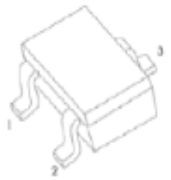
SZCJ Shenzhen Changji Semiconductor Co., LTD.

SOT-523 Plastic-Encapsulate MOSFETS

2SK3019A N-channel MOSFET

$V_{(BR)DSS}$	$R_{DS(on)}$TYP	I_D
30V	0.88q @4V	100mA
	1.4q @2.5V	

SOT-523



1. GATE
2. SOURCE
3. DRAIN

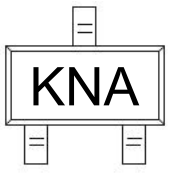
FEATURE

- Low on-resistance
- Fast switching speed
- Low voltage drive makes this device ideal for Portable equipment
- Easily designed drive circuits
- Easy to parallel

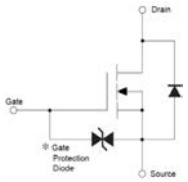
APPLICATION

- Interfacing , Switching

MARKING



Equivalent Circuit



Maximum ratings (T_a=25℃ unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-source voltage	V_{DS}	30	V
Gate-source voltage	V_{GS}	Ñ20	
Continuous drain current	I_D	100	mA
Power dissipation	P_D ③	0.63	W
Thermal resistance from junction to ambient	R_{dJA} ③	200	℃/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
Drain-source breakdown voltage	$V_{(BR)\ DSS}$	V_{GS} = 0V, I_D =10μA	30			V
Gate-source leakage current	I_{GSS}	V_{DS} =0V, V_{GS} =±20V			±2	μA
Zero gate voltage drain current	I_{DSS}	V_{DS} =30V, V_{GS} =0V			1.0	μA
Gate threshold voltage	$V_{GS(th)}$ ②	V_{DS} =3V, I_D =100μA	0.7	0.88	1.5	V
Static drain-source on-state resistance	$R_{DS(on)}$ ②	V_{GS} =4V, I_D =10mA		0.88	2	Ω
		V_{GS} =2.5V, I_D =1mA		1.4	3	
Forward transconductance	g_{FS}	V_{DS} =3V, I_D =10mA	20	101		mS
Input capacitance	C_{iss} ②	V_{DS} =5V,V_{GS} =0V,f =1MHz		30		pF
Output capacitance	C_{oss} ②			10		
Reverse transfer capacitance	C_{rss} ②			4		
Turn-on delay time	$t_{d(on)}$ ②	V_{GS}=10V,V_{DD}=2V, R_L=20Ω,R_G=10Ω		24		ns
Rise time	t_r ②			30		
Turn-off delay time	$t_{d(off)}$ ②			38		
Fall time	t_f ②			20		

Notes:

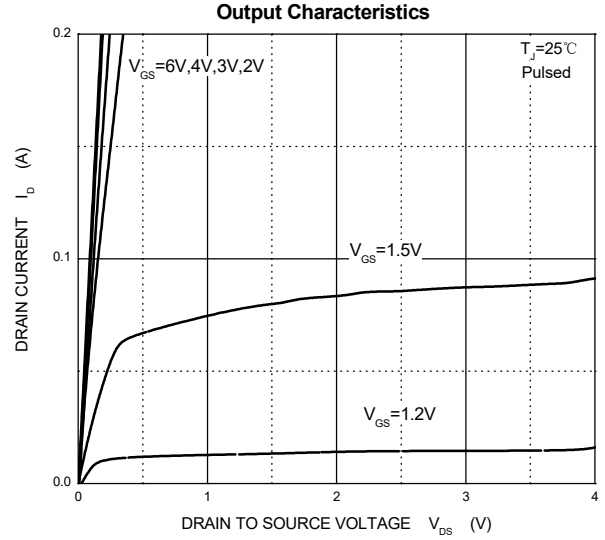
1.P_W≤10μs, Duty cycle≤1%.

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

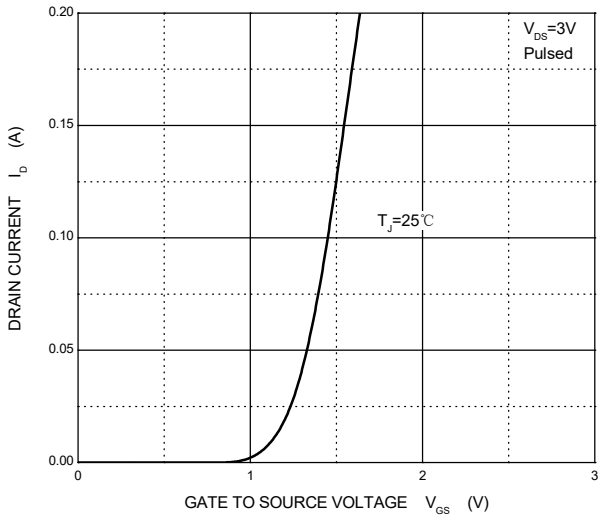
3.The value of $R_{\theta JA}$ is measured with the device mounted on 1 in^2 FR-4 board with 1oz. Copper, in a still air environment with T_a=25℃.

