



SANYO Semiconductors

DATA SHEET

CPH6622 — N-Channel Silicon MOSFET

General-Purpose Switching Device Applications

Features

- Low ON-resistance.
- 2.5V drive.
- Best suited for LiB charging and discharging switch.
- Common-drain type.
- With a built-in gate resistor.

Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V _{DSS}		20	V
Gate-to-Source Voltage	V _{GSS}		±12	V
Drain Current (DC)	I _D		3.0	A
Drain Current (Pulse)	I _{DP}	PW≤12ms, duty cycle≤1%	18	A
Allowable Power Dissipation	P _D	Mounted on a ceramic board (900mm ² ×0.8mm)1unit	0.9	W
Total Dissipation	P _T	Mounted on a ceramic board (900mm ² ×0.8mm)	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} =0V	20			V
Zero-Gate Voltage Drain Current	I _{DSS}	V _{DS} =20V, V _{GS} =0V			1	μA
Gate-to-Source Leakage Current	I _{GSS}	V _{GS} = ±8V, V _{DS} =0V			±10	μA
Cutoff Voltage	V _{GS(off)}	V _{DS} =10V, I _D =1mA	0.6		1.2	V

Marking : BW

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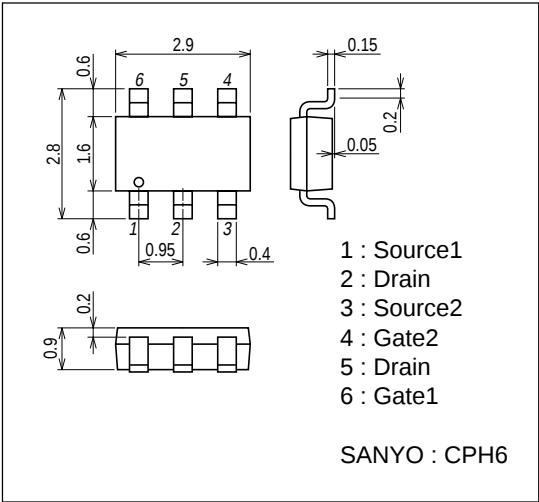
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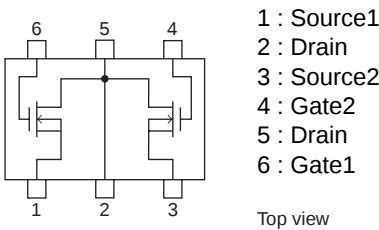
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Forward Transfer Admittance	$ y_{fs} $	$V_{DS}=10V, I_D=1.5A$	1.5	3.3		S
Static Drain-to-Source On-State Resistance	$R_{DS(on)1}$	$I_D=3A, V_{GS}=4V$	46	58	70	$m\Omega$
	$R_{DS(on)2}$	$I_D=3A, V_{GS}=2.5V$	50	75	100	$m\Omega$
Turn-ON Delay Time	$t_d(on)$	See specified Test Circuit.		210		ns
Rise Time	t_r	See specified Test Circuit.		690		ns
Turn-OFF Delay Time	$t_d(off)$	See specified Test Circuit.		1400		ns
Fall Time	t_f	See specified Test Circuit.		1000		ns
Total Gate Charge	Q_g	$V_{DS}=10V, V_{GS}=4V, I_D=3A$		10.5		nC
Gate-to-Source Charge	Q_{gs}	$V_{DS}=10V, V_{GS}=4V, I_D=3A$		1.0		nC
Gate-to-Drain "Miller" Charge	Q_{gd}	$V_{DS}=10V, V_{GS}=4V, I_D=3A$		2.8		nC
Diode Forward Voltage	V_{SD}	$I_S=3A, V_{GS}=0V$		0.8	1.2	V

