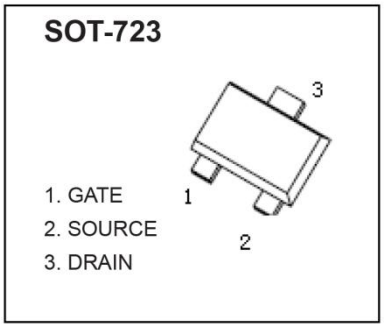
JIANGSU CHANGJING ELECTRONICS TECHNOLOGY CO., LTD.

AD-2SK3541 Plastic-Encapsulated MOSFET

AD-2SK3541 N-Channel Power MOSFET

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



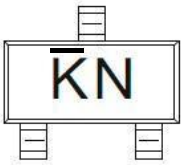
FEATURES

- Low on-resistance
- Fast switching speed
- Low voltage drive makes this device ideal for portable equipment
- Easily designed drive circuits
- Easy to parallel
- AEC-Q101 qualified

APPLICATIONS

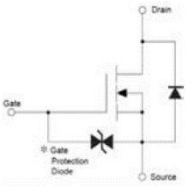
- Interfacing , Switching Load switch

MARKING



$\overline{K}$N = Device code

EQUIVALENT CIRCUIT



MAXIMUM RATINGS (T_j = 25°C unless otherwise specified)

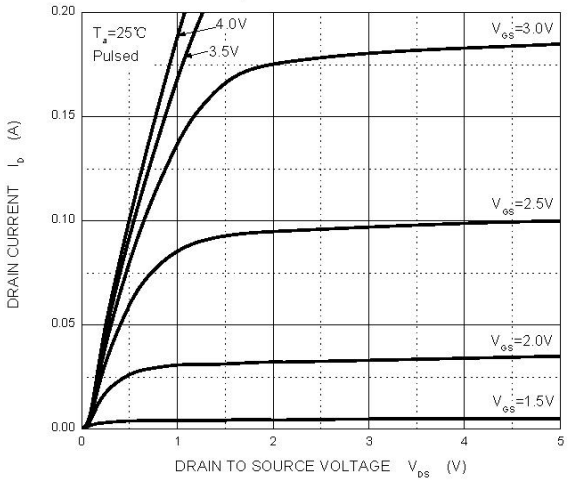
Parameter	Symbol	Value	Unit
Drain-source voltage	V_{DS}	30	V
Gate-source voltage	V_{GS}	±20	V
Continuous drain current	I_D	100	mA
Maximum power dissipation	P_D	150	mW
Thermal resistance from junction to ambient	$R_{\theta JA}$	833	°C/W
Operating junction and storage temperature range	T_j, T_{stg}	-55 ~ 150	°C

ELECTRICAL CHARACTERISTICS (T_j = 25°C unless otherwise specified)

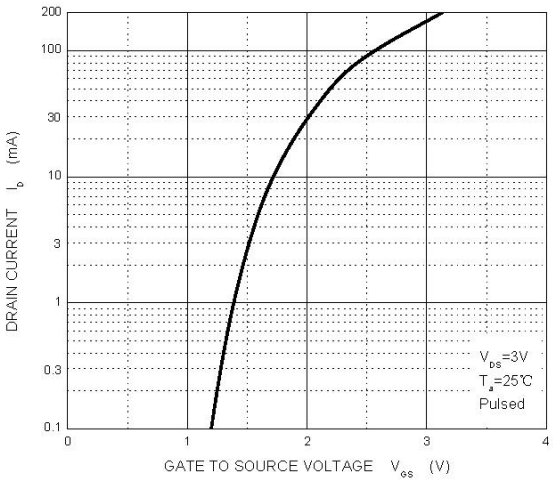
Parameter	Symbol	Test condition	Min	Typ	Max	Unit
Static characteristics						
Drain-source breakdown voltage	V_{DS}	V_{GS} = 0V, I_D = 10μA	30	-	-	V
Zero gate voltage drain current	I_{DSS}	V_{DS} = 30V, V_{GS} = 0V	-	-	1	μA
Gate-body leakage current	I_{GSS}	V_{GS} = ±20V, V_{DS} = 0V	-	-	±2	μA
Gate threshold voltage [5]	$V_{GS(th)}$	V_{DS} = 3V, I_D = 100μA	0.8	-	1.5	V
Drain-source on-state resistance [5]	$R_{DS(on)}$	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 = 10 mA	20	-	-	mS
Dynamic characteristics [5] [6]						
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	-	
Switching parameters [5] [6]						
Turn-on delay time	$t_{d(on)}$	V_{GS} = 5V, V_{DD} = 5V, I_D = 10mA, R_g = 10Ω, R_L = 500Ω	-	15	-	ns
Rise Time	t_r		-	35	-	
Turn-off delay time	$t_{d(off)}$		-	80	-	
Fall Time	t_f		-	80	-	

