

## 2SK3541

### 30V N-Channel MOSFET

100mA 30V;  $R_{DS(ON)typ}=1.1\Omega@4V$ ,  $R_{DS(ON)typ}=1.4\Omega@2.5V$ ,

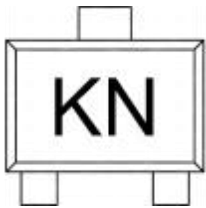
#### FEATURE

- High density cell design for Low  $R_{DS(on)}$
- Voltage controlled small signal switch
- Rugged and reliable
- Parallel use is easy
- ESD protected

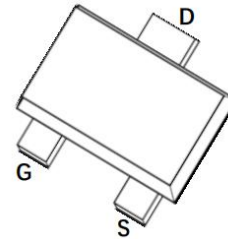
#### Application

- Load Switch for Portable Devices
- Battery Switch

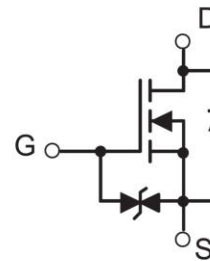
#### MARKING:



#### SOT-723



#### Schematic diagram



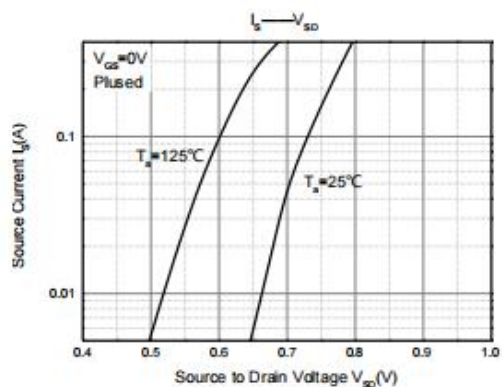
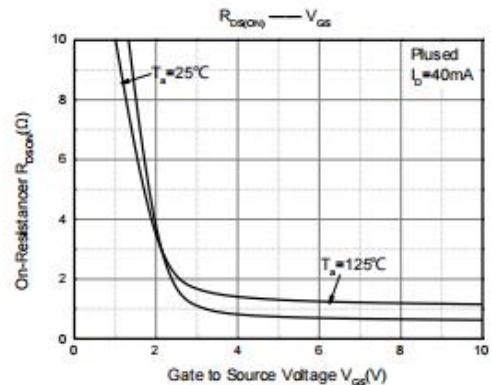
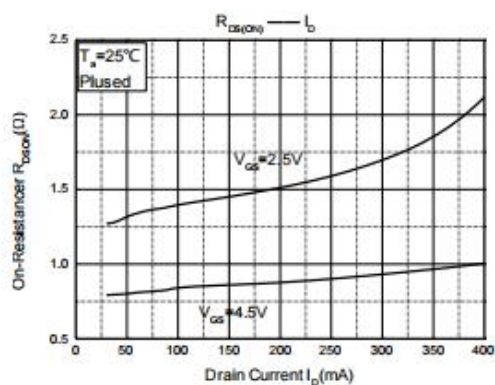
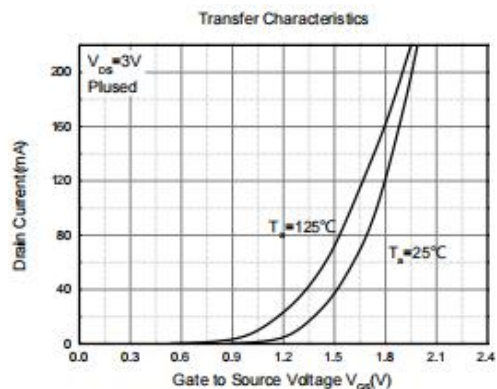
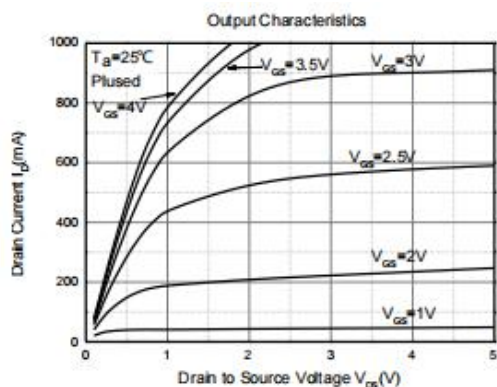
#### ABSOLUTE MAXIMUM RATINGS ( $T_a=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	$V_{DS}$	30	V
Gate-Source Voltage	$V_{GS}$	$\pm 20$	V
Continuous Drain Current	$I_D$	$\pm 100$	mA
Power Dissipation	$P_D$	0.15	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	833	$^\circ\text{C/W}$
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature	$T_{STG}$	-55~+150	$^\circ\text{C}$

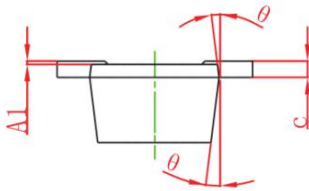
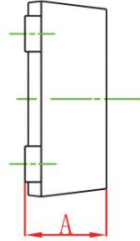
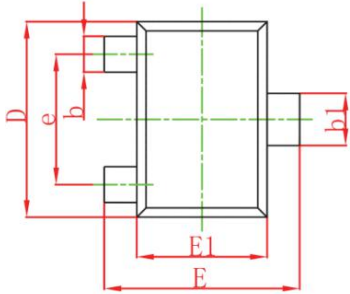
**MOSFET ELECTRICAL CHARACTERISTICS(T<sub>a</sub>=25°C unless otherwise noted)**

