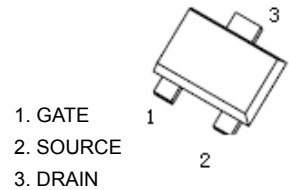


## SOT-723 Plastic-Encapsulate MOSFETS

### 2SK3541 N-Channel MOSFET

$V_{(BR)DSS}$	$R_{DS(on)MAX}$	$I_D$
30V	8Ω@4V	100mA
	13Ω@2.5V	

#### SOT-723



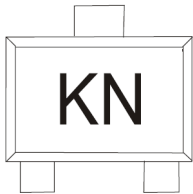
#### FEATURE

- Low on-resistance
- Fast switching speed
- Low voltage drive makes this device ideal for Portable equipment
- Drive circuits can be simple
- Parallel use is easy

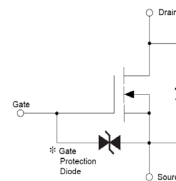
#### APPLICATION

- Interfacing , Switching

#### MARKING



#### Equivalent Circuit



#### Maximum ratings ( $T_a=25^{\circ}C$ 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	$P_D$	0.15	W
Thermal resistance from junction to ambient	$R_{\theta JA}$	833	$^{\circ}C/W$
Junction temperature	$T_J$	150	$^{\circ}C$
Storage temperature	$T_{stg}$	-55 ~+150	

\*  $P_w \leq 10\mu s$  , Duty cycles  $\leq 1\%$

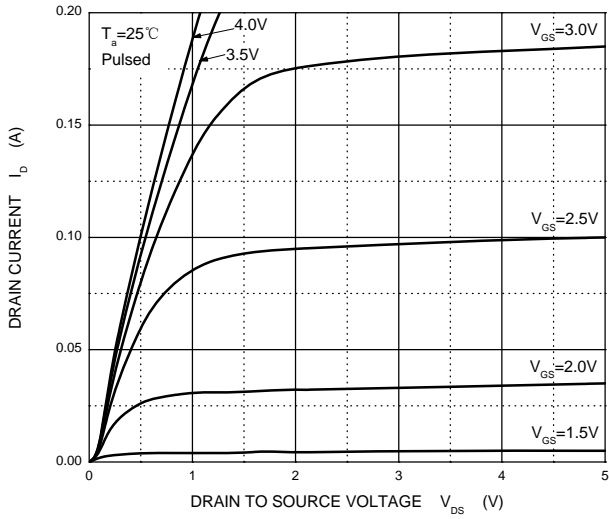
## MOSFET ELECTRICAL CHARACTERISTICS

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

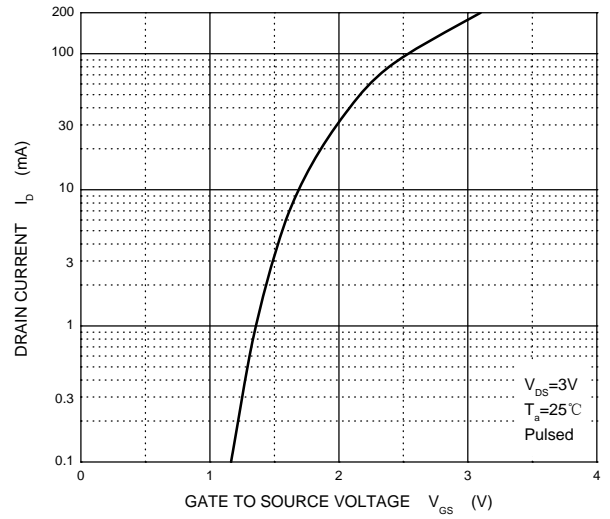
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = 10\mu A$	30			V
Gate-source leakage current	$I_{GSS}$	$V_{DS} = 0V, V_{GS} = \pm 20V$			$\pm 2$	$\mu A$
Zero gate voltage drain current	$I_{DSS}$	$V_{DS} = 30V, V_{GS} = 0V$			1.0	$\mu A$
Gate threshold voltage	$V_{GS(th)}$	$V_{DS} = 3V, I_D = 100\mu A$	0.8		1.5	V
Static drain-source on-state resistance	$R_{DS(on)}$	$V_{GS} = 4V, I_D = 10mA$		5	8	$\Omega$
		$V_{GS} = 2.5V, I_D = 1mA$		7	13	
Forward transconductance	$g_{FS}$	$V_{DS} = 3V, I_D = 10mA$	20			mS
Input capacitance	$C_{iss}$	$V_{DS} = 5V, V_{GS} = 0V, f = 1MHz$		13		pF
Output capacitance	$C_{oss}$			9		
Reverse transfer capacitance	$C_{rss}$			4		
Turn-on delay time	$t_{d(on)}$	$V_{GS} = 5V, V_{DD} = 5V, I_D = 10mA$ $R_L = 500\Omega, R_G = 10\Omega$		15		ns
Rise time	$t_r$			35		
Turn-off delay time	$t_{d(off)}$			80		
Fall time	$t_f$			80		