TYPICAL CHARACTERISTICS

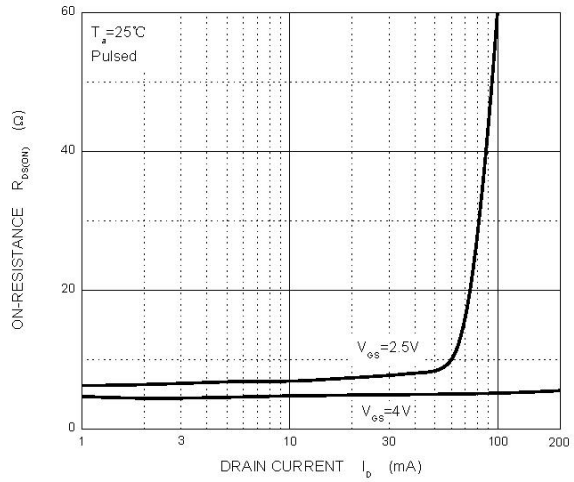
Output Characteristics



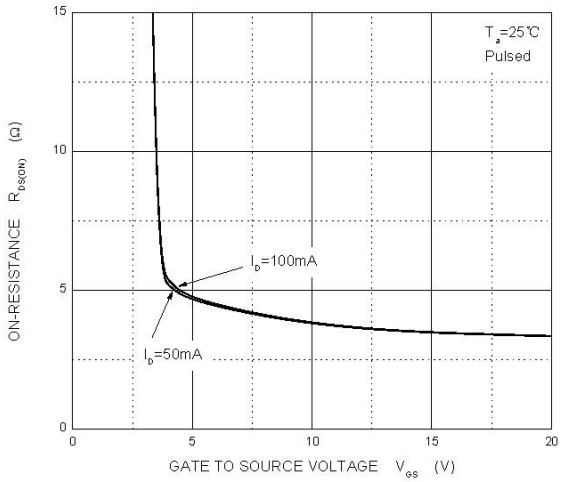
Transfer Characteristics



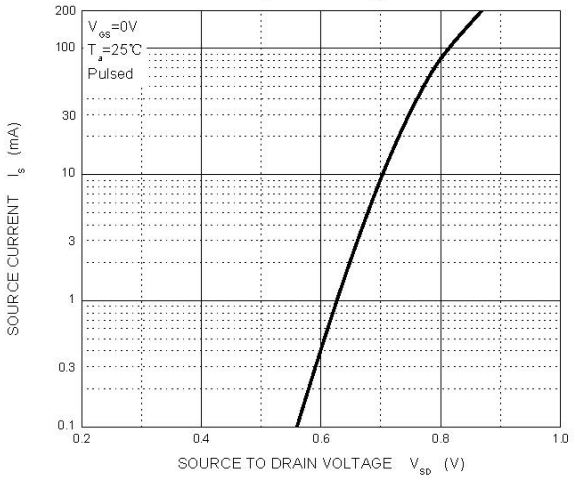
$R_{DS(ON)}$ —— I_D



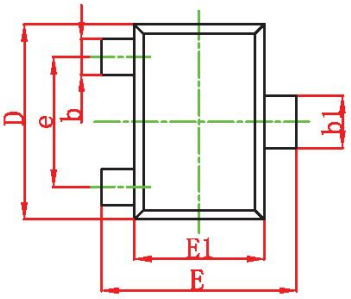
$R_{DS(ON)}$ —— V_{GS}

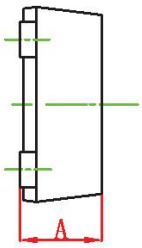


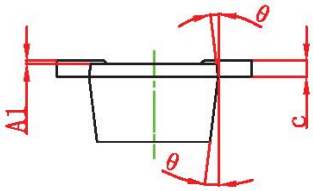
I_S —— V_{SD}



SOT-723 PACKAGE OUTLINE DIMENSIONS

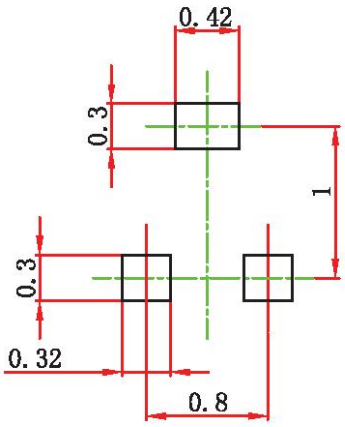






Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.430	0.500	0.017	0.020
A1	0.000	0.050	0.000	0.002
b	0.170	0.270	0.007	0.011
b1	0.270	0.370	0.011	0.015
c	0.080	0.150	0.003	0.006
