

## 2SK3018T

### 30V N-Channel MOSFET

100mA 30V;  $R_{DS(ON)typ}=1.1\Omega@4.5V$ ,  $R_{DS(ON)typ}=1.5\Omega@2.5V$ ,

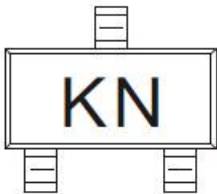
#### FEATURE

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

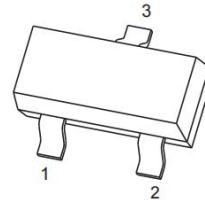
#### Application

- Interfacing , Switching

#### MARKING:

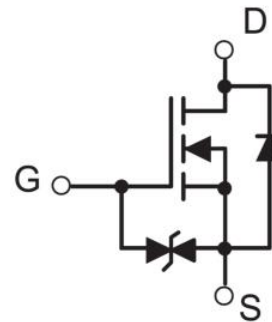


#### SOT-23



1. GATE
2. SOURCE
3. DRAIN

#### Schematic diagram



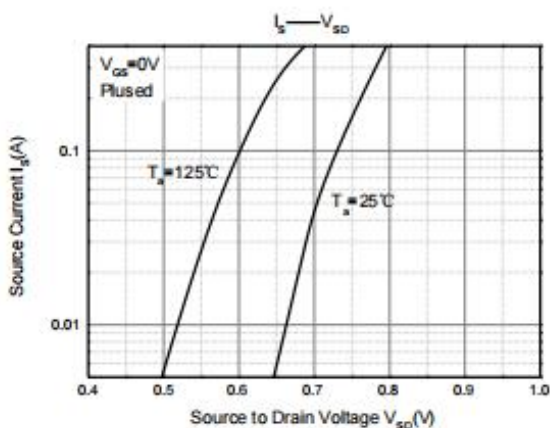
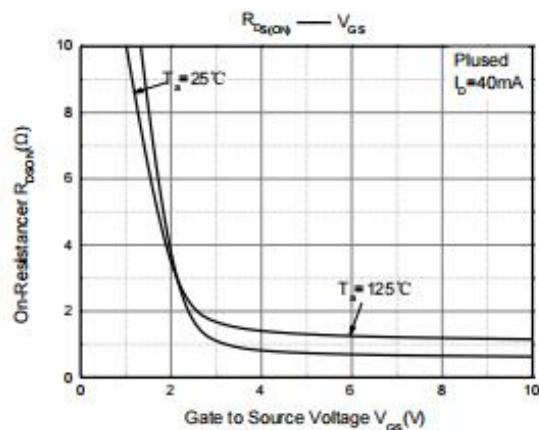
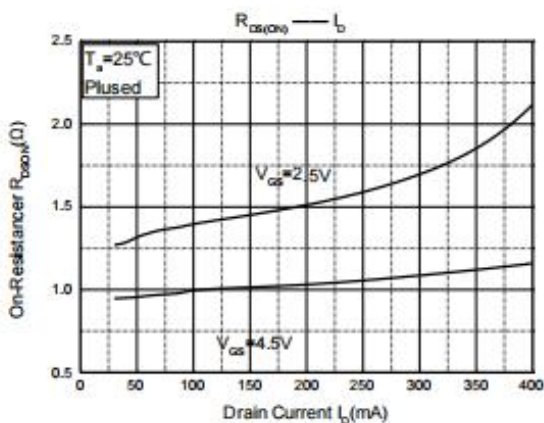
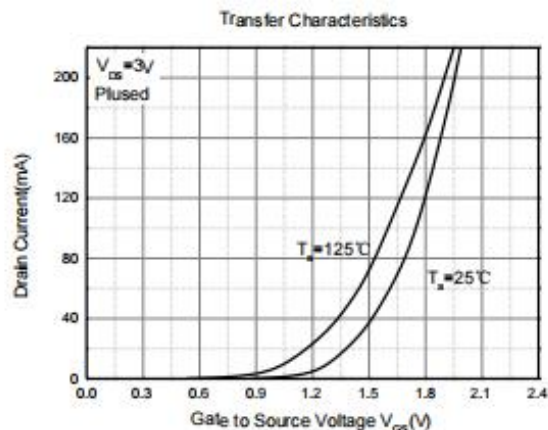
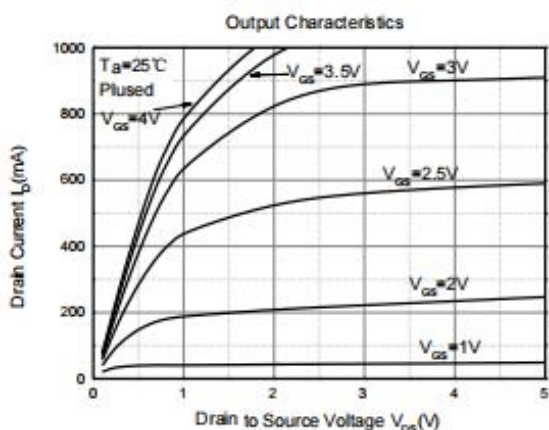
#### ABSOLUTE MAXIMUM RATINGS ( $T_a=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	$V_{DS}$	30	V
Gate-Source Voltage	$V_{GS}$	$\pm 20$	V
Continuous Drain Current	$I_D$	100	mA
Power Dissipation	$P_D$	0.35	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	357	$^\circ\text{C}/\text{W}$
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature	$T_{STG}$	-55~ +150	$^\circ\text{C}$

