Ordering number : ENA0313

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DATA SHEET

P-Channel Silicon MOSFET

CPH3345 — General-Purpose Switching Device Applications

Features

- 4V drive.

Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DSS}		−30	V
Gate-to-Source Voltage	V_{GSS}		±20	V
Drain Current (DC)	I_D		−2	A
Drain Current (Pulse)	I_{DP}	PW≤10μs, duty cycle≤1%	−8	A
Allowable Power Dissipation	P_D	Mounted on a ceramic board (1200mm²×0.8mm)	1	W
Channel Temperature	Tch		150	°C
Storage Temperature	Tstg		−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}=0V	−30			V
Zero-Gate Voltage Drain Current	I_{DSS}	V_{DS}=−30V, V_{GS}=0V			−1	μA
Gate-to-Source Leakage Current	I_{GSS}	V_{GS}=±16V, V_{DS}=0V			±10	μA
Cutoff Voltage	V_{GS}(off)	V_{DS}=−10V, I_D=−1mA	−1.2		−2.6	V
Forward Transfer Admittance	$\|yfs\|$	V_{DS}=−10V, I_D=−1A	1.3	2.3		S
Static Drain-to-Source On-State Resistance	R_{DS}(on)1	I_D=−1A, V_{GS}=−10V		98	130	mΩ
	R_{DS}(on)2	I_D=−0.5A, V_{GS}=−4.5V		168	240	mΩ
	R_{DS}(on)3	I_D=−0.5A, V_{GS}=−4V		190	270	mΩ
Input Capacitance	Ciss	V_{DS}=−10V, f=1MHz		340		pF
Output Capacitance	Coss	V_{DS}=−10V, f=1MHz		70		pF
Reverse Transfer Capacitance	Crss	V_{DS}=−10V, f=1MHz		56		pF
Turn-ON Delay Time	t_d(on)	See specified Test Circuit.		9.0		ns
Rise Time	t_r	See specified Test Circuit.		15.5		ns
Turn-OFF Delay Time	t_d(off)	See specified Test Circuit.		36		ns
Fall Time	t_f	See specified Test Circuit.		30.5		ns

Marking : YU

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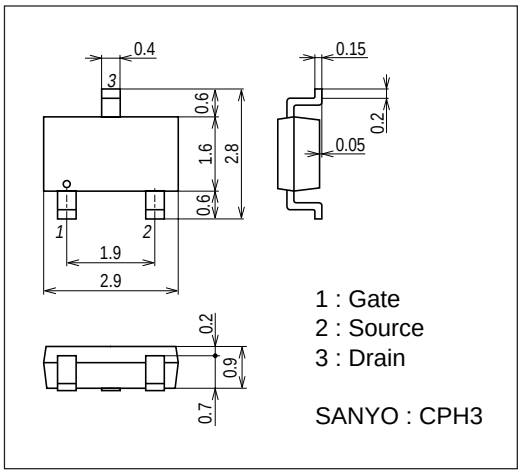
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Total Gate Charge	Qg	V_{DS}=–10V, V_{GS}=–10V, I_D=–2A		7.7		nC
Gate-to-Source Charge	Qgs	V_{DS}=–10V, V_{GS}=–10V, I_D=–2A		1.15		nC
Gate-to-Drain “Miller” Charge	Qgd	V_{DS}=–10V, V_{GS}=–10V, I_D=–2A		1.4		nC
Diode Forward Voltage	V_{SD}	I_S=–2A, V_{GS}=0V		–0.85	–1.2	V

