



CPH3322 — P-Channel Silicon MOSFET

Ultrahigh-Speed Switching Applications

Features

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

Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V _{DSS}		-60	V
Gate-to-Source Voltage	V _{GSS}		±20	V
Drain Current (DC)	I _D		-0.6	A
Drain Current (Pulse)	I _{DP}	PW≤10μs, duty cycle≤1%	-2.4	A
Allowable Power Dissipation	P _D	Mounted on a ceramic board (900mm²×0.8mm)	0.9	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	-60			V
Zero-Gate Voltage Drain Current	I _{DSS}	V _{DS} = -60V, V _{GS} =0			-1	μA
Gate-to-Source Leakage Current	I _{GSS}	V _{GS} = ±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 = -300mA	0.46	0.67		S
Static Drain-to-Source On-State Resistance	R _{DS(on)1}	I _D = -0.3A, V _{GS} = -10V		1.3	1.7	Ω
	R _{DS(on)2}	I _D = -0.3A, V _{GS} = -4V		1.6	2.3	Ω
Input Capacitance	C _{iss}	V _{DS} = -20V, f=1MHz		73		pF
Output Capacitance	C _{oss}	V _{DS} = -20V, f=1MHz		7		pF
Reverse Transfer Capacitance	C _{rss}	V _{DS} = -20V, f=1MHz		4		pF
Turn-ON Delay Time	t _{d(on)}	See specified Test Circuit.		6		ns
Rise Time	t _r	See specified Test Circuit.		3.5		ns
Turn-OFF Delay Time	t _{d(off)}	See specified Test Circuit.		12.5		ns
Fall Time	t _f	See specified Test Circuit.		3		ns

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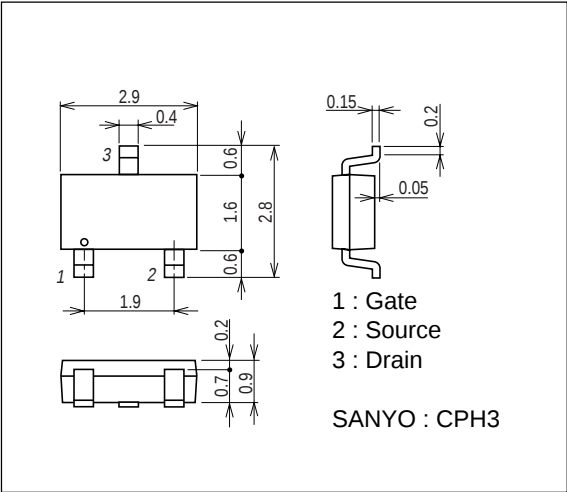
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Total Gate Charge	Qg	V _{DS} = -30V, V _{GS} = -10V, I _D = -0.6A		2.6		nC
Gate-to-Source Charge	Qgs	V _{DS} = -30V, V _{GS} = -10V, I _D = -0.6A		0.4		nC
Gate-to-Drain "Miller" Charge	Qgd	V _{DS} = -30V, V _{GS} = -10V, I _D = -0.6A		0.4		nC
Diode Forward Voltage	V _{SD}	I _S = -0.6A, V _{GS} =0		-0.88	-1.2	V