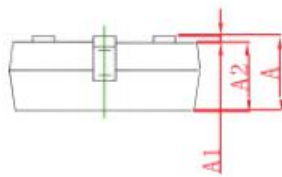
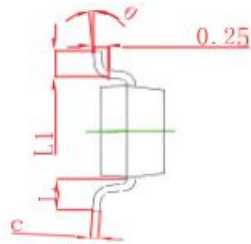
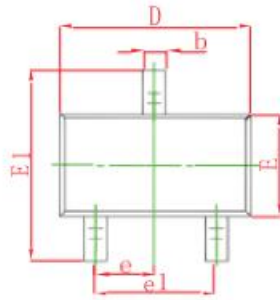
**MOSFET ELECTRICAL CHARACTERISTICS(T<sub>a</sub>=25°C unless otherwise noted)**

Parameter	Symbol	Test Condition	Min	Type	Max	Unit
<b>STATIC CHARACTERISTICS</b>						
Drain-source breakdown voltage	V <sub>(BR)DSS</sub>	V <sub>GS</sub> = 0V, I <sub>D</sub> = 10μA	30			V
Zero gate voltage drain current	I <sub>DSS</sub>	V <sub>DS</sub> = 30V, V <sub>GS</sub> = 0V			0.2	μA
Gate-body leakage current	I <sub>GSS</sub>	V <sub>GS</sub> = ±20V, V <sub>DS</sub> = 0V			±2	μA
Gate threshold voltage	V <sub>GS(th)</sub>	V <sub>DS</sub> = V <sub>GS</sub> , I <sub>D</sub> = 250μA	0.6		1.5	V
Drain-source on-resistance	R <sub>DS(on)</sub>	V <sub>GS</sub> = 4.5V, I <sub>D</sub> = 10mA		1.1	3.0	Ω
		V <sub>GS</sub> = 2.5V, I <sub>D</sub> = 1mA		1.5	4.2	
Forward tranconductance	g <sub>FS</sub>	V <sub>DS</sub> = 3V, I <sub>D</sub> = 10mA	20			mS
<b>DYNAMIC CHARACTERISTICS</b>						
Input Capacitance	C <sub>iss</sub>	V <sub>DS</sub> = 5V, V <sub>GS</sub> = 0V, f = 1MHz		13		pF
Output Capacitance	C <sub>oss</sub>			9		
Reverse Transfer Capacitance	C <sub>rss</sub>			4		
<b>SWITCHING CHARACTERISTICS</b>						
Turn-on delay time	t <sub>d(on)</sub>	V <sub>GS</sub> = 5V, V <sub>DD</sub> = 5V, I <sub>D</sub> = 10mA, R <sub>g</sub> = 10Ω, R <sub>L</sub> = 500Ω,		15		ns
Turn-on rise time	t <sub>r</sub>			35		
Turn-off delay time	t <sub>d(off)</sub>			80		
Turn-off fall time	t <sub>f</sub>			80		

