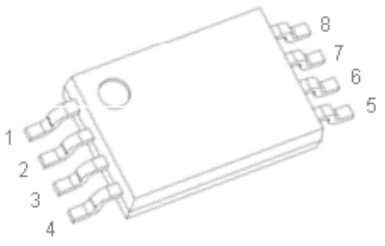
JIANGSU CHANGJING ELECTRONICS TECHNOLOGY CO., LTD

TSSOP8 Plastic-Encapsulate MOSFETS

CJS8810 Dual N-Channel MOSFET

$V_{(BR)DSS}$	$R_{DS(on)}$TYP	I_D
20V	14mΩ@10V	7A
	14.2mΩ@4.5V	
	15.4mΩ@3.8V	
	18.2mΩ@2.5V	

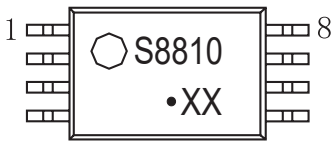
TSSOP8



DESCRIPTION

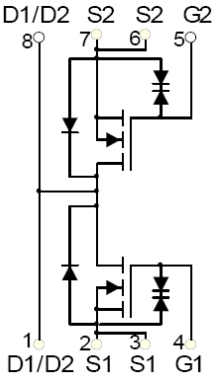
The CJS8810 uses advanced trench technology to provide excellent $R_{DS(ON)}$ and low gate charge. It is ESD protected. This device is suitable for use as a uni-directional or bi-directional load switch,facilitated by its common-drain configuration.

MARKING:



S8810 = Device code.
Solid dot = Green molding compound device, if none, the normal device.
XX = Code.

Equivalent Circuit



ABSOLUTE 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 ①	7	A
Pulsed Drain Current	I_{DM} ②	30	A
Maximum Power Dissipation	P_D ⑤	2	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$ ⑤	62.5	℃/W
Operating Junction and Storage Temperature Range	T_J ,T_{stg}	-55~+150	℃

MOSFET ELECTRICAL CHARACTERISTICS

T_a=25℃ unless otherwise specified

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Off characteristics						
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_{DS} =0V, V_{GS} =±4.5V			±1	μA
		V_{DS} =0V, V_{GS} =±8V			±10	μA
On characteristics ③						
Gate-threshold voltage	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =250μA	0.4		1.0	V
Static drain-source on-sate resistance	$R_{DS(on)}$	V_{GS} =10V, I_D =3A	9.0	14.0	17	mΩ
		V_{GS} =4.5V, I_D =3A	10.5	14.2	19	mΩ
		V_{GS} =3.8V, I_D =3A	11.5	15.4	21	mΩ
		V_{GS} =2.5V, I_D =3A	13.0	18.2	23	mΩ
Forward transconductance	g_{FS}	V_{DS} =5V, I_D =7A	9			S
Dynamic characteristics ③④						
Input capacitance	C_{iss}	V_{DS} =10V,V_{GS} =0V, f =1MHz		1150	2300	pF
Output capacitance	C_{oss}			185	370	pF
Reverse transfer capacitance	C_{rss}			145	290	pF
Switching characteristics ③④						
Total gate charge	Q_g	V_{GS}=4.5V, V_{DS}=10V, I_D=7A		15	30	nC
Gate-source charge	Q_{gs}			0.8	1.6	nC
Gate-drain charge	Q_{gd}			3.2	6.4	nC
Turn-on delay time	$t_{d(on)}$	V_{DS}=10V, V_{GS}=5V,R_G=3Ω, R_L=1.35Ω		6	12	ns
Turn-on rise time	t_r			13	26	ns
Turn-off delay time	$t_{d(off)}$			52	104	ns
Turn-off fall time	t_f			16	32	ns
Drain-Source Diode Characteristics						
Drain-source diode forward voltage	V_{SD} ③	V_{GS} =0V, I_S=1.0A			1.0	V
Continuous drain-source diode forward current	I_S ①				7	A
Pulsed drain-source diode forward current	I_{SM} ②				30	A

Notes:

1.T_C=25℃ Limited only by maximum temperature allowed.

