

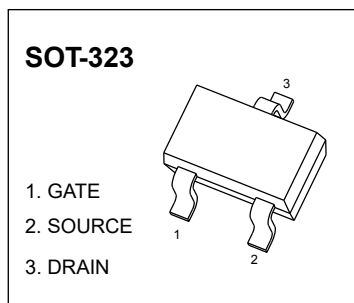


JIANGSU CHANGJING ELECTRONICS TECHNOLOGY CO., LTD.

SOT-323 Plastic-Encapsulate MOSFETS

2SK3018A N-channel MOSFET

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



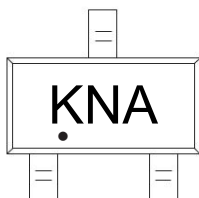
FEATURE

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

APPLICATION

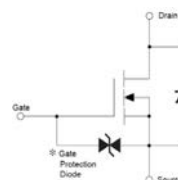
- Interfacing , Switching

MARKING



KNA=Device code
Solid dot = Green molding compound device

Equivalent Circuit



Maximum ratings ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-source voltage	V_{DS}	30	V
Gate-source voltage	V_{GS}	≤ 20	
Continuous drain current	I_D	100	mA
Power dissipation	P_D ③	0.63	W
Thermal resistance from junction to ambient	$R_{\theta JA}$ ③	200	$^{\circ}\text{C/W}$
Operation Junction and Storage Temperature Range	T_J, T_{stg}	-55 ~ +150	$^{\circ}\text{C}$

MOSFET ELECTRICAL CHARACTERISTICS

$T_a=25\text{ }^{\circ}\text{C}$ unless otherwise specified

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = 10\mu A$	30			V
Gate-source leakage current	I_{GSS}	$V_{DS} = 0V, V_{GS} = \pm 20V$			± 2	μA
Zero gate voltage drain current	I_{DSS}	$V_{DS} = 30V, V_{GS} = 0V$			1.0	μA
Gate threshold voltage	$V_{GS(th)}^{(2)}$	$V_{DS} = 3V, I_D = 100\mu A$	0.65	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	$t_{d(on)}^{(2)}$	$V_{GS} = 10V, V_{DD} = 2V,$ $R_L = 20\Omega, R_G = 10\Omega$		24		ns
Rise time	$t_r^{(2)}$			30		
Turn-off delay time	$t_{d(off)}^{(2)}$			38		
Fall time	$t_f^{(2)}$			20		