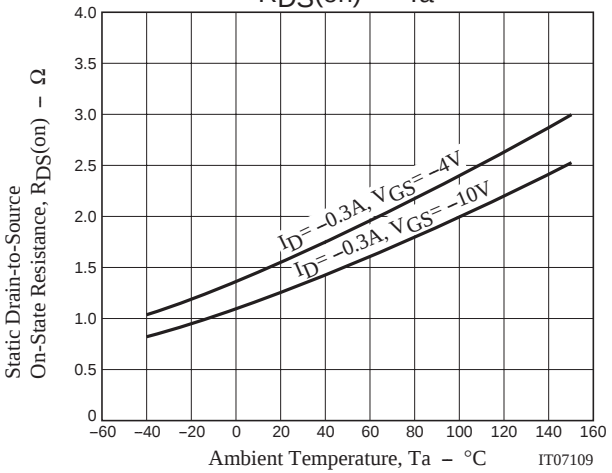
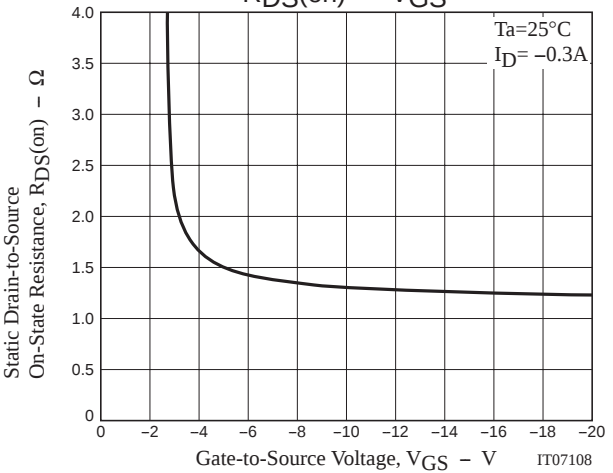
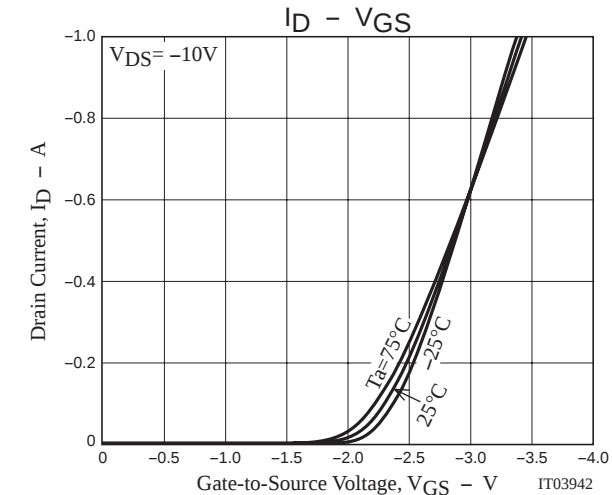
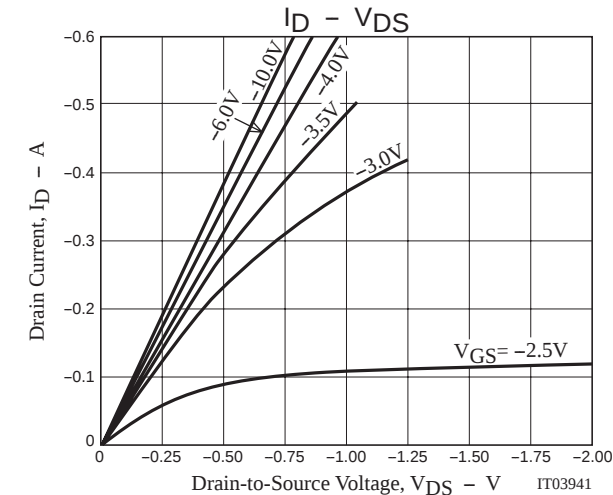
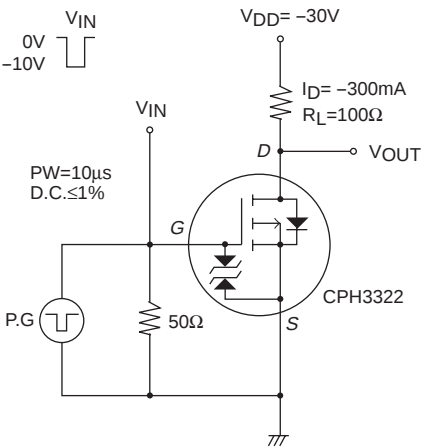
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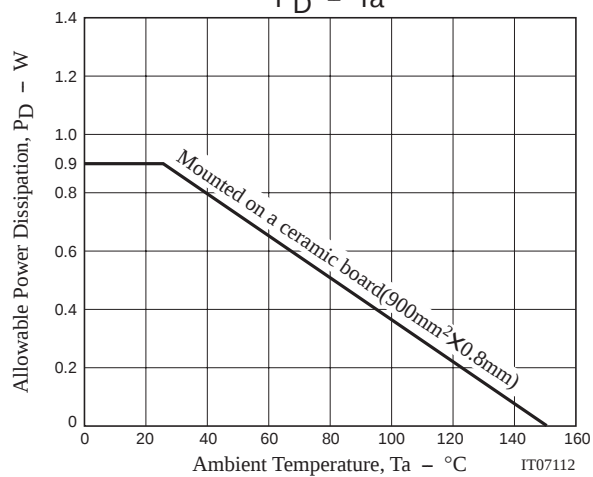
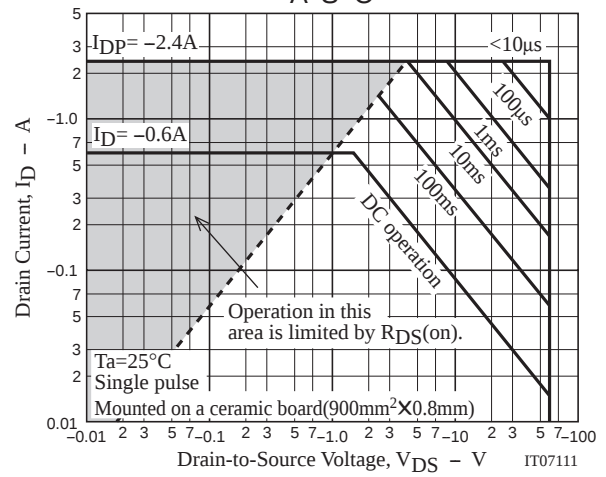