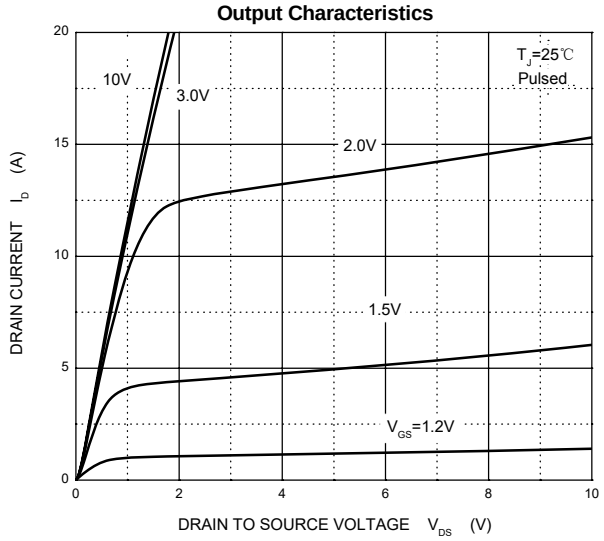
2.P_W≤10μs, Duty cycle≤1%.

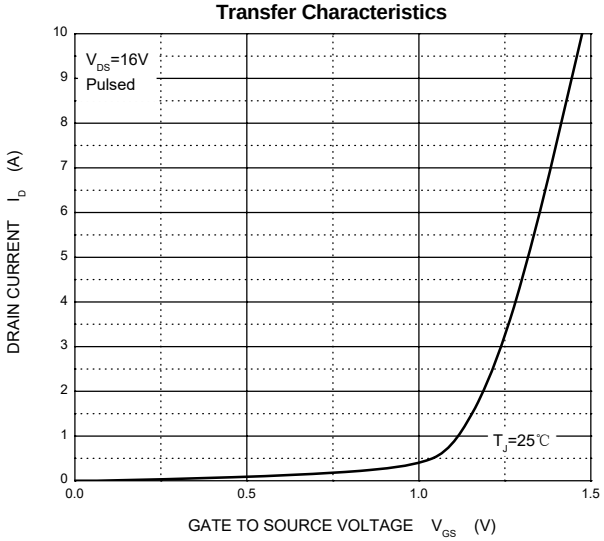
3.Pulse Test : Pulse Width≤300μs, duty cycle ≤2%.

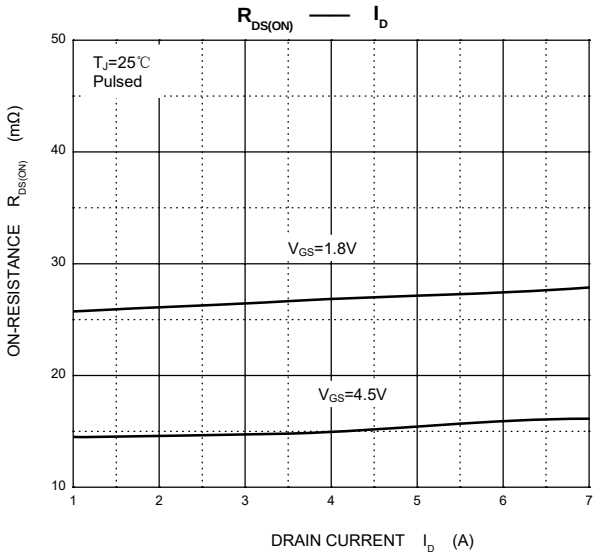
4.Guaranteed by design, not subject to production.

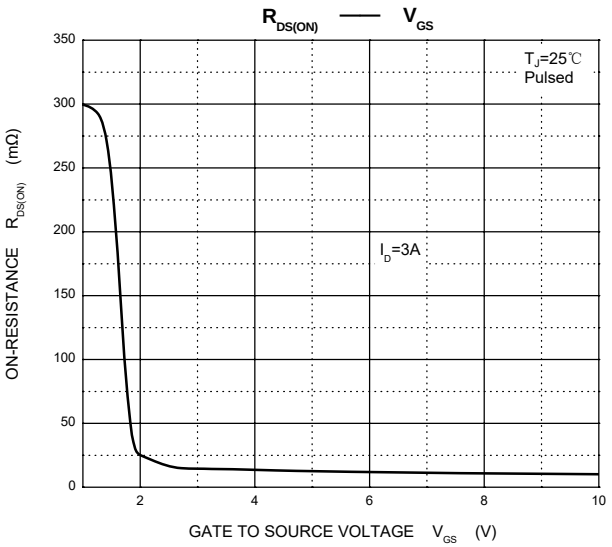
5.The value of $R_{\theta JA}$ is measured with the device mounted on 1 in 2 FR-4 board with 2oz. Copper, in a still air environment with T_a=25℃,t ≤10 sec.

