SZCJ

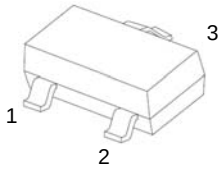
Shenzhen Changji Semiconductor Co., LTD.

SOT-23-3L Plastic-Encapsulate MOSFETS

CJK2009 P-Channel Enhancement Mode Field Effect Transistor

$V_{(BR)DSS}$	$R_{DS(on)}$MAX	I_D
-20V	25mΩ@-4.5V	-9A
	40mΩ@-2.5V	

SOT-23-3L



1. GATE
2. SOURCE
3. DRAIN

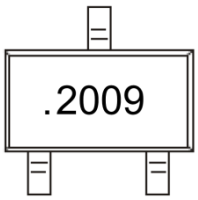
Feature

- Advanced trench MOSFET process technology
- Ultra low on-resistance with low gate charge

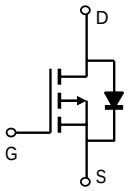
Application

- PWM application
- Load switch
- Battery charge in cellular handset

MARKING



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	-9	A
Power Dissipation	P_D	450	mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	278	℃/W
Operation Junction and Storage Temperature Range	T_J,T_{STG}	-55~+150	℃

MOSFET ELECTRICAL CHARACTERISTICS

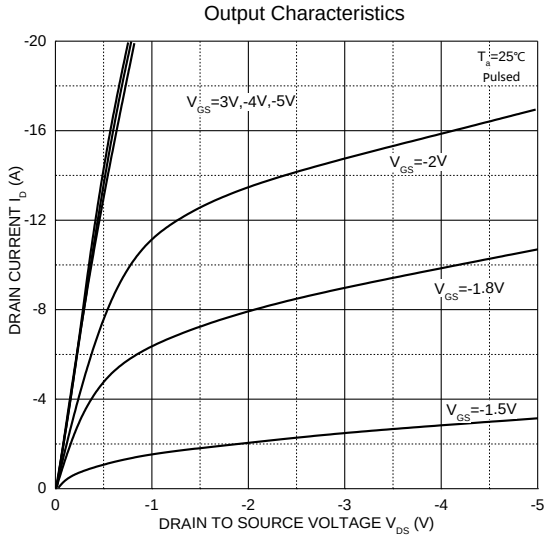
T_a=25℃ unless otherwise specified

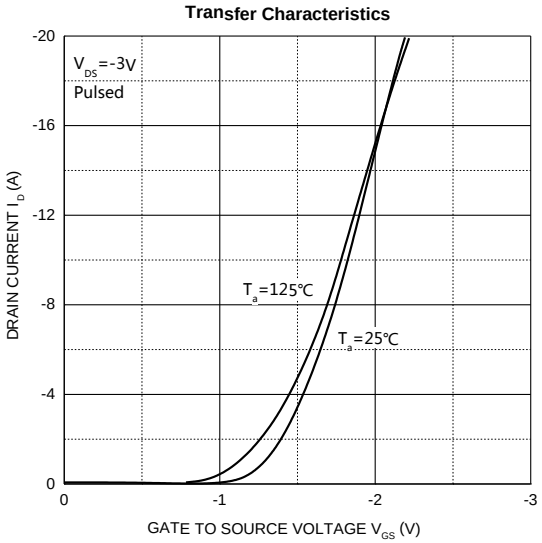
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Off characteristics						
Drain-source breakdown voltage	$V_{(BR)DSS}$	V_{GS} = 0V, I_D =-250μA	-20			V
Zero gate voltage drain current	I_{DSS}	V_{DS} =-20V,V_{GS} = 0V			-1	μA
Gate-source leakage current	I_{GSS}	V_{GS} =±12V, V_{DS} = 0V			±100	nA
On characteristics						
Drain-source on-resistance (note 1)	$R_{DS(on)}$	V_{GS} =-4.5V, I_D =-6A		16	25	mΩ
		V_{GS} =-2.5V, I_D =-6A		30	40	mΩ
Forward tranconductance (note 1)	g_{FS}	V_{DS} =-5V, I_D =-6A	9	17		S
Gate threshold voltage	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =-250μA	-0.4	-0.6	-1.2	V
Dynamic characteristics (note 2)						
Input capacitance	C_{iss}	V_{DS} =-10V,V_{GS} =0V,f =1MHz		2600		pF
Output capacitance	C_{oss}			670		pF
Reverse transfer capacitance	C_{rss}			580		pF
Switching characteristics (note 2)						
Turn-on delay time	$t_{d(on)}$	V_{DD}=-10V,V_{GEN}=-4.5V, I_D =-1A,R_g=10Ω			11	ns
Turn-on rise time	t_r				35	ns
Turn-off delay time	$t_{d(off)}$				30	ns
Turn-off fall Time	t_f				10	ns
Drain-source diode characteristics and maximum ratings						
Diode forward voltage (note 1)	V_{SD}	V_{GS} =0V, I_S=-2A		-0.75	-1.2	V