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			1	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> = 4V, I <sub>D</sub> = 10mA		1.1	3.0	Ω
		V <sub>GS</sub> = 2.5V, I <sub>D</sub> = 1mA		1.4	4.2	
Forward tranconductance	g <sub>FS</sub>	V <sub>DS</sub> = 3V, I <sub>D</sub> = 10mA	20			mS
<b>DYNAMIC CHARACTERISTICS</b>						
Gate Resistance	R <sub>g</sub>	f = 1MHz		160		Ω
Input Capacitance	C <sub>iss</sub>	V <sub>DS</sub> = 15V, V <sub>GS</sub> = 0V, f = 1MHz		30		pF
Output Capacitance	C <sub>oss</sub>			7.6		
Reverse Transfer Capacitance	C <sub>rss</sub>			3.0		
<b>SWITCHING CHARACTERISTICS</b>						
Turn-on delay time	t <sub>d(on)</sub>	V <sub>DD</sub> = 5V, V <sub>GS</sub> = 5V, R <sub>L</sub> = 500Ω I <sub>D</sub> = 10mA, R <sub>G</sub> = 10Ω		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



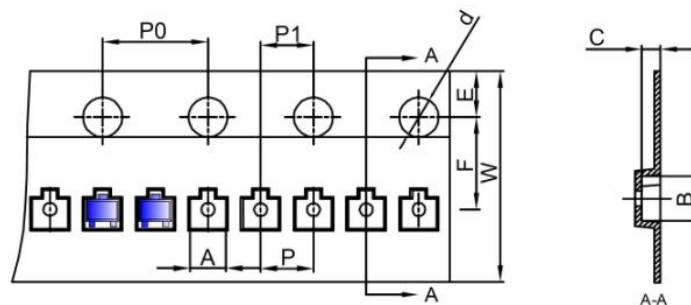
**SOT-723 Package Information**



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.430	0.500	0.017	0.020
A1	0.000	0.050	0.000	0.002
b	0.170	0.270	0.007	0.011
b1	0.270	0.370	0.011	0.015
c	0.080	0.150	0.003	0.006
D	1.150	1.250	0.045	0.049
E	1.150	1.250	0.045	0.049
E1	0.750	0.850	0.030	0.033
e	0.800TYP.		0.031TYP.	
θ	7° REF.		7° REF.	

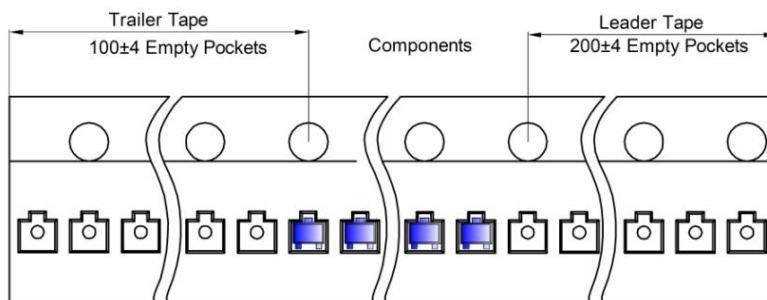
## SOT-723 Tape and Reel

### SOT-723 Embossed Carrier Tape

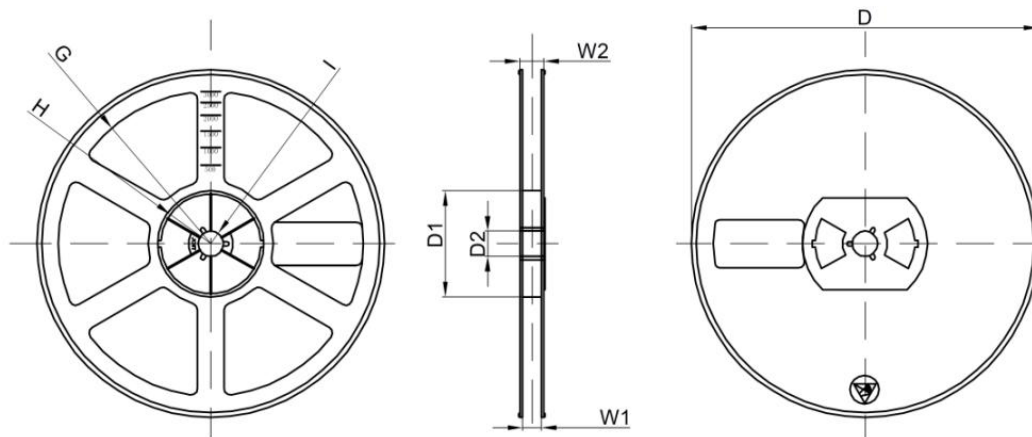


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-723	1.33	1.45	0.61	Ø1.50	1.75	3.50	4.00	2.00	2.00	8.00

### SOT-723 Tape Leader and Trailer



### SOT-723 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)
8000 pcs	7 inch	80,000 pcs	203×203×195	320,000 pcs	438×438×220	