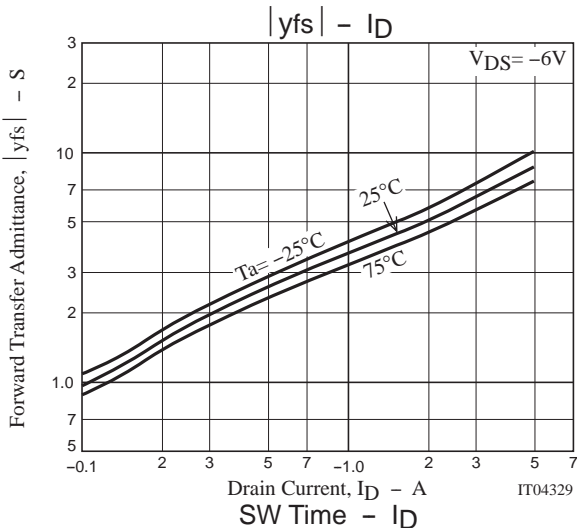
Package Dimensions

unit : mm
2152A



Switching Time Test Circuit





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