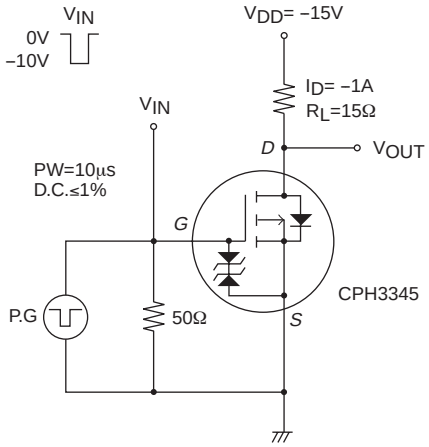
Package Dimensions

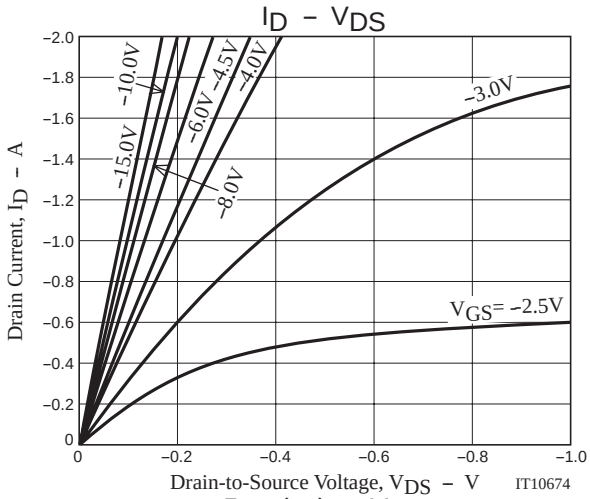
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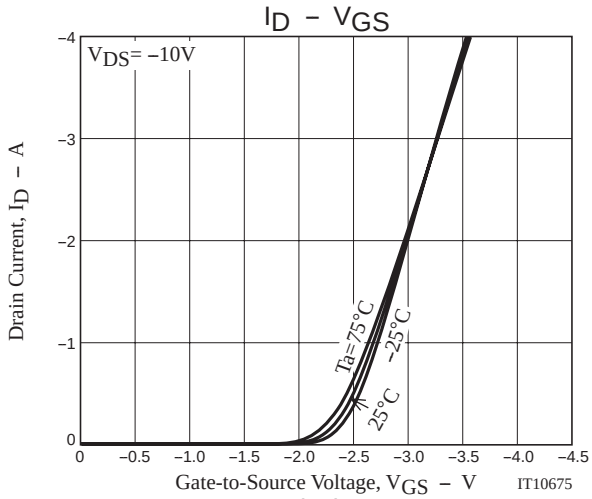
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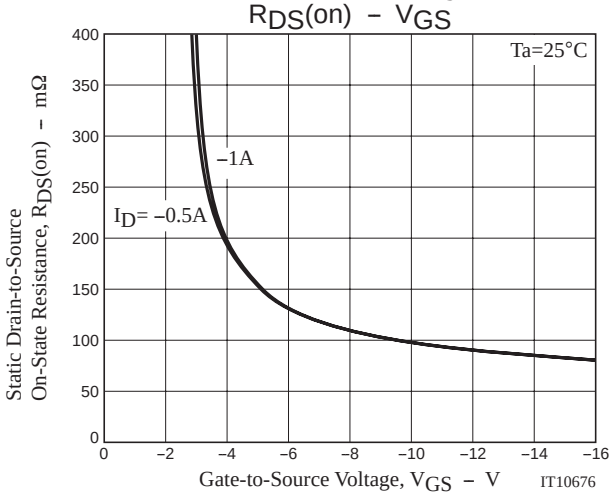


