



SANYO Semiconductors

DATA SHEET

N-Channel Silicon MOSFET

CPH3423 — General-Purpose Switching Device 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			1.5	A
Drain Current (Pulse)	I _{DP}	PW≤10μs, duty cycle≤1%		6	A
Allowable Power Dissipation	P _D	Mounted on a ceramic board (900mm ² ×0.8mm)		1	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 =0.75A	0.75	1.5		S
Static Drain-to-Source On-State Resistance	R _{DS(on)1}	I _D =0.75A, V _{GS} =10V		240	310	mΩ
	R _{DS(on)2}	I _D =0.75A, V _{GS} =4V		320	450	mΩ
Input Capacitance	C _{iss}	V _{DS} =20V, f=1MHz		150		pF
Output Capacitance	C _{oss}	V _{DS} =20V, f=1MHz		19.0		pF
Reverse Transfer Capacitance	C _{rss}	V _{DS} =20V, f=1MHz		13.0		pF
Turn-ON Delay Time	t _{d(on)}	See specified Test Circuit.		7		ns
Rise Time	t _r	See specified Test Circuit.		3		ns
Turn-OFF Delay Time	t _{d(off)}	See specified Test Circuit.		20		ns
Fall Time	t _f	See specified Test Circuit.		11		ns

Marking : KY

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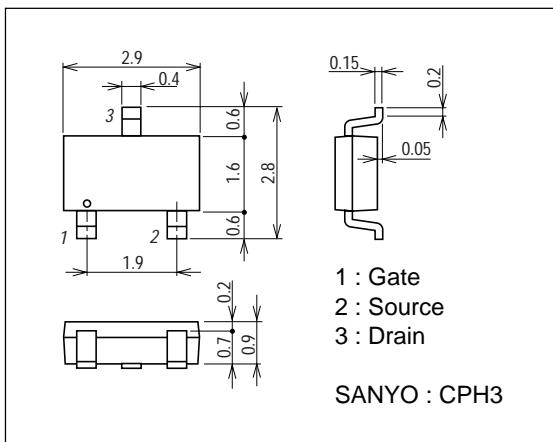
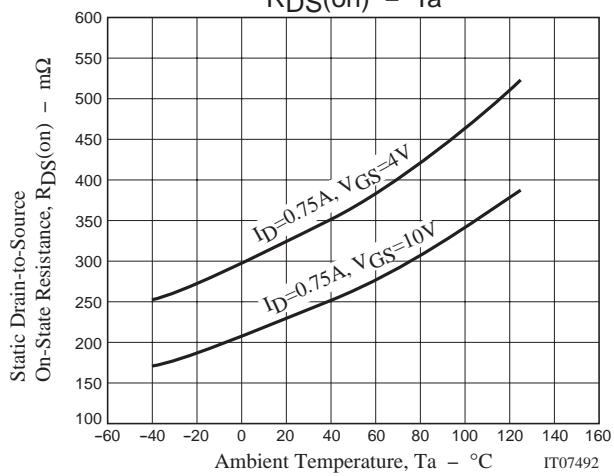
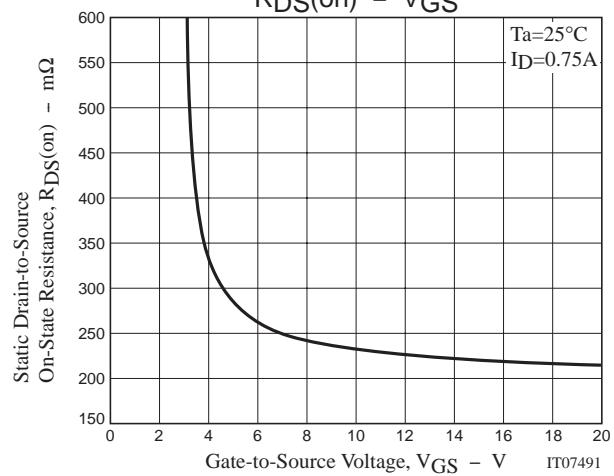
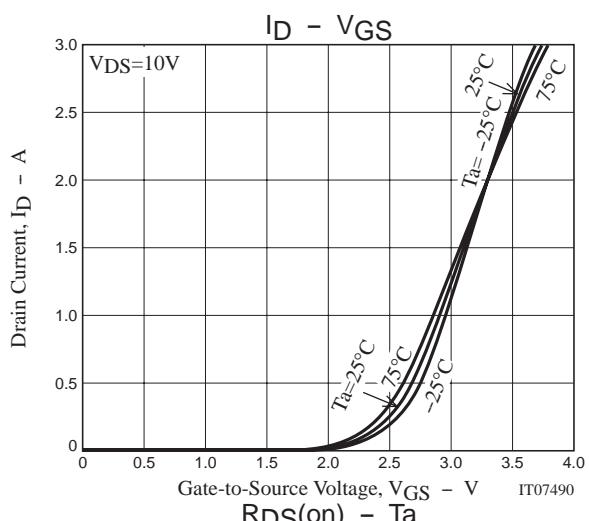
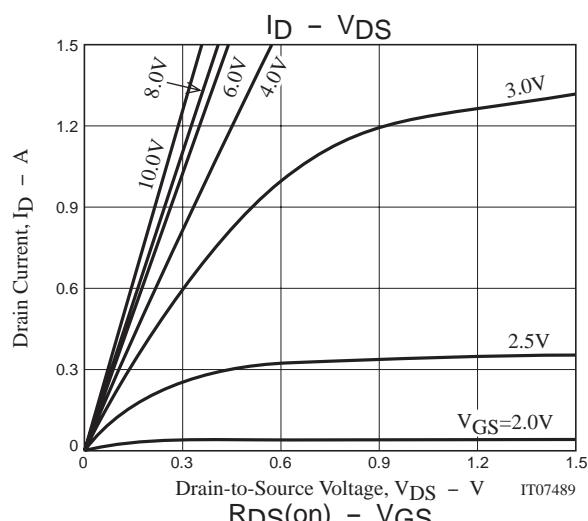
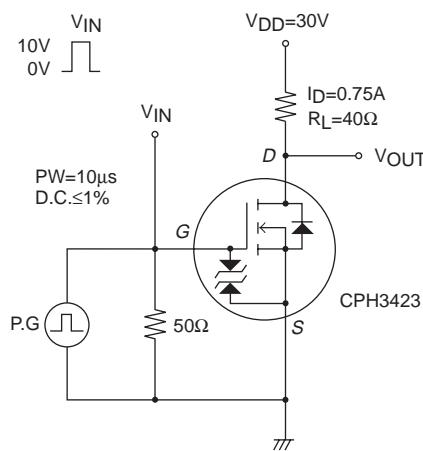
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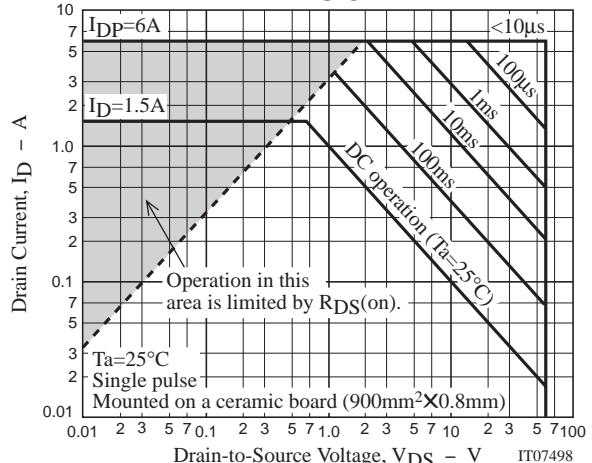
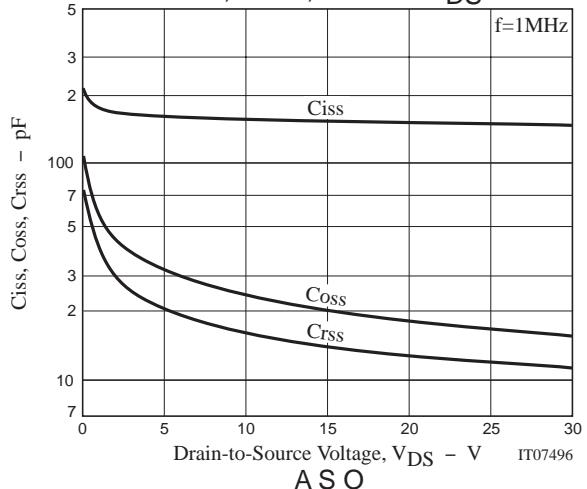
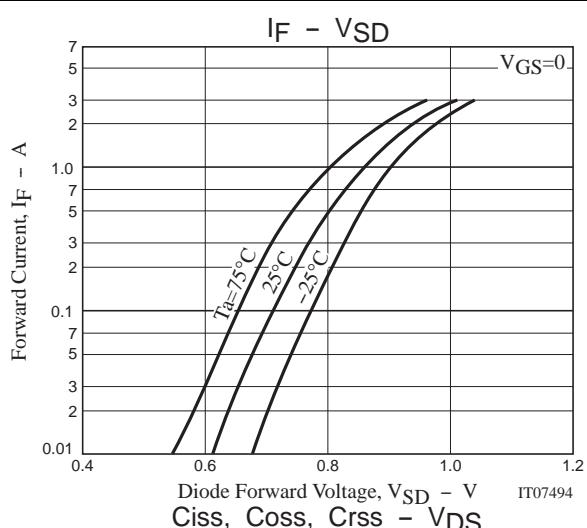
