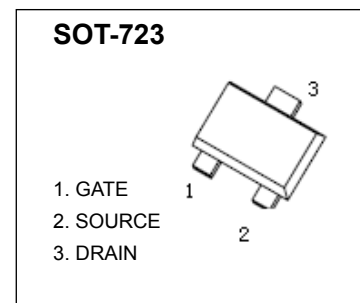


SOT-723 Plastic-Encapsulate MOSFETS

2SK3541 N-Channel MOSFET

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



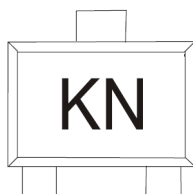
FEATURE

- 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

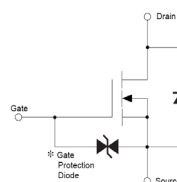
APPLICATION

- Interfacing , Switching

MARKING



Equivalent Circuit



Maximum ratings ($T_a=25^{\circ}\text{C}$ 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	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	

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

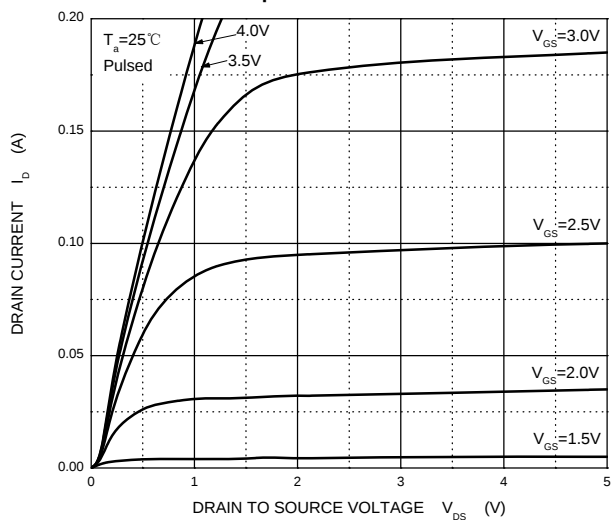
MOSFET ELECTRICAL CHARACTERISTICS

T_a=25 °C unless otherwise specified

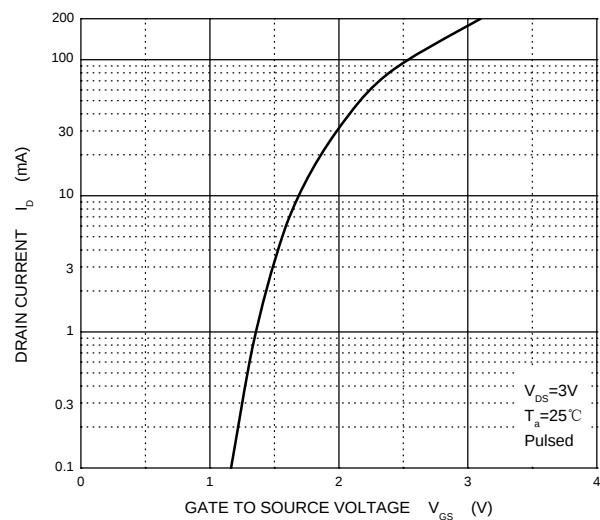
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Drain-source breakdown voltage	V _{(BR) DSS}	V _{GS} = 0V, I _D = 10μA	30			V
Gate-source leakage current	I _{GSS}	V _{DS} = 0V, V _{GS} = ±20V			±2	μA
Zero gate voltage drain current	I _{DSS}	V _{DS} = 30V, V _{GS} = 0V			1.0	μA
Gate threshold voltage	V _{GS(th)}	V _{DS} = 3V, I _D = 100μA	0.8		1.5	V
Static drain-source on-state resistance	R _{DS(on)}	V _{GS} = 4V, I _D = 10mA		5	8	Ω
		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 = 500Ω, R _G = 10Ω		15		ns
Rise time	t _r			35		
Turn-off delay time	t _{d(off)}			80		
Fall time	t _f			80		