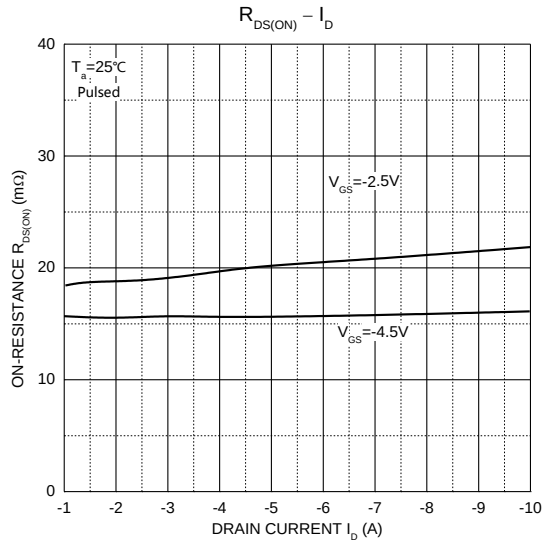
Note :

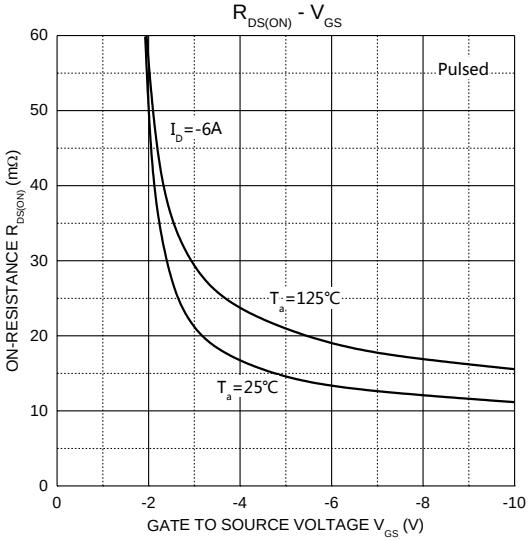
1. Pulse Test : Pulse width≤300μs, duty cycle≤2%.
2. These parameters have no way to verify.