# Typical Characteristics

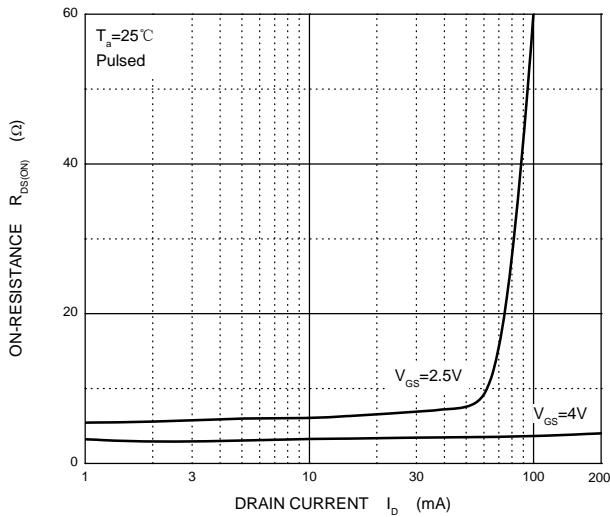
Output Characteristics



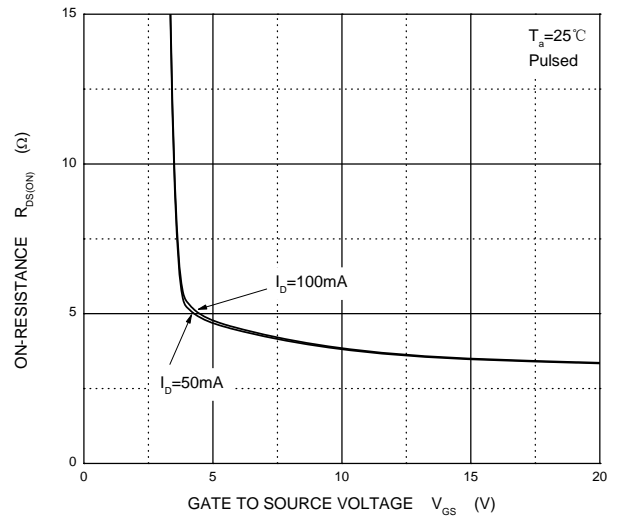
Transfer Characteristics



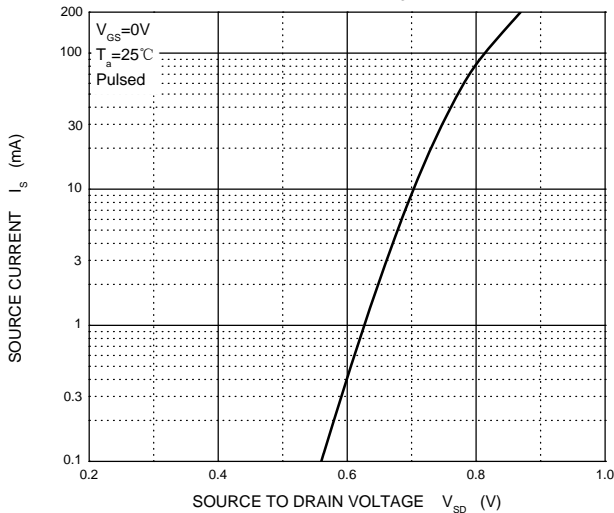
$R_{DS(ON)}$  —  $I_D$



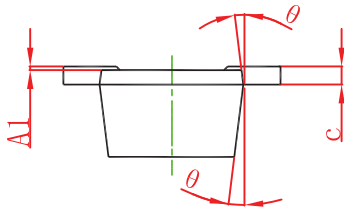
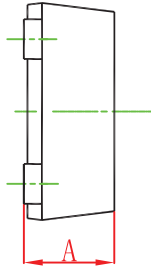
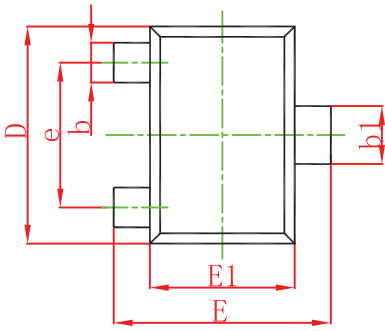
$R_{DS(ON)}$  —  $V_{GS}$