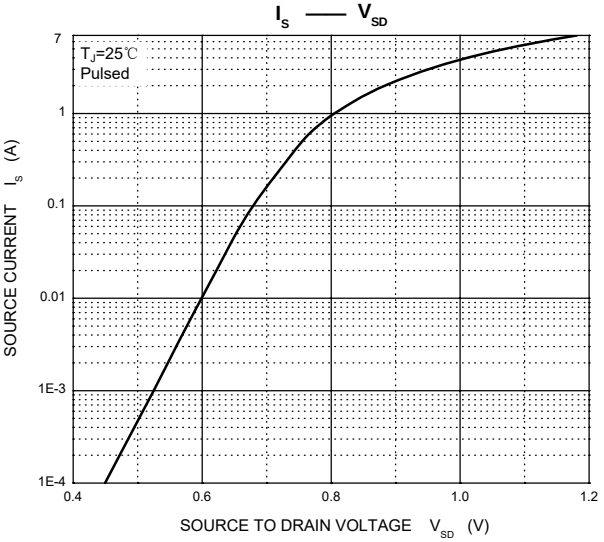
Typical Characteristics

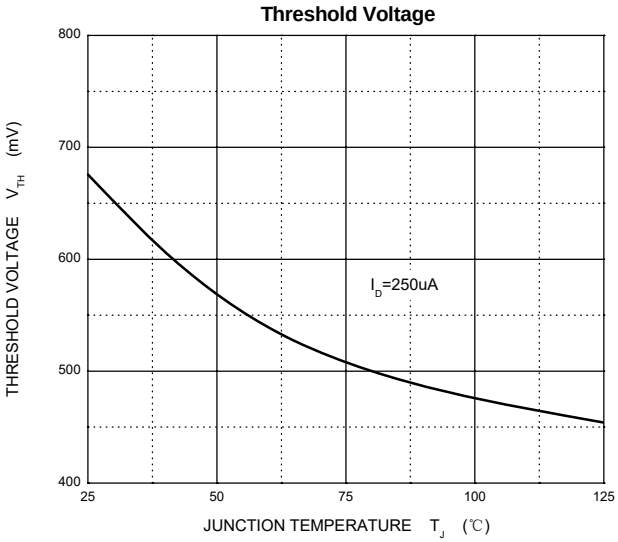




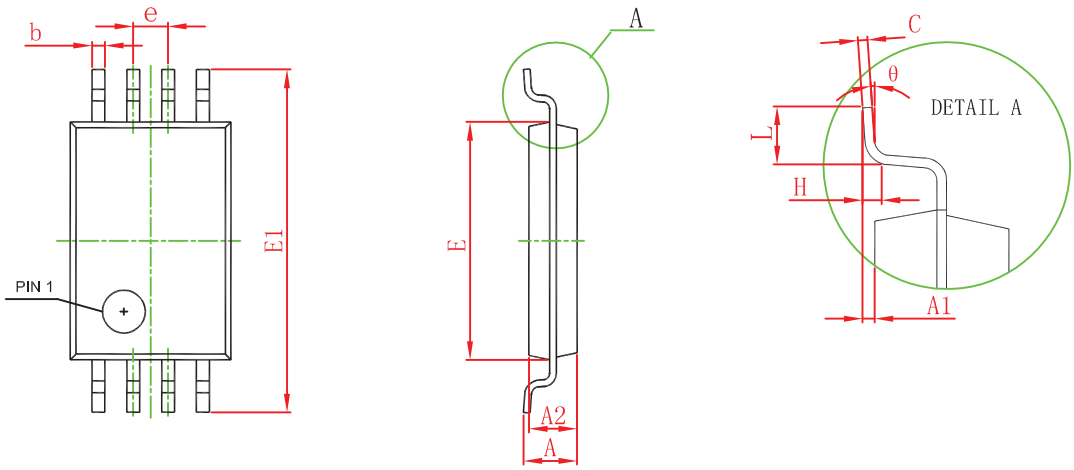






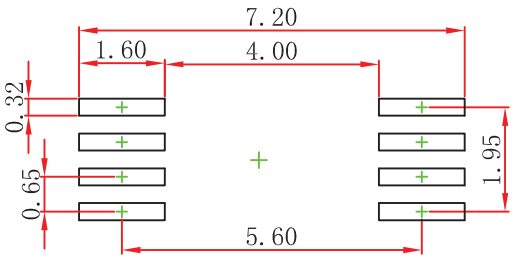


TSSOP8 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	**Max**	**Min**	**Max**
D	2. 900	3. 100	0. 114	0. 122
E	4. 300	4. 500	0. 169	0. 177
b	0. 190	0. 300	0. 007	0. 012
c	0. 090	0. 200	0. 004	0. 008
E1	6. 250	6. 550	0. 246	0. 258
A		1. 200		0. 047
A2	0. 800	1. 000	0. 031	0. 039
A1	0. 050	0. 150	0. 002	0. 006
e	0. 65 (BSC)		0. 026 (BSC)	
L	0. 500	0. 700	0. 020	0. 028
H	0.25(TYP		0.01(TYP	
θ	1°	7°	1°	7°

