SZCJ

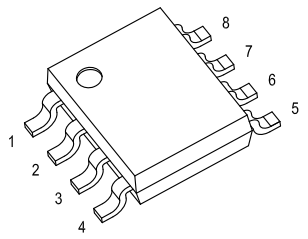
Shenzhen Changji Semiconductor Co., LTD.

SOP8 Plastic-Encapsulate MOSFETS

CJQ9926 Dual N-Channel MOSFET

$V_{(BR)DSS}$	$R_{DS(on)}$TYP	I_D
20V	28mΩ@2.5V	4.8A
	20mΩ@4.5V	

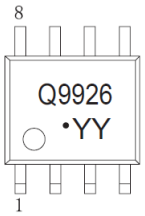
SOP8



FEATURE

- Advanced trench process technology
- High density cell design for ultra low on-resistance
- High power and current handing capability
- Ideal for Liion battery pack applications

MARKING



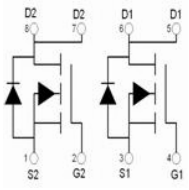
Q9926= Device code

YY=Date Code

Solid dot = Pin1 indicator

Solid dot = Green molding compound device, if none,the normal device.

Equivalent Circuit



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	4.8	A
Pulsed Drain Current	I_{DM} ②	30	A
Power Dissipation	P_D ⑤	1.25	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$ ⑤	100	℃/ W
Junction Temperature	T_J	150	℃
Storage Temperature	T_{stg}	-55~+150	℃

MOSFET ELECTRICAL CHARACTERISTICS

T_a=25℃ unless otherwise specified

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
STATIC 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} =20V,V_{GS} = 0V			1	μA
Gate-body leakage current	I_{GSS}	V_{GS} =±12V, V_{DS} = 0V			±100	nA
Gate threshold voltage ③	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =250μA	0.6	1.0	1.2	V
Drain-source on-resistance ③	$R_{DS(on)}$	V_{GS} =2.5V, I_D =5A		28	40	mΩ
		V_{GS} =4.5V, I_D =6A		20	30	mΩ
Forward transconductance	g_{FS}	V_{DS} =15V, I_D =6A	15			S
DYNAMIC CHARACTERISTICS ③④						
Input Capacitance	C_{lss}	V_{DS}=10V,V_{GS}=0V, f=1.0MHz		640		pF
Output Capacitance	C_{oss}			140		pF
Reverse Transfer Capacitance	C_{rss}			80		pF
SWITCHING CHARACTERISTICS ③④						
Turn-on delay time	$t_{d(on)}$	V_{GEN}=4.5V,V_{DD}=15V, R_{GEN}=6Ω, I_D =1A, R_L=15Ω			35	ns
Turn-on rise time	t_r				60	ns
Turn-off delay time	$t_{d(off)}$				75	ns
Turn-off fall time	t_f				30	ns
Total gate charge	Q_g	V_{DS} =15V,V_{GS} =4.5V,I_D =6A			20	nC
Gate-source Charge	Q_{gs}			3		nC
Gate-drain Charge	Q_{gd}			3.3		nC
SOURCE-DRAIN DIODE CHARACTERISTICS						
Maximum diode forward current	I_S ①				1	A
Diode forward voltage	V_{SD} ③	I_S=1.7A,V_{GS}=0V			1.2	V
Source-Drain Reverse Recovery Time	t_{rr}	I_F = 1.7 A, di/dt = 100 A/μs			80	ns

Notes :

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

2.P_W≤10μs, Duty cycle≤1%.