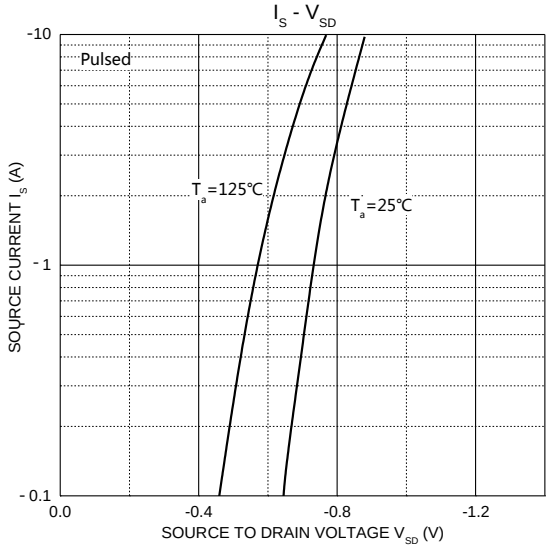
Typical Characteristics

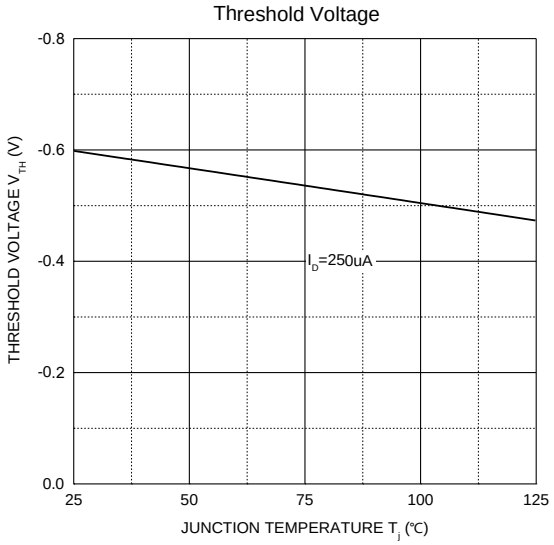




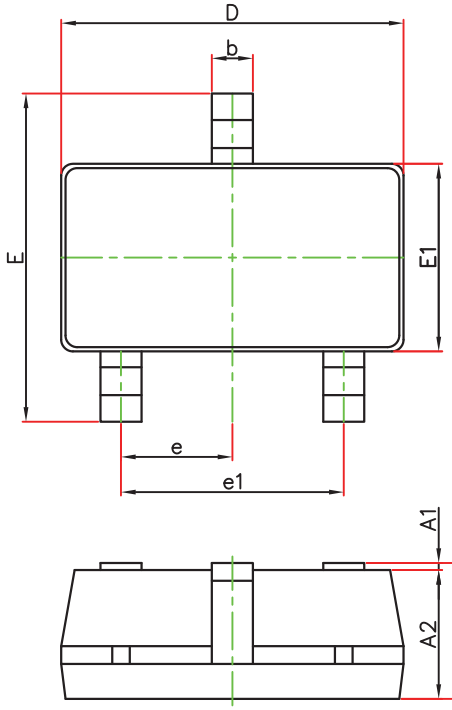


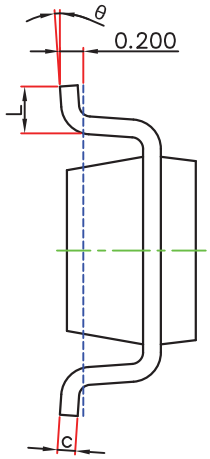






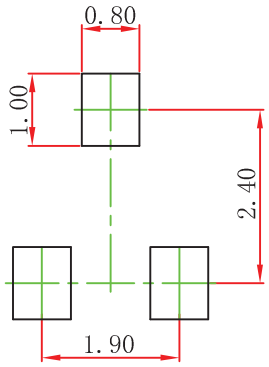
SOT-23-3L Package Outline Dimensions





Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E1	1.500	1.700	0.059	0.067
E	2.650	2.950	0.104	0.116
e	0.950(BSC)		0.037(BSC)	
e1	1.800	2.000	0.071	0.079
L	0.300	0.600	0.012	0.024
K	0°	8°	0°	8°

SOT-23-3L Suggested Pad Layout



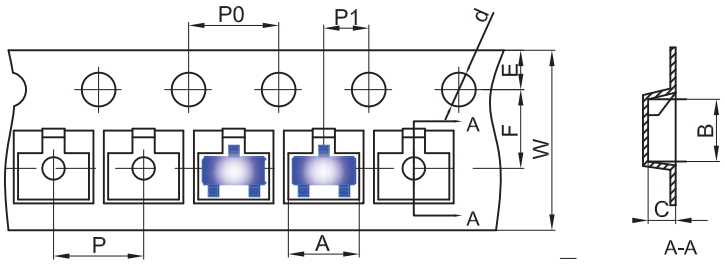
Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.