**Typical Electrical and Thermal Characteristics**



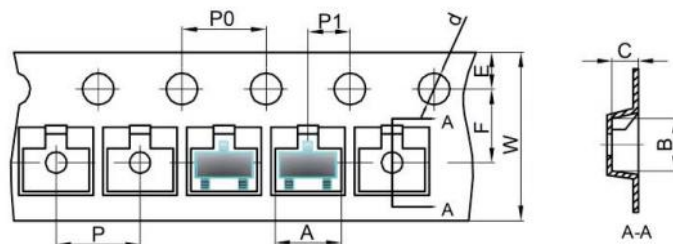
**SOT-23 Package Information**



6IPERO	'LPHQVLRQV ,Q 0LOOLPHWHUV		'LPHQVLRQV ,Q,QFKHV	
	0LQ	0D[	0LQ	0D[
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
φ	0°	8°	0°	8°

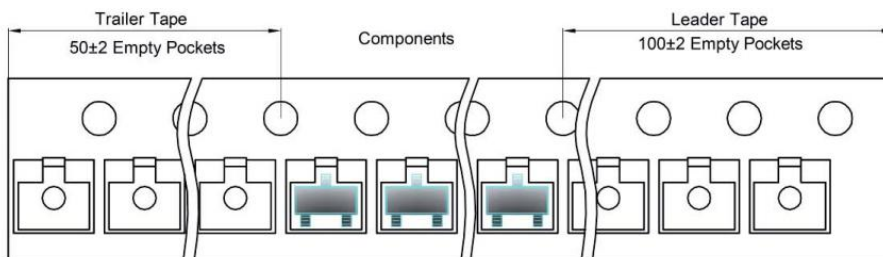
## SOT-23 Tape and Reel

### SOT-23 Embossed Carrier Tape

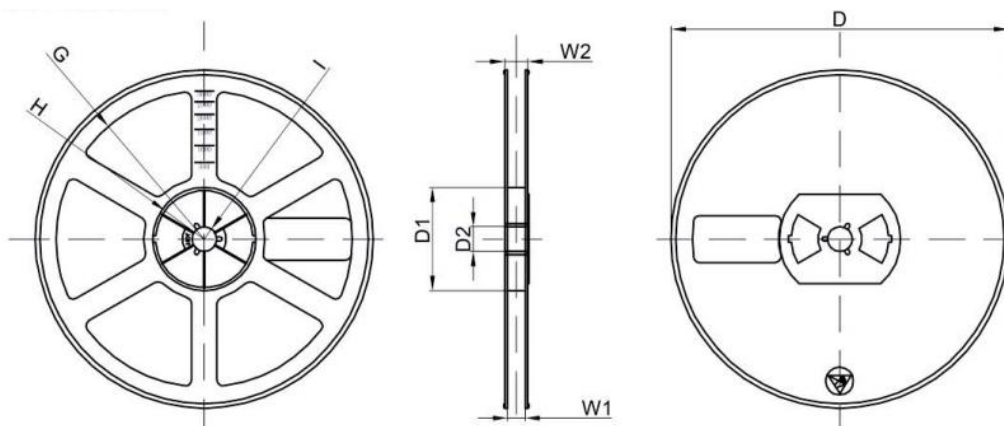


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-23	3.15	2.77	1.22	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

### SOT-23 Tape Leader and Trailer



### SOT-23 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	30,000 pcs	203×203×195	120,000 pcs	438×438×220	