Typical Characteristics

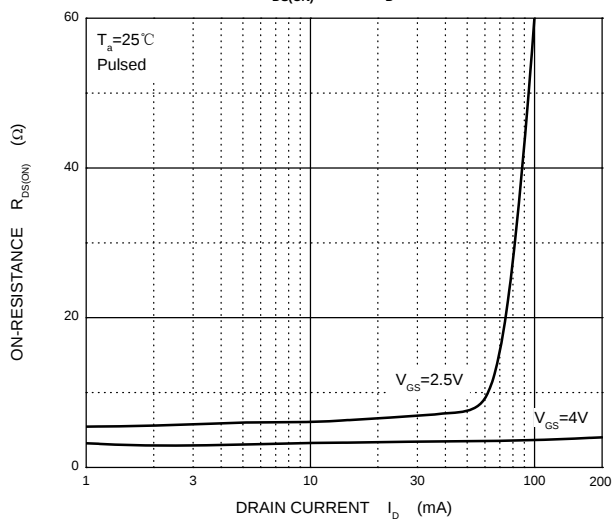
Output Characteristics



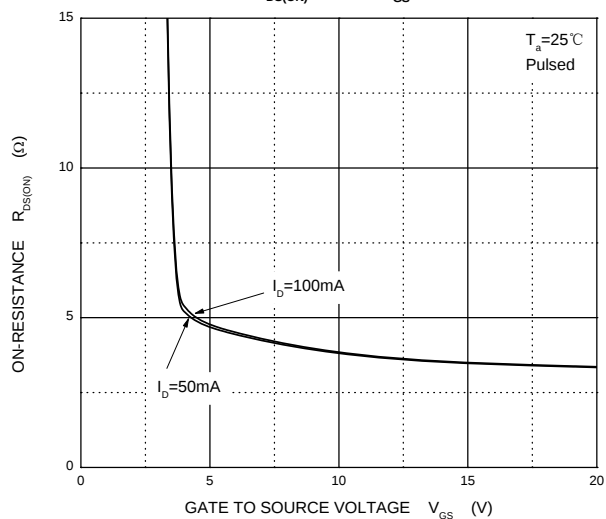
Transfer Characteristics



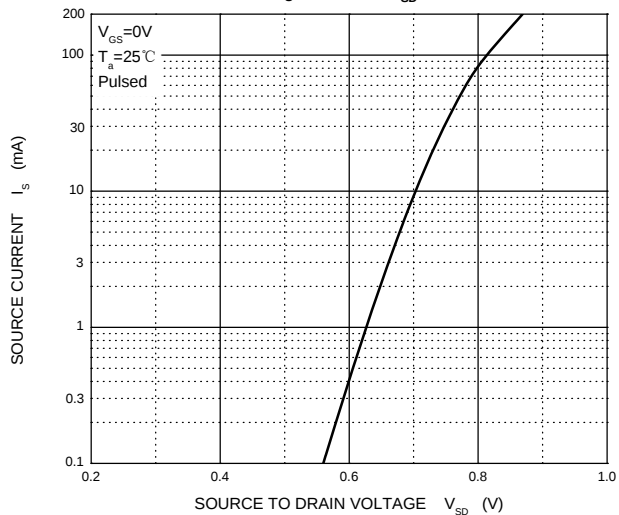
$R_{DS(ON)}$ — I_D



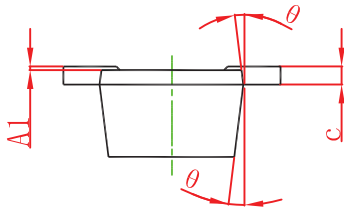
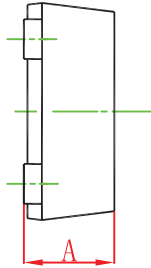
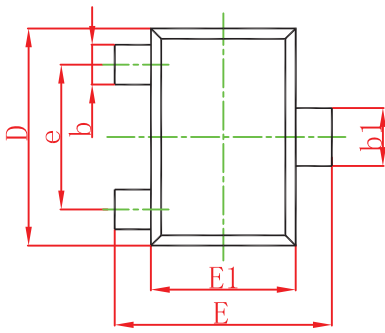
$R_{DS(ON)}$ — V_{GS}