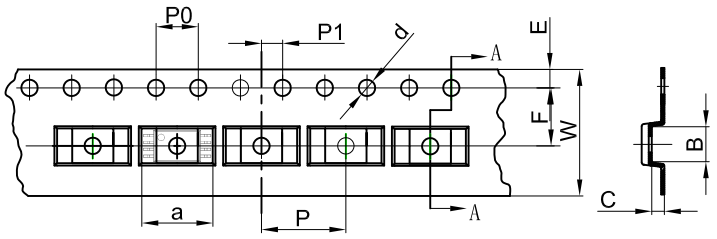
TSSOP8 Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.

TSSOP8 Tape and Reel

TSSOP8 Embossed Carrier Tape



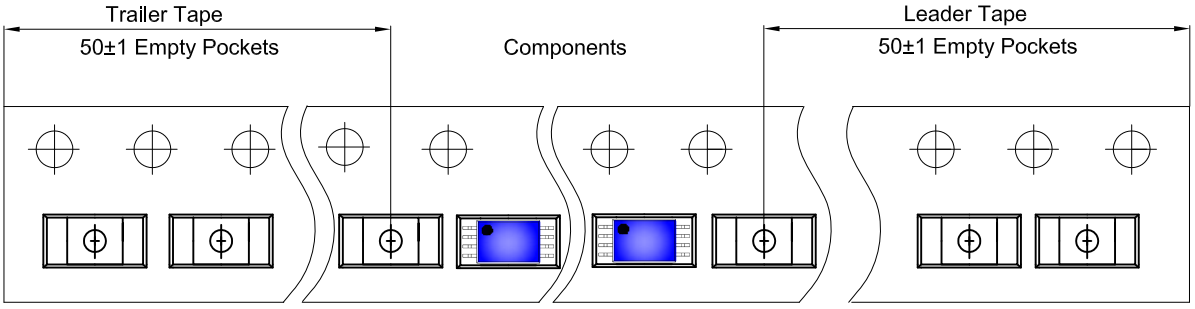
Packaging Description:

TSSOP8 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 3,000 units per 13" or 33cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

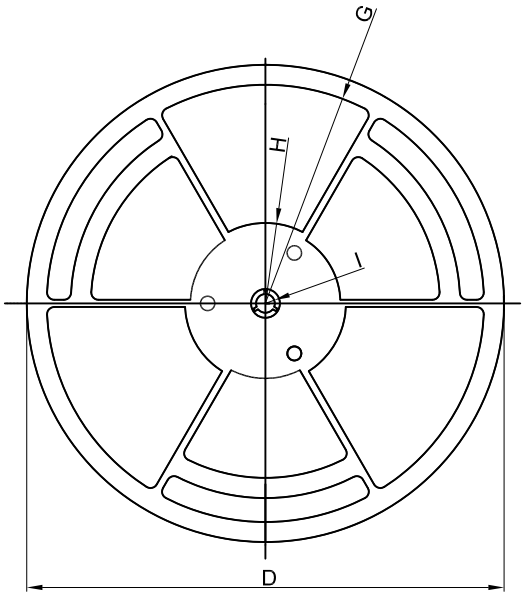
ALL DIM IN mm

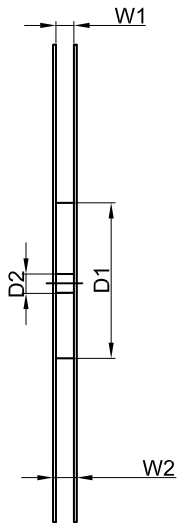
Dimensions are in millimeter										
Pkg type	a	B	C	d	E	F	P0	P	P1	W
TSSOP8	6.76	3.30	1.20	Ø1.50	1.75	5.50	4.00	8.00	2.00	12.00

TSSOP8 Tape Leader and Trailer



TSSOP8 Reel





Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
13"Dia	Ø330.00	100.00	13.00	R151.00	R56.00	R6.50	12.40	17.60

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
3,000 pcs	13 inch	3,000 pcs	336×336×48	24,000 pcs	445×355×365	