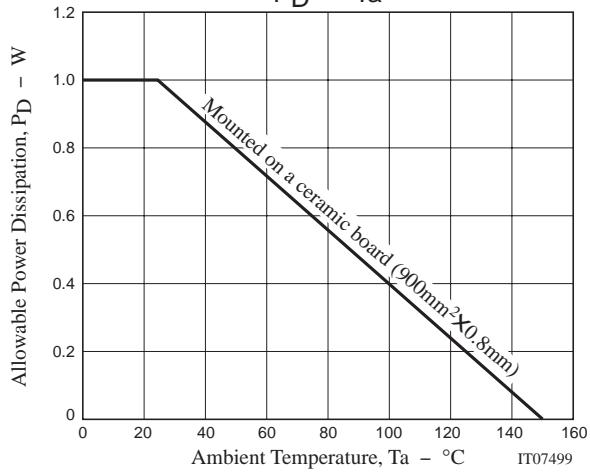
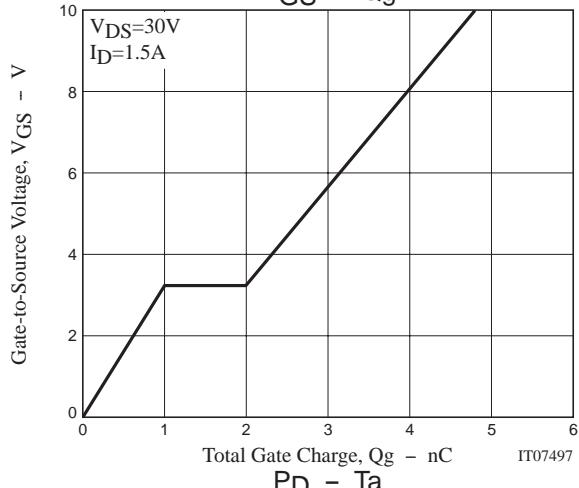
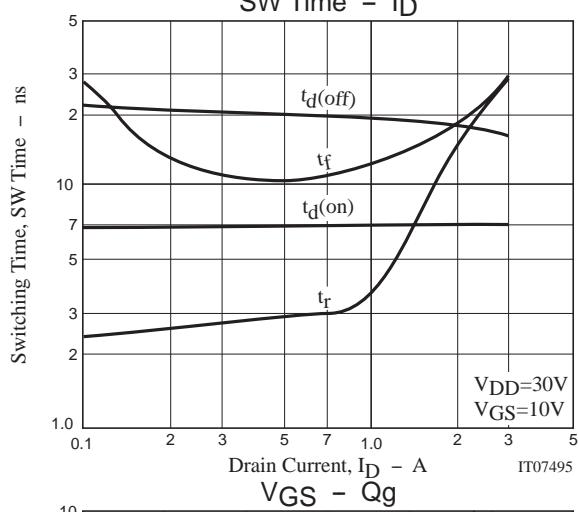
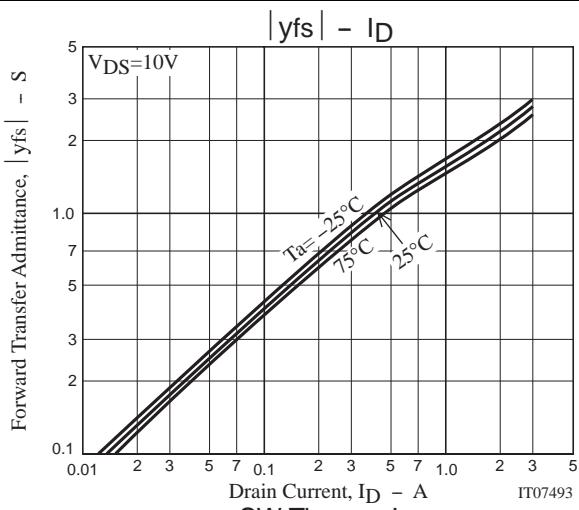
Parameter	Symbol	Conditions	Ratings			Unit	
			min	typ	max		
Total Gate Charge	Qg	$V_{DS}=30V$, $V_{GS}=10V$, $I_D=1.5A$			4.8	nC	
Gate-to-Source Charge	Qgs	$V_{DS}=30V$, $V_{GS}=10V$, $I_D=1.5A$			1.0	nC	
Gate-to-Drain "Miller" Charge	Qgd	$V_{DS}=30V$, $V_{GS}=10V$, $I_D=1.5A$			1.0	nC	
Diode Forward Voltage	V _{SD}	$I_S=1.5A$, $V_{GS}=0$			0.89	1.2	V

Package Dimensions

unit : mm

2152A

**Switching Time Test Circuit**



Note on usage : Since the CPH3423 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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