Typical Characteristics

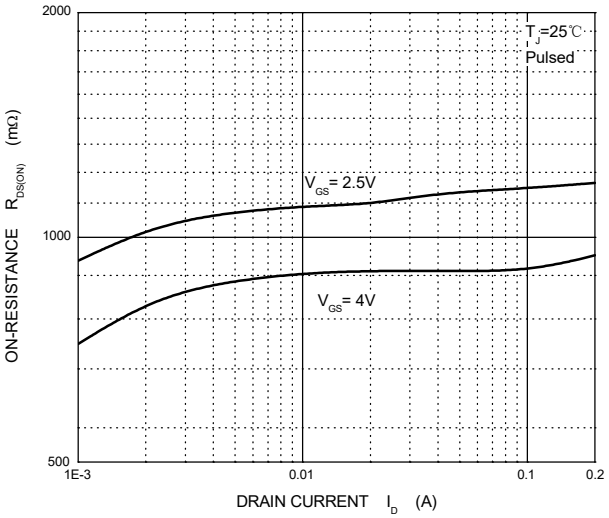
Output Characteristics



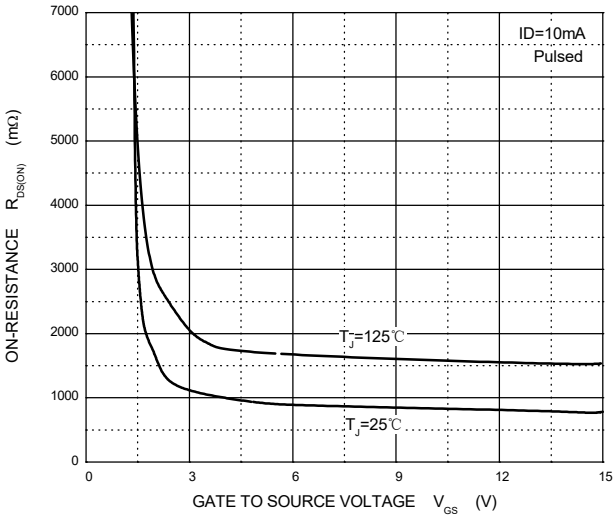
Transfer Characteristics



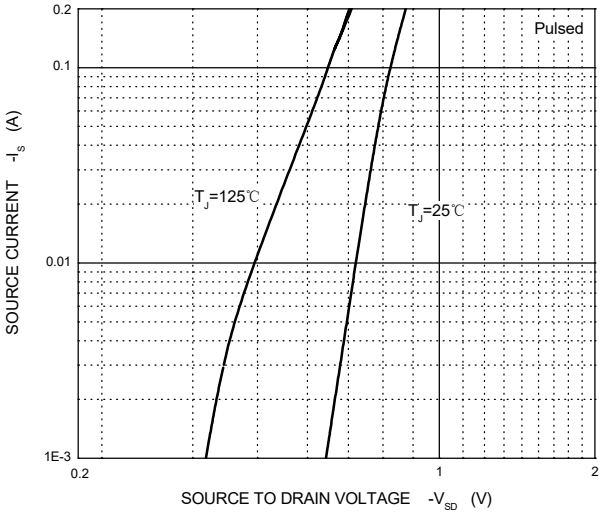
$R_{DS(ON)}$ —— I_D



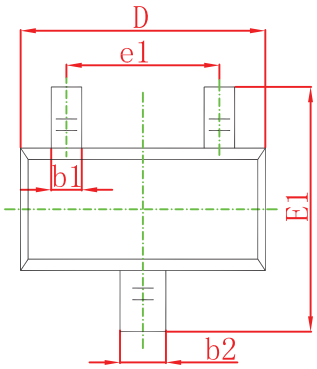
$R_{DS(ON)}$—— V_{GS}

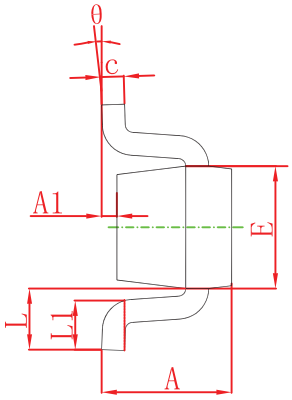


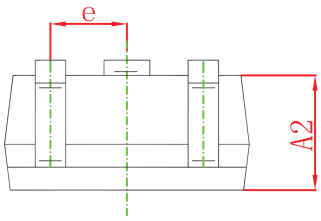
I_S —— V_{SD}



SOT-523 Package Outline Dimensions

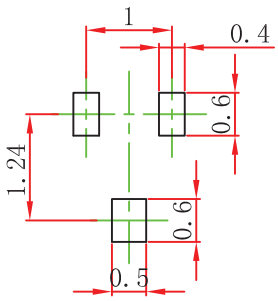






Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.700	0.900	0.028	0.035
A1	0.000	0.100	0.000	0.004
A2	0.700	0.800	0.028	0.031
b1	0.150	0.250	0.006	0.010
b2	0.250	0.350	0.010	0.014
c	0.100	0.200	0.004	0.008
D	1.500	1.700	0.059	0.067
E	0.700	0.900	0.028	0.035
E1	1.450	1.750	0.057	0.069
e	0.500 TYP.		0.020 TYP.	
e1	0.900	1.100	0.035	0.043
L	0.400 REF.		0.016 REF.	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°