$I_S$  —  $V_{SD}$

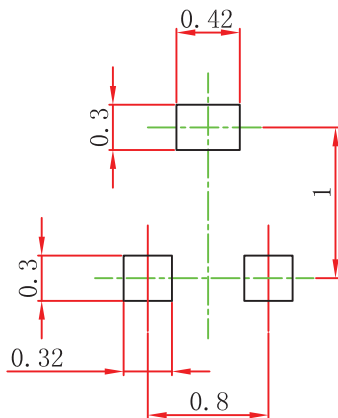


## SOT-723 Package Outline Dimensions



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 Suggested Pad Layout



**Note:**

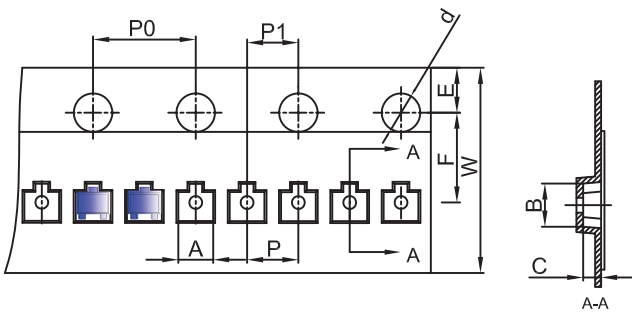
1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05\text{mm}$ .
3. The pad layout is for reference purposes only.

**NOTICE**

JSCJ reserves 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-723 Tape and Reel

## SOT-723 Embossed Carrier Tape

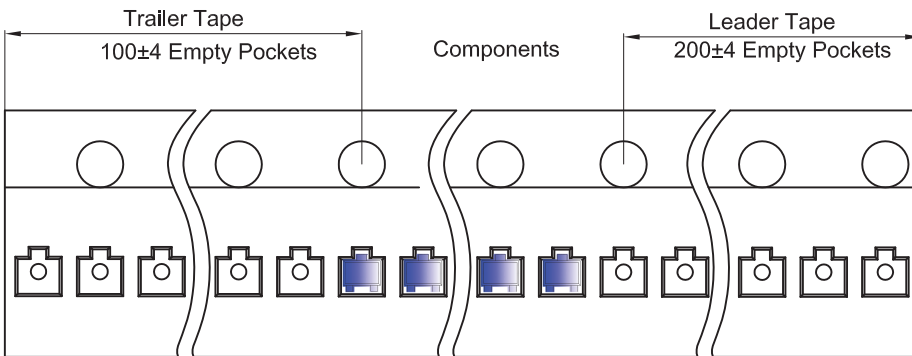


### Packaging Description:

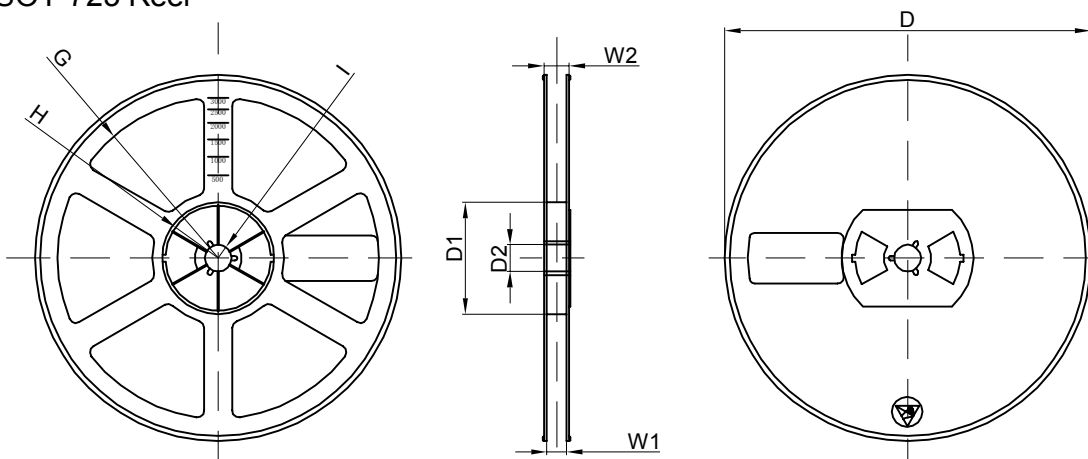
SOT-723 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 8,000 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-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	120,000 pcs	203×203×195	480,000 pcs	438×438×220	

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