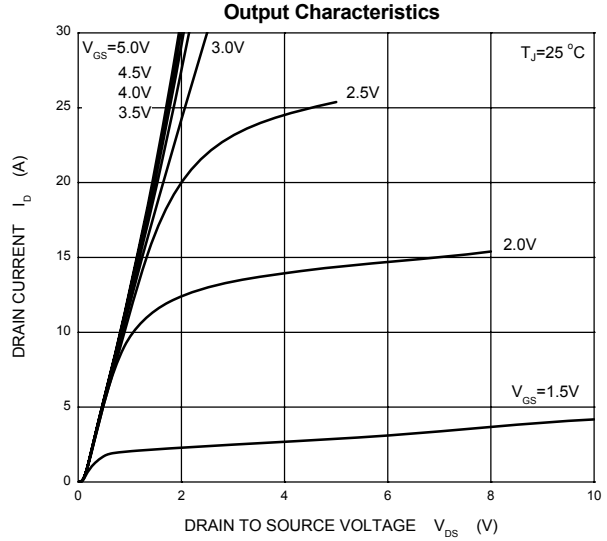
3.Pulse Test : Pulse Width≤300μs, duty cycle ≤2%.

4.Guaranteed by design, not subject to production.

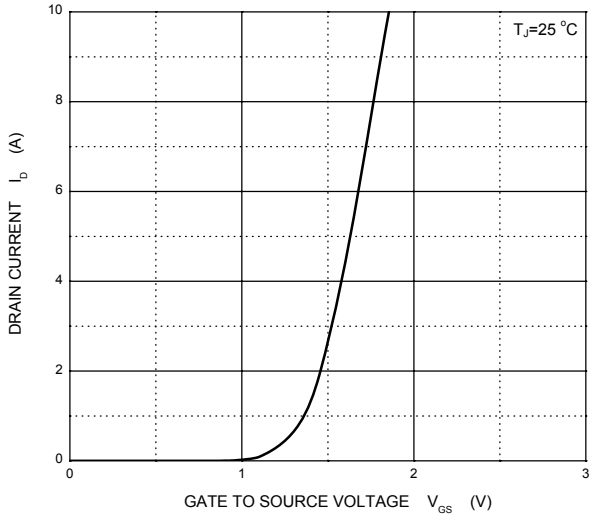
5.The value of $R_{\theta JA}$ is measured with the device mounted on 1 in 2 FR-4 board with 2oz. Copper, in a still air environment with T_a=25℃.