SOT-523 Suggested Pad Layout

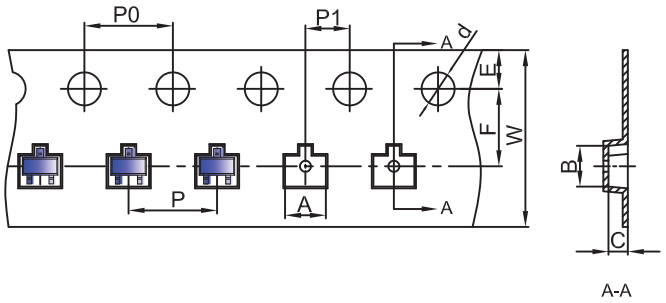


Note:
1.Controlling dimension:in millimeters.
2.General tolerance:±0.05mm.
3.The pad layout is for reference purposes only.

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-523 Embossed Carrier Tape

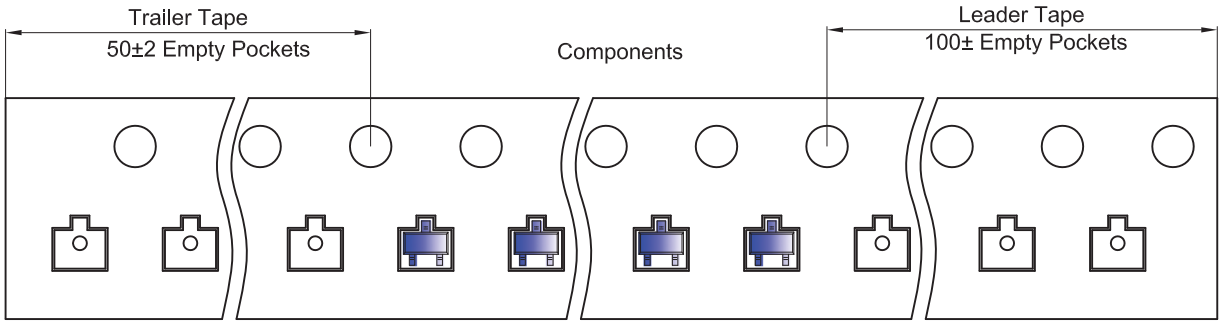


Packaging Description:

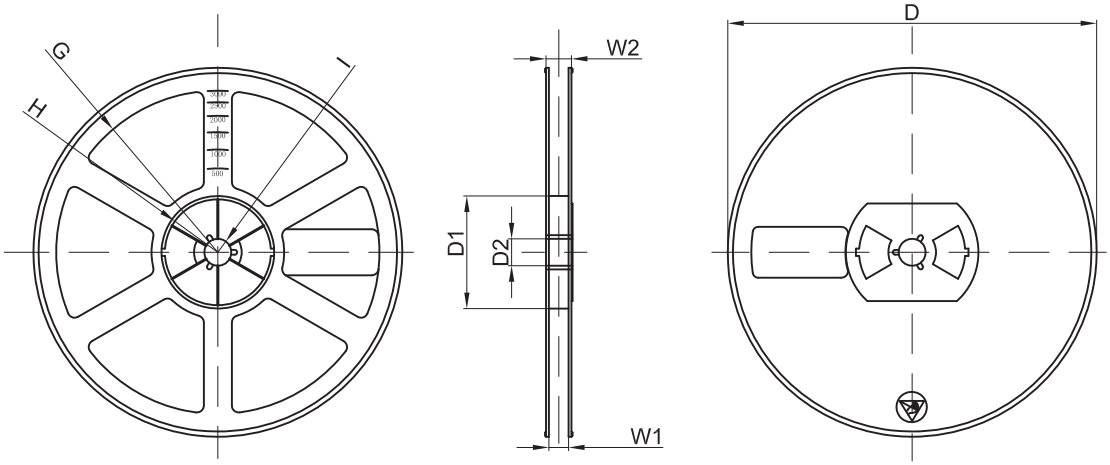
SOT-523 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 3,000 units per 7" or 17.8cm 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-523	1.85	1.85	0.875	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

SOT-523 Tape Leader and Trailer



SOT-523 Reel



Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
7"Dia	Ø178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
3000 pcs	7 inch	45,000 pcs	203×203×195	180,000 pcs	438×438×220	