JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

SOT-23 Plastic-Encapsulate MOSFETS

CJ8810   N-Channel MOSFET
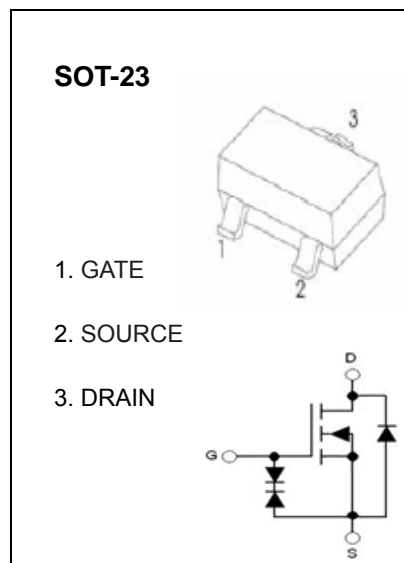
SOT-23

DESCRIPTION

The CJ8810 use advanced trench technology to provide excellent $R_{DS(ON)}$ and low gate charge. It is ESD protected. This device is suitable for use as a uni-directional or bi-directional load switch,facilitated by its common-drain configuration.

MARKING: 8810

1. GATE

2. SOURCE

3. DRAIN

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-source voltage	V_{DS}	20	V
Gate-source voltage	V_{GS}	±12	V
Continuous drain current	I_D	7	A
Pulsed Drain Current	I_{DM}	30	A
Power dissipation*	P_D	0.3	W
Thermal resistance from junction to ambient	$R_{\theta JA}$	417	℃/W
Junction temperature	T_J	150	℃
Storage temperature	T_{stg}	-55~ +150	℃

* Repetitive rating : Pulse width limited by junction temperature.

ELECTRICAL CHARACTERISTICS (T$_a$=25℃ unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
STATIC PARAMETERS						
Drain-source breakdown voltage	V$_{(BR)DSS}$	V$_{GS}$ = 0V, I$_D$ =250µA	20			V
Zero gate voltage drain current	I$_{DSS}$	V$_{DS}$ =16V,V$_{GS}$ = 0V			1	µA
Gate-body leakage current	I$_{GSS}$	V$_{GS}$ =±4.5V, V$_{DS}$ = 0V			±1	µA
		V$_{GS}$ =±8V, V$_{DS}$ = 0V			±10	µA
Gate threshold voltage (note 1)	V$_{GS(th)}$	V$_{DS}$ =V$_{GS}$, I$_D$ =250µA	0.4		1	V
Drain-source on-resistance (note 1)	R$_{DS(on)}$	V$_{GS}$ =10V, I$_D$ =7A			20	mΩ
		V$_{GS}$ =2.5V, I$_D$ =5.5A			26	mΩ
		V$_{GS}$ =1.8V, I$_D$ =5A			35	mΩ
Forward tranconductance (note 1)	g$_{FS}$	V$_{DS}$ =5V, I$_D$ =7A	9			S
Diode forward voltage(note 1)	V$_{SD}$	I$_S$=1A, V$_{GS}$ = 0V			1	V
SWITCHING PARAMETERS(note 2)						
Turn-on delay time	t$_{d(on)}$	V$_{GS}$=5V,V$_{DS}$=10V, R$_L$=1.35Ω,R$_{GEN}$=3Ω		6.5		ns
Turn-on rise time	t$_r$			12.5		ns
Turn-off delay time	t$_{d(off)}$			51.5		ns
Turn-off fall time	t$_f$			16		ns
Total Gate Charge	Q$_g$	V$_{DS}$ =10V,V$_{GS}$ =4.5V,I$_D$ =7A		20		nC
Gate-Source Charge	Q$_{gs}$			1		nC
Gate-Drain Charge	Q$_{gd}$			4		nC

Notes :

1. Pulse Test : Pulse width≤300µs, duty cycle≤0.5%.

2. Guaranteed by design, not subject to production testing.

B,Jan,2013