Typical Characteristics

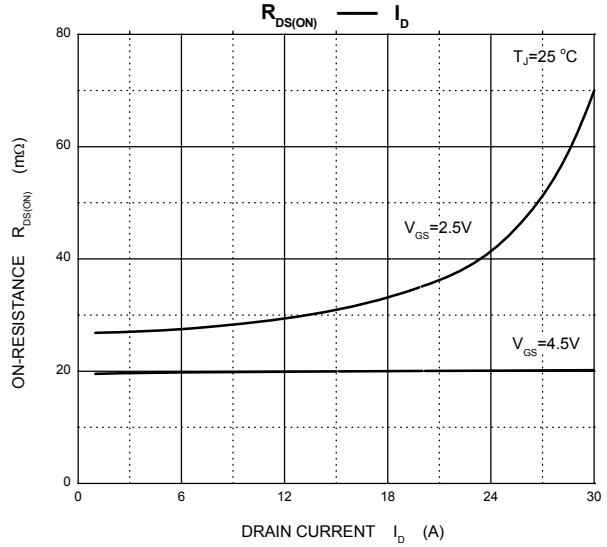
Output Characteristics



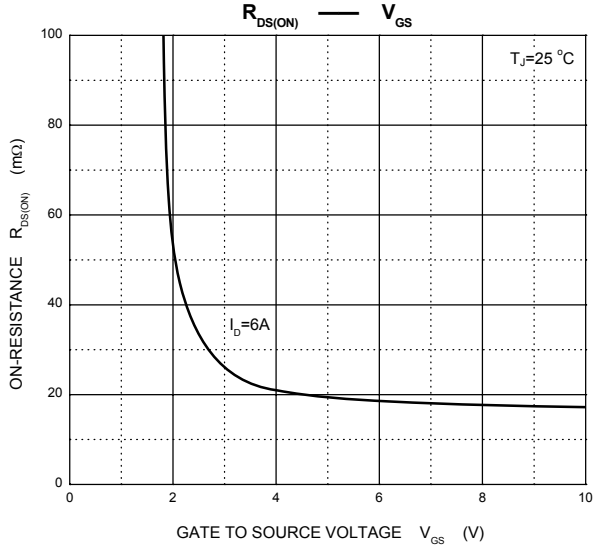
Transfer Characteristics



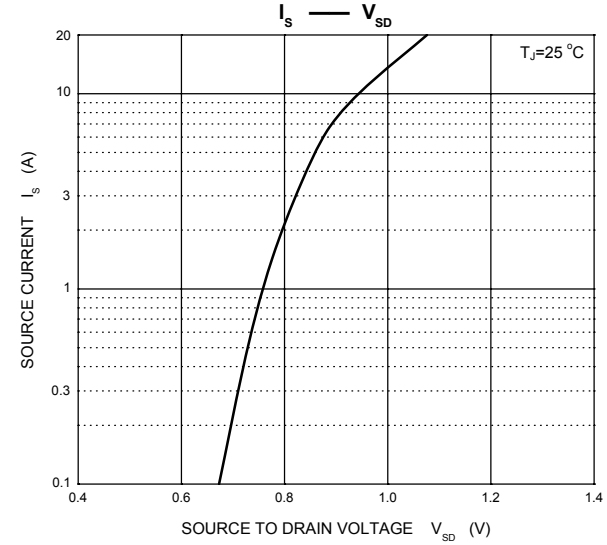
$R_{DS(ON)}$ — I_D



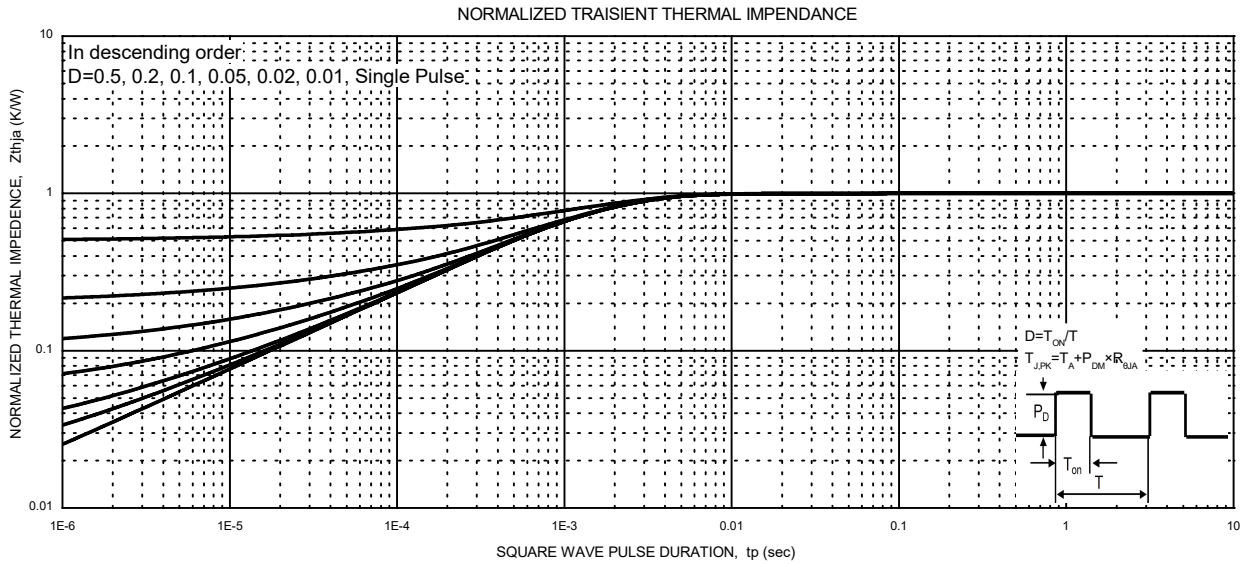
$R_{DS(ON)}$ — V_{GS}

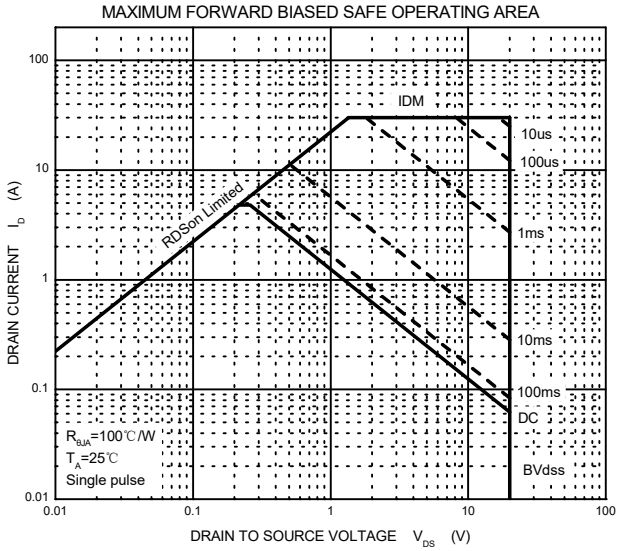


I_S — V_{SD}

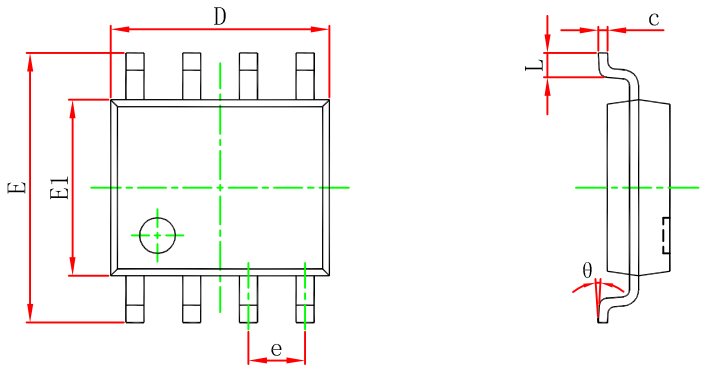


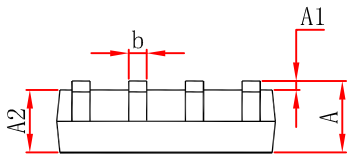
Typical Characteristics





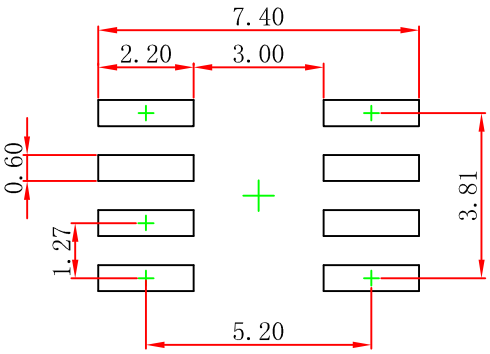