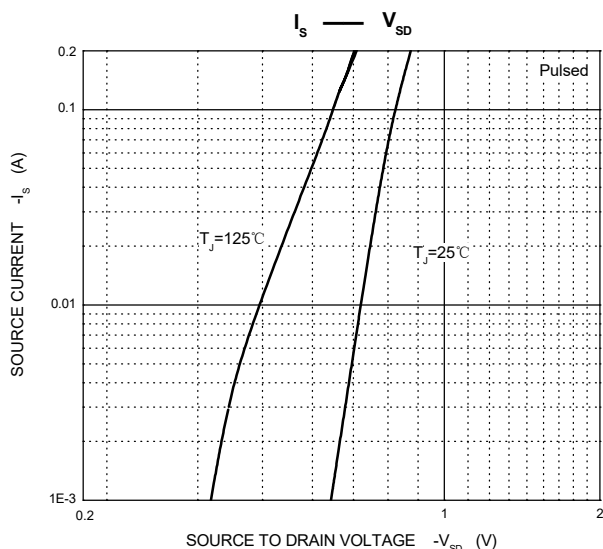
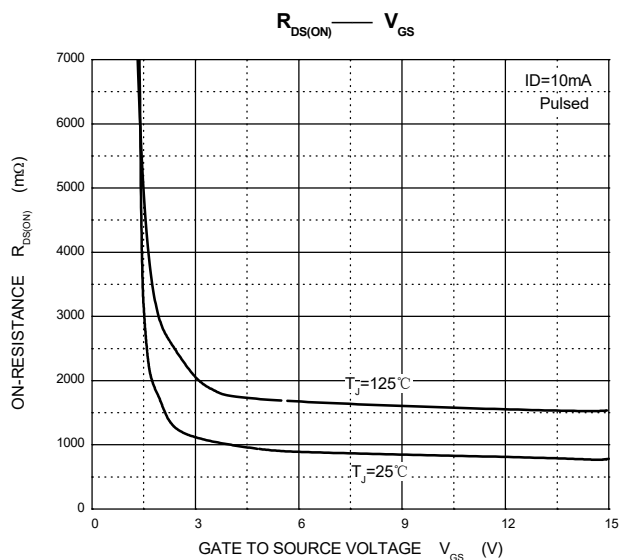
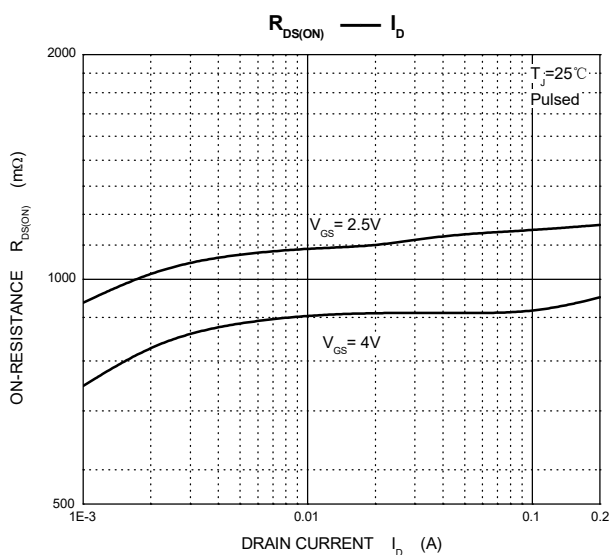
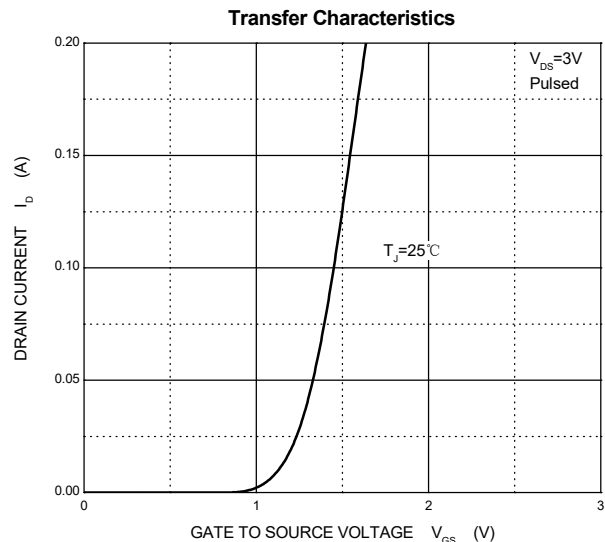
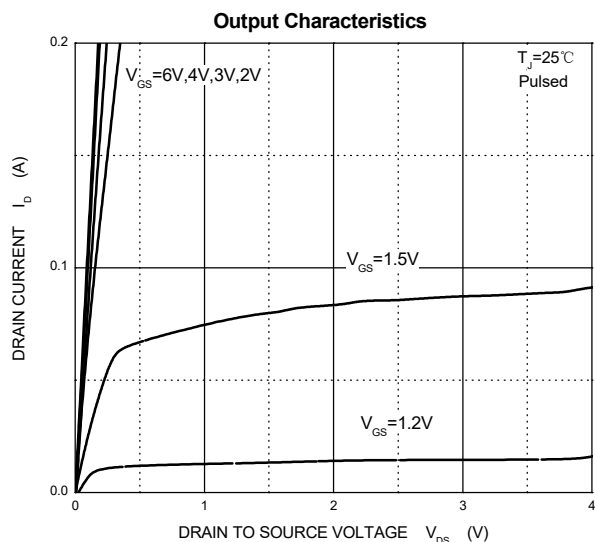
Notes:

1. $P_W \leq 10\mu s$, Duty cycle $\leq 1\%$.

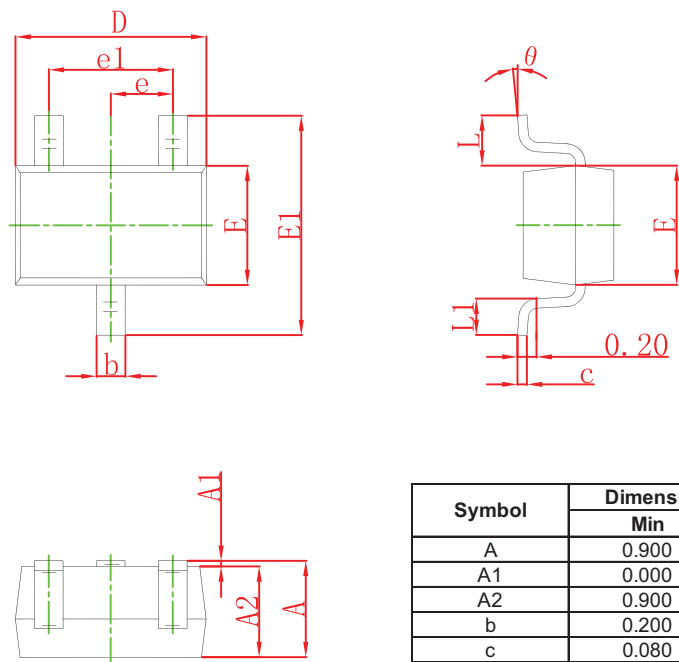
2. Pulse Test : Pulse Width $\leq 300\mu s$, duty cycle $\leq 2\%$.