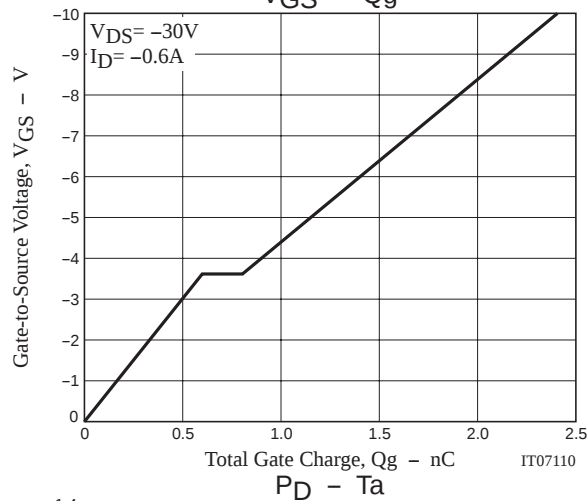
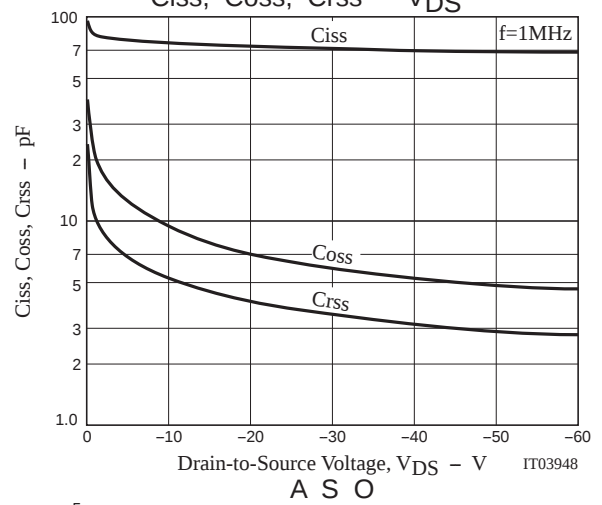
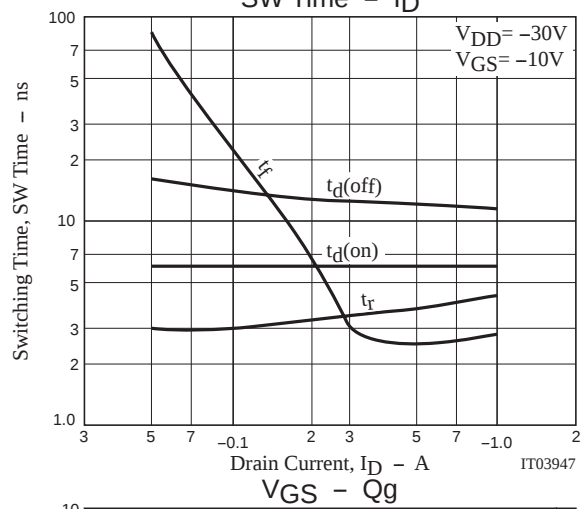
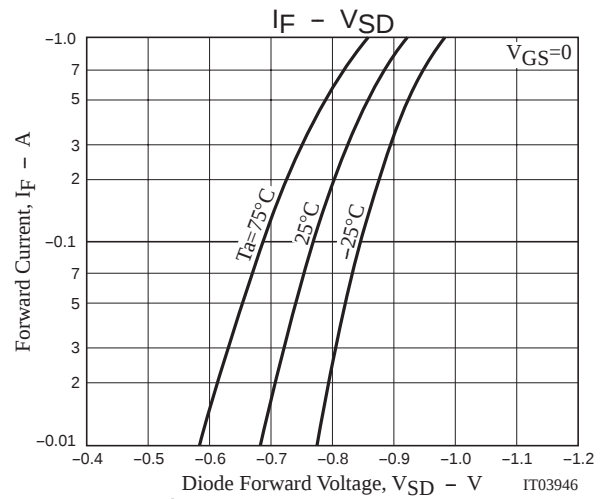
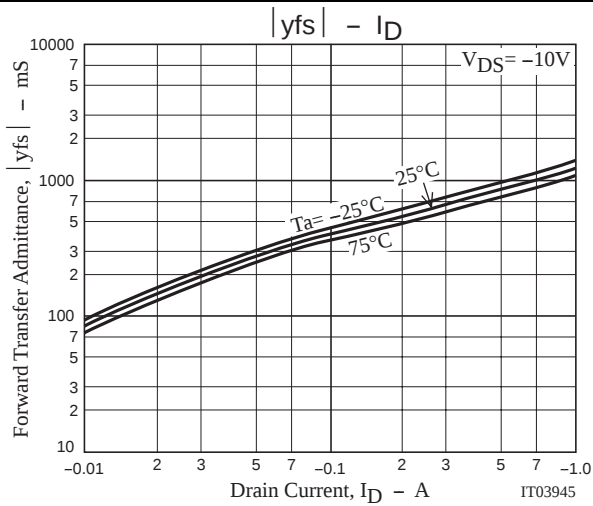
Package Dimensions

unit : mm
2152A



Switching Time Test Circuit





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