SOP8 Package Outline Dimensions





Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	**Max**	**Min**	**Max**
A	1.450	1.750	0.053	0.069
A1	0.100	0.250	0.004	0.010
A2	1.350	1.550	0.053	0.061
b	0.330	0.510	0.013	0.020
c	0.170	0.250	0.007	0.010
D	4.700	5.100	0.185	0.201
e	1.270（BSC）		0.050（BSC）	
E	5.800	6.200	0.228	0.244
E1	3.800	4.000	0.150	0.157
L	0.400	1.270	0.016	0.050
θ	0°	8°	0°	8°

SOP8 Suggested Pad Layout



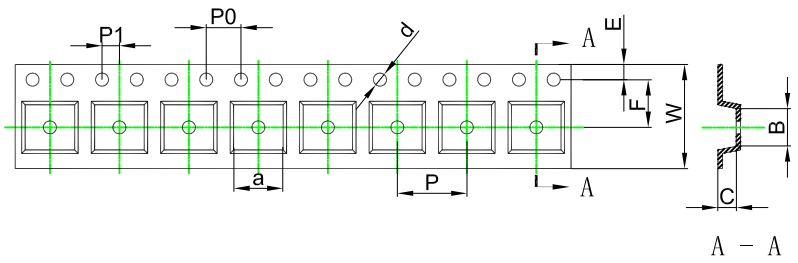
Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.