I_S — V_{SD}

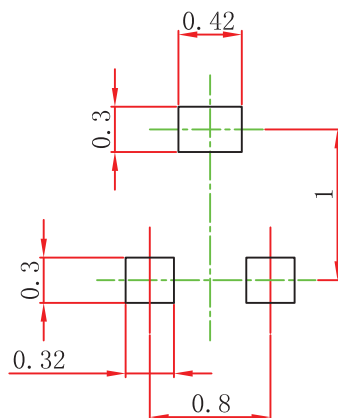


SOT-723 Package Outline Dimensions



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

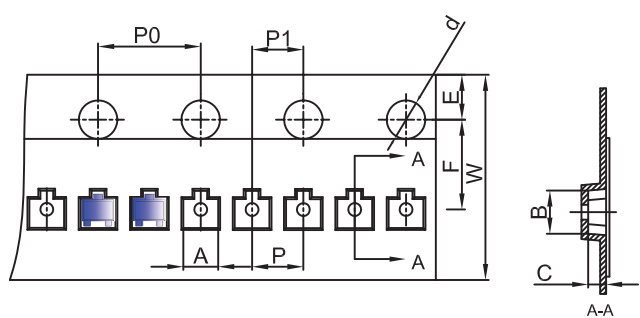


Note:

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

SOT-723 Tape and Reel

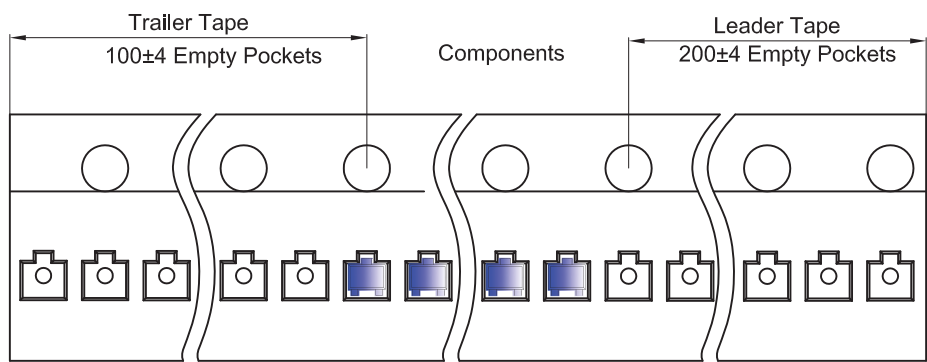
SOT-723 Embossed Carrier Tape



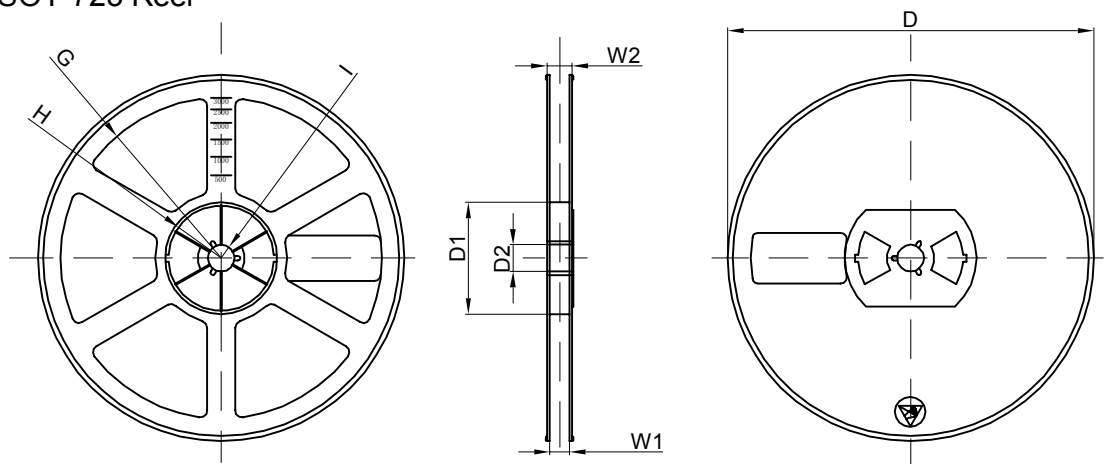
Packaging Description:
SOT-723 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. 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