Package Dimensions

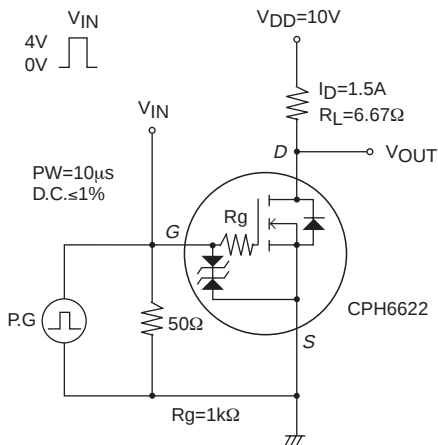
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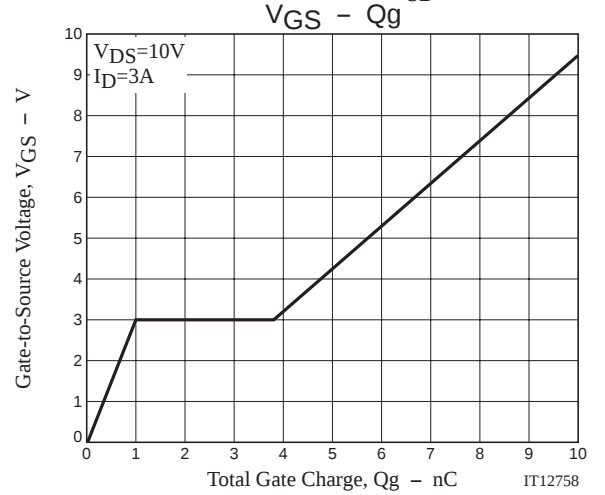
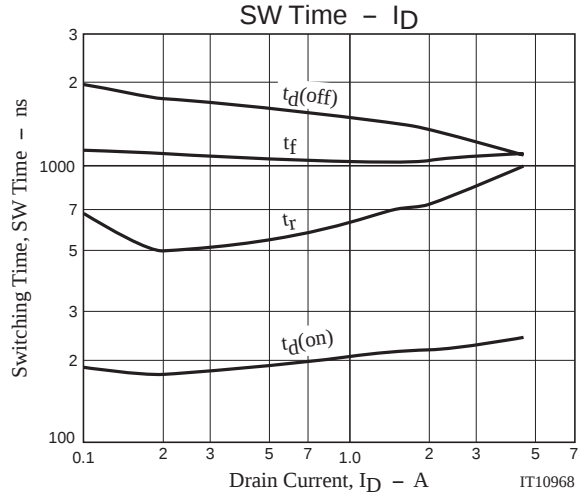
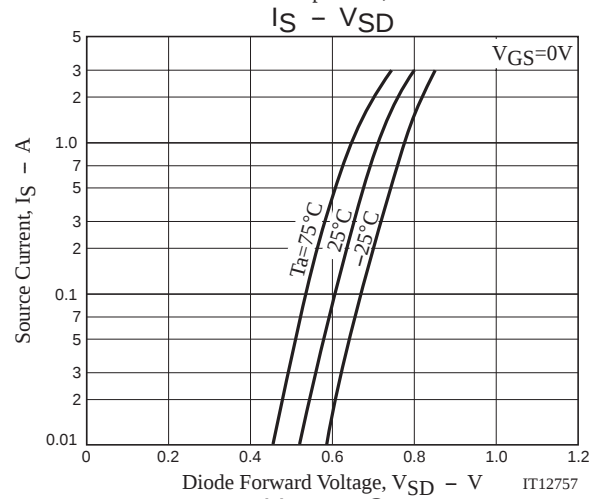
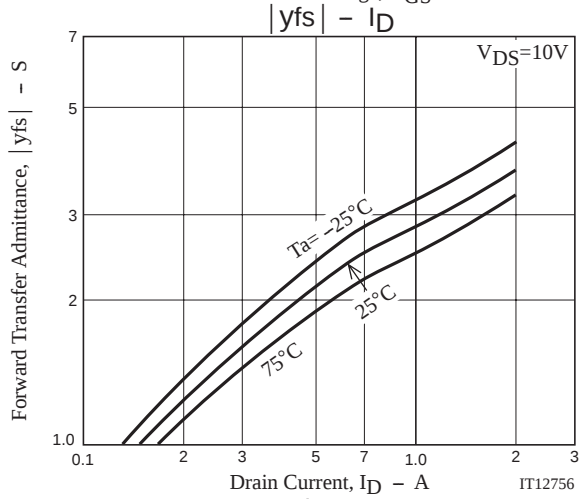
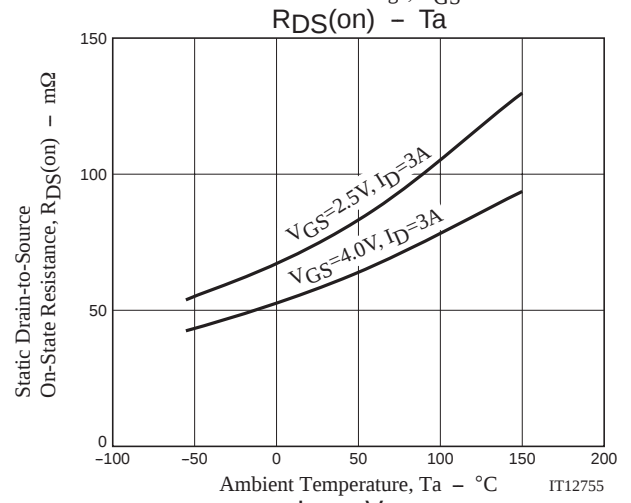
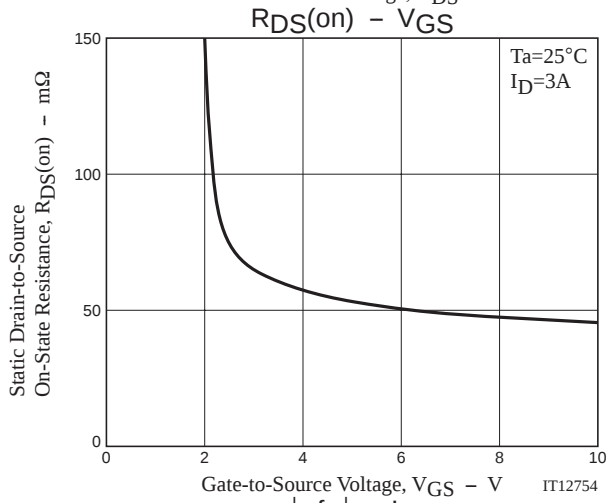
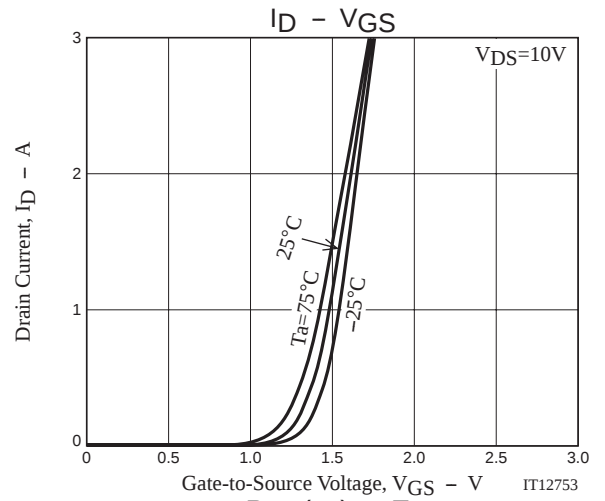
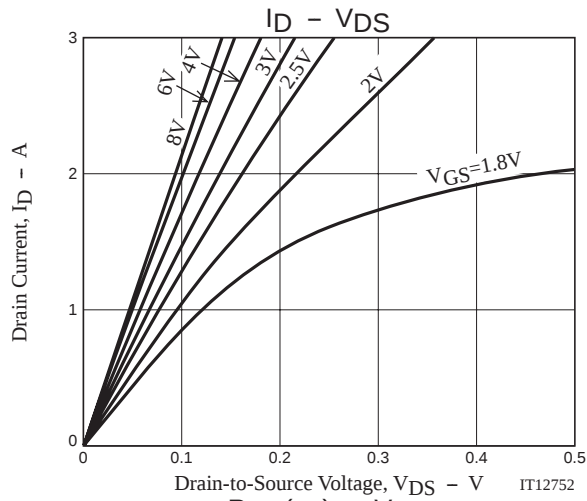