NOTICE

SZCJ reserves the right to make modifications,enhan nts,improvements,corrections or other es without further notice to any product herein. SZCJ does not assume any liability arising out of the application or use of any product described h

SOP8 Tape and Reel

SOP8 Embossed Carrier Tape



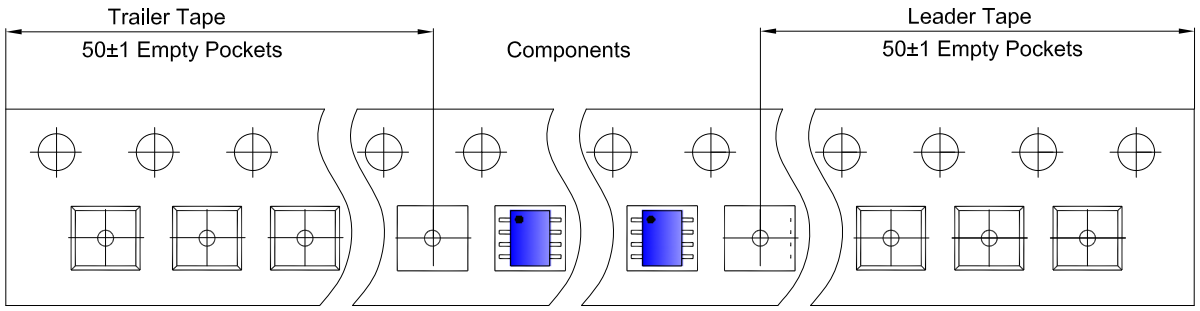
Packaging Description:

SOP8 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 4,000 units per 13" or 33cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

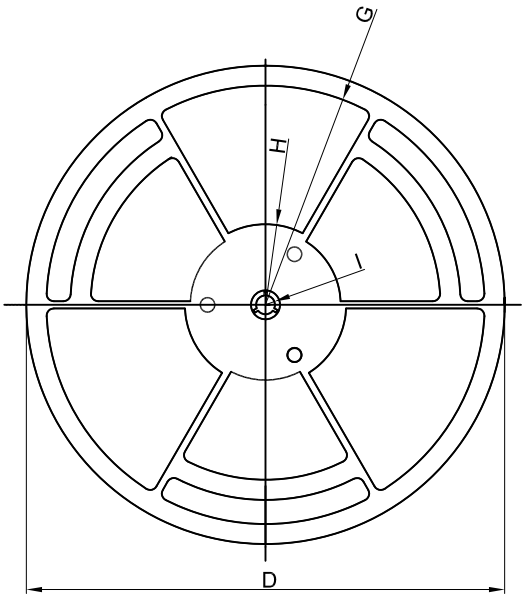
ALL DIM IN mm

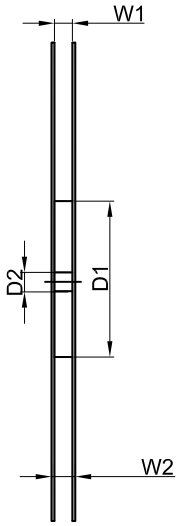
Dimensions are in millimeter										
Pkg type	a	B	C	d	E	F	P0	P	P1	W
SOP8	6.40	5.40	2.10	Ø1.50	1.75	5.50	4.00	8.00	2.00	12.00

SOP8 Tape Leader and Trailer



SOP8 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)
4,000 pcs	13 inch	8,000 pcs	360×360×65	40,000 pcs	378×358×382	