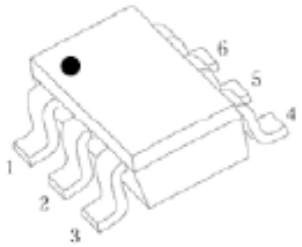
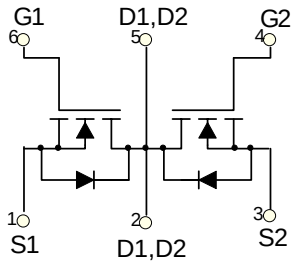
SOT-23-6L Plastic-Encapsulate MOSFETS

NCE8205 Dual N-Channel MOSFET

SOT-23-6L





FEATURE

- TrenchFET Power MOSFET
- Excellent $R_{DS(on)}$
- Low Gate Charge
- High Power and Current Handing Capability
- Surface Mount Package

APPLICATION

- Battery Protection
- Load Switch
- Power Management

MARKING

ABSOLUTE MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	19	V
Gate-Source Voltage	V_{GS}	±10	V
Continuous Drain Current	I_D	6	A
Pulsed Drain Current (note 1)	I_{DM}	25	A
Thermal Resistance from Junction to Ambient (note 2)	$R_{\theta JA}$	357	℃/W
Junction Temperature	T_J	150	℃
Storage Temperature	T_{STG}	-55~+150	℃
Lead Temperature for Soldering Purposes(1/8'' from case for 10 s)	T_L	260	℃

ELECTRICAL CHARACTERISTICS(T_a=25℃ unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
STATIC CHARACTERICTISCS						
Drain-source breakdown voltage	$V_{(BR)DSS}$	V_{GS} = 0V, I_D =250μA	19			V
Zero gate voltage drain current	I_{DSS}	V_{DS} =18V,V_{GS} = 0V			1	μA
Gate-body leakage current	I_{GSS}	V_{GS} =±10V, V_{DS} = 0V			±100	nA
Gate threshold voltage (note 3)	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =250μA	0.45		1.2	V
Drain-source on-resistance (note 3)	$R_{DS(on)}$	V_{GS} =4.5V, I_D =6A			27	mΩ
		V_{GS} =2.5V, I_D =5A			37	mΩ
Forward tranconductance (note 3)	g_{FS}	V_{DS} =5V, I_D =4.5A		10		S
Diode forward voltage (note 3)	V_{SD}	I_S=1.25A, V_{GS} = 0V			1.2	V
DYNAMIC CHARACTERICTISCS (note4)						
Input Capacitance	C_{iss}	V_{DS} =8V,V_{GS} =0V,f =1MHz		800		pF
Output Capacitance	C_{oss}			155		pF
Reverse Transfer Capacitance	C_{rss}			125		pF
SWITCHING CHARACTERICTISCS (note 4)						
Turn-on delay time	$t_{d(on)}$	V_{DD}=10V,V_{GS}=4V, I_D=1A,R_{GEN}=10Ω		18		ns
Turn-on rise time	t_r			5		ns
Turn-off delay time	$t_{d(off)}$			43		ns
Turn-off fall time	t_f			20		ns
Total Gate Charge	Q_g	V_{DS} =10V,V_{GS} =4.5V,I_D=4A		11		nC
Gate-Source Charge	Q_{gs}			2.3		nC
Gate-Drain Charge	Q_{gd}			2.5		nC

Notes :

1.Repetitive rating：Pluse width limited by maximum junction temperature

2.Surface Mounted on FR4 board，t≤10 sec.

3. Pulse test : Pulse width≤300μs, duty cycle≤2%.

4. Guaranteed by design, not subject to production.