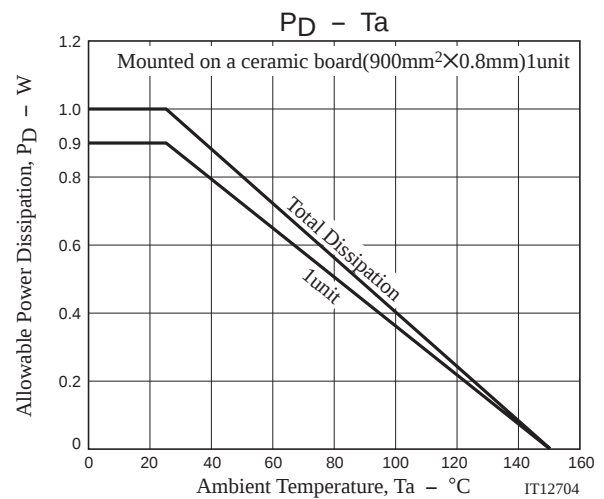
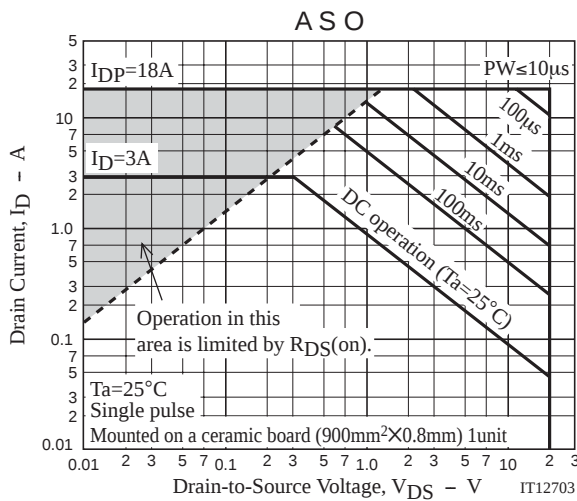
Electrical Connection



Switching Time Test Circuit







Note on usage : Since the CPH6622 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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