3. The value of $R_{\theta JA}$ is measured with the device mounted on 1 in² FR-4 board with 1oz. Copper, in a still air environment with $T_a = 25\text{ }^{\circ}\text{C}$.

Typical Characteristics

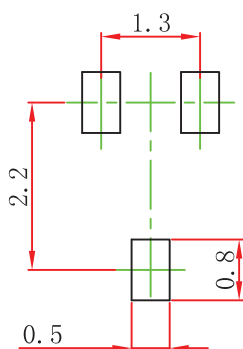


SOT-323 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.200	0.400	0.008	0.016
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.450	0.085	0.096
e	0.650 TYP		0.026 TYP	
e1	1.200	1.400	0.047	0.055
L	0.525 REF		0.021 REF	
L1	0.260	0.460	0.010	0.018
theta	0°	8°	0°	8°

SOT-323 Suggested Pad Layout



Note:

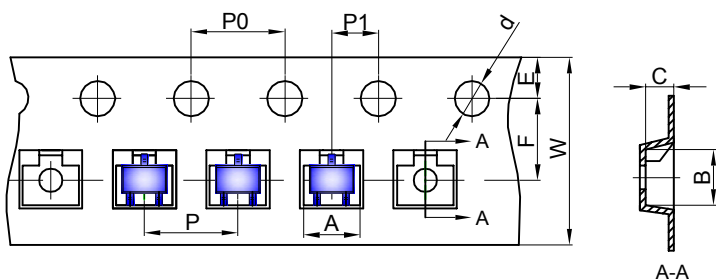
1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.05 mm.
3. The pad layout is for reference purposes only.

NOTICE

JSCJ reserve the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. JSCJ does not assume any liability arising out of the application or use of any product described herein.

SOT-323 Tape and reel

SOT-323 Embossed Carrier Tape

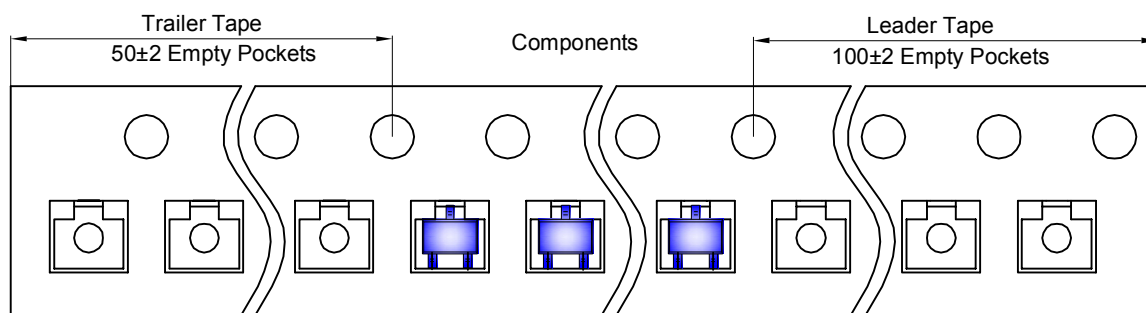


Packaging Description:

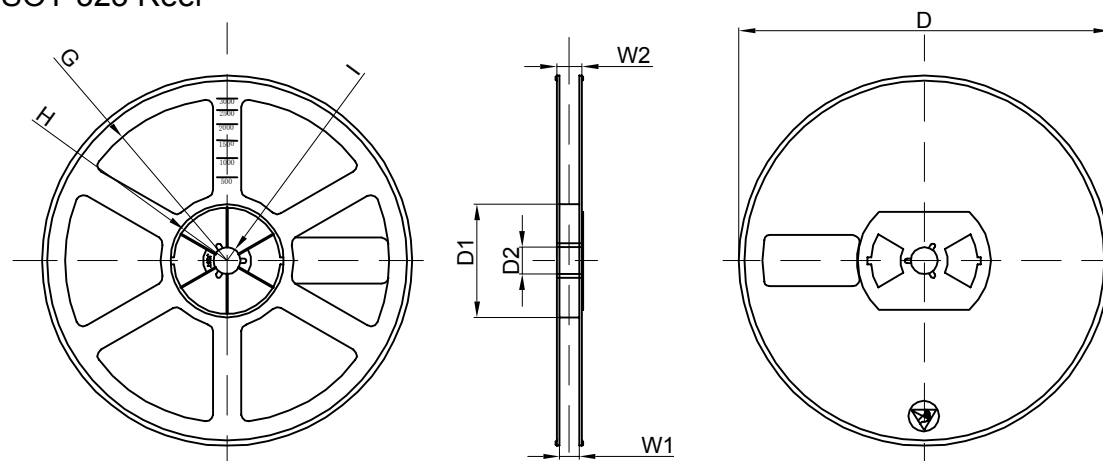
SOT-323 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts 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-323	2.25	2.55	1.19	Ø1.55	1.75	3.50	4.00	4.00	2.00	8.00

SOT-323 Tape Leader and Trailer



SOT-323 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	