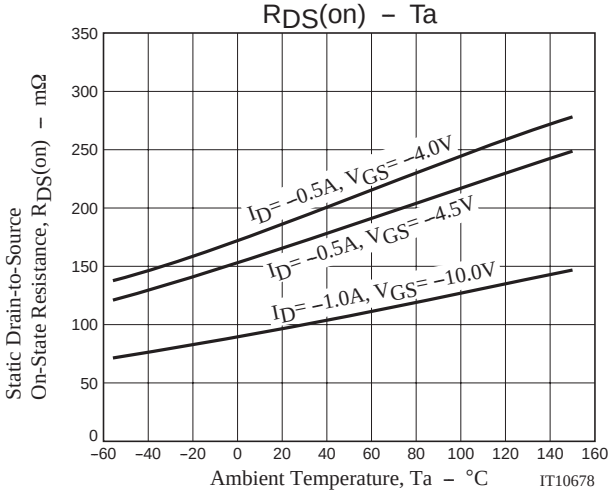
Switching Time Test Circuit



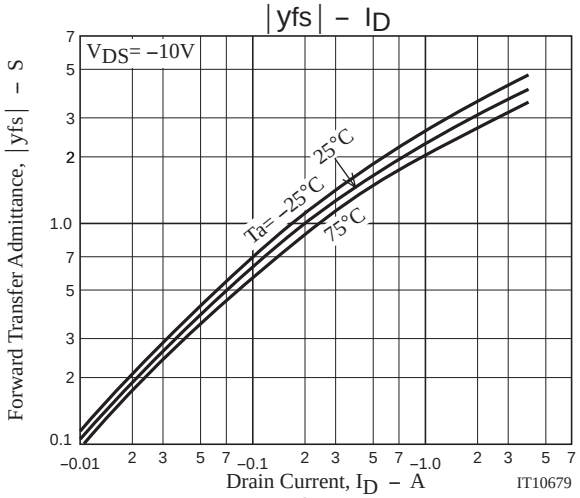


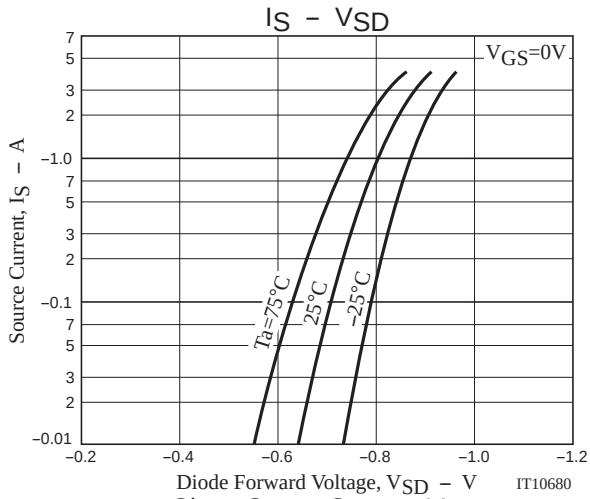


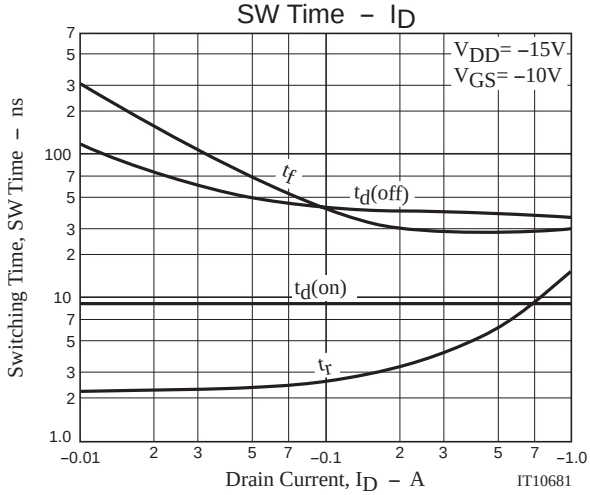


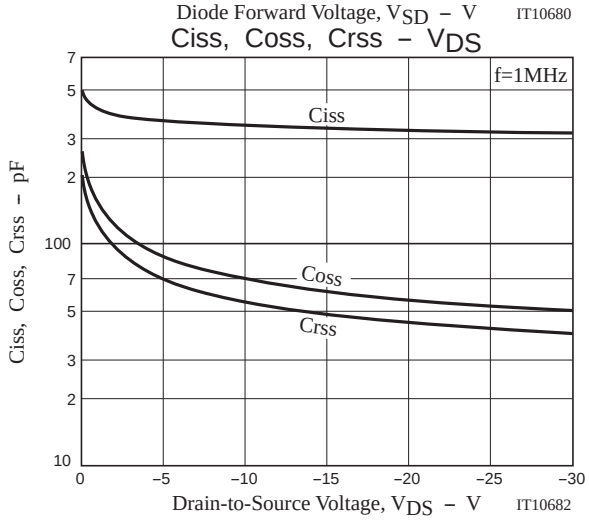


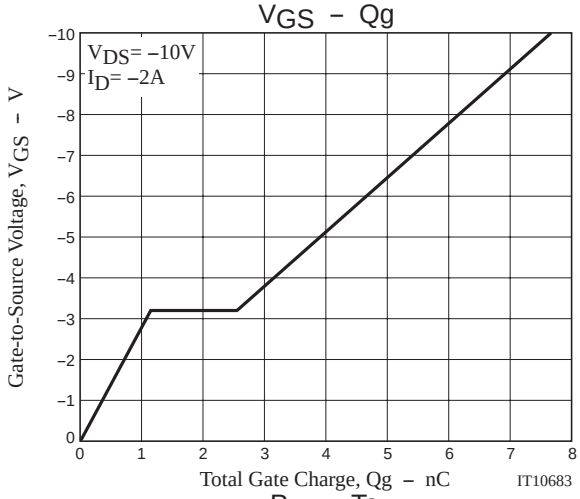
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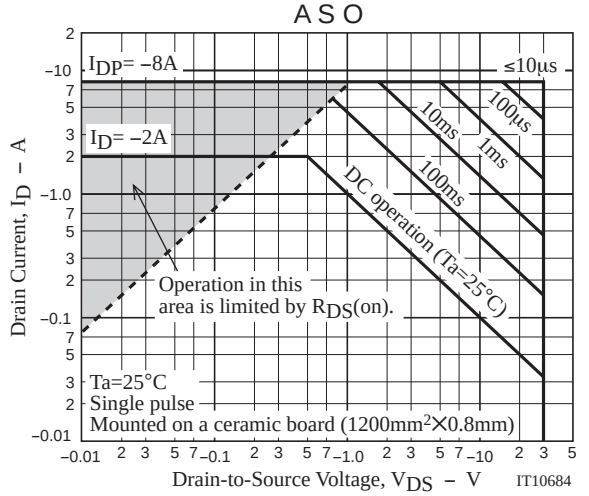


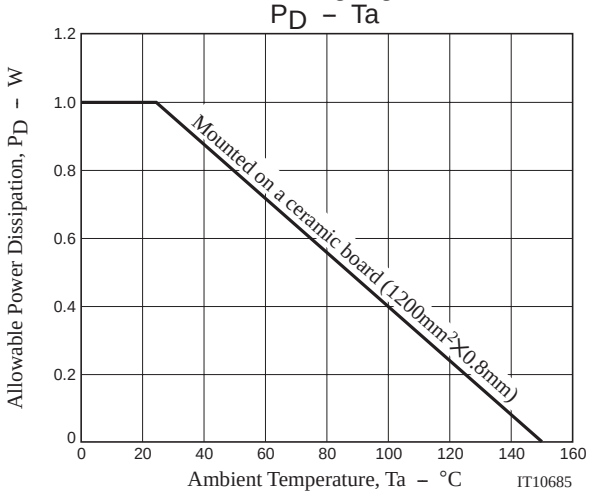












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