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

SOT-23-3L Tape and Reel

SOT-23-3L Embossed Carrier Tape

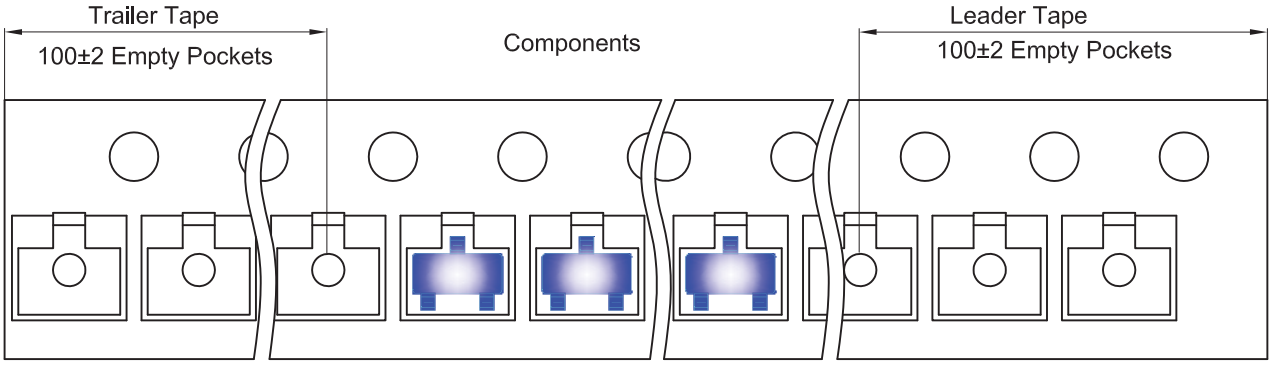


Packaging Description:

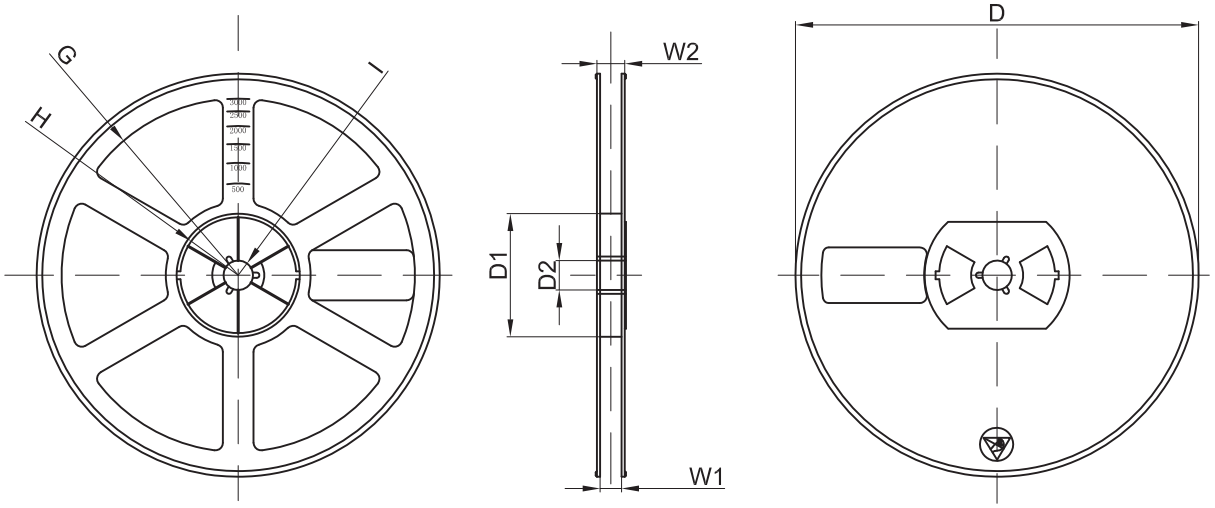
SOT-23-3L parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 3,000 units per 7" or 18.0cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-23-3L	3.18	3.28	1.32	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

SOT-23-3L Tape Leader and Trailer



SOT-23-3L Reel



Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
7"Dia	Ø180.00	60.00	13.00	R78.00	R25.60	R6.50	9.50	13.10

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
3000 pcs	7 inch	30,000 pcs	203×203×195	120,000 pcs	438×438×220	