D	1.150	1.250	0.045	0.049
E	1.150	1.250	0.045	0.049
E1	0.750	0.850	0.030	0.033
e	0.800TYP.	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

SOT-723 SUGGESTED PAD LAYOUT

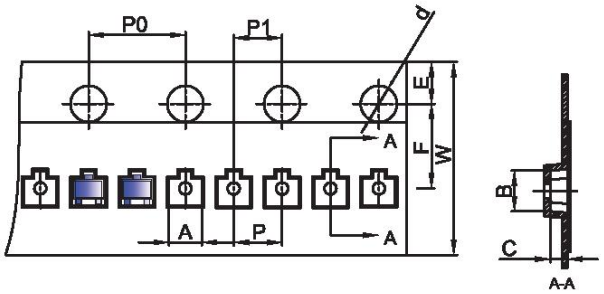


Note:

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

SOT-723 TAPE AND REEL

SOT-723 Embossed Carrier Tape

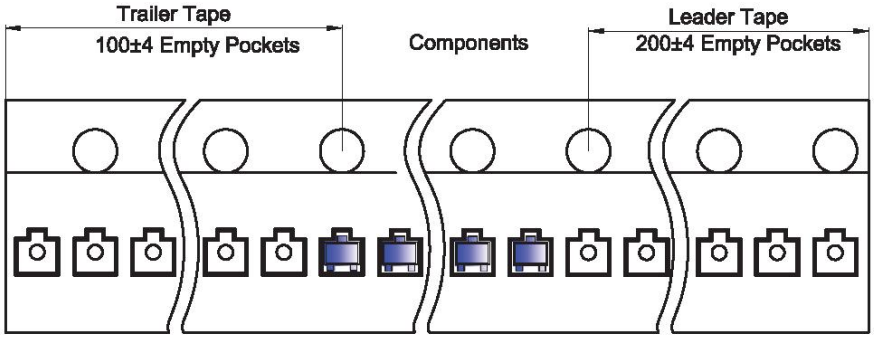


Packaging Description:

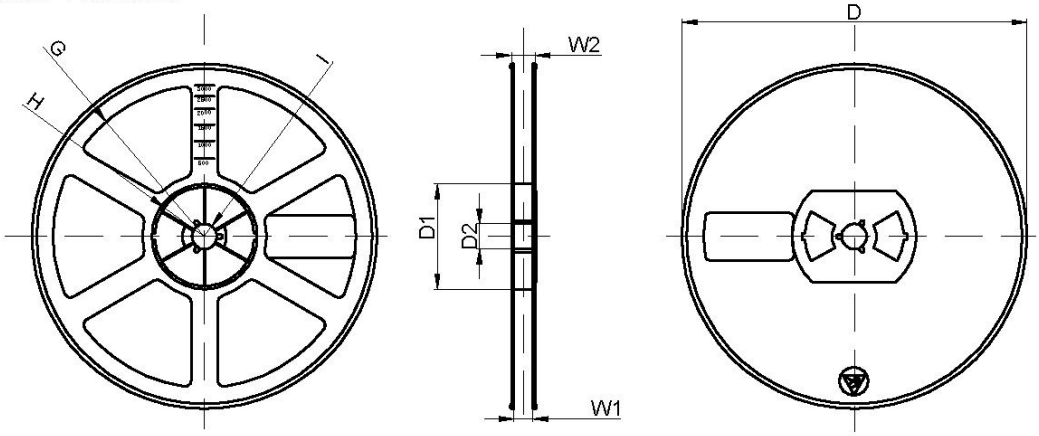
SOT-723 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts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

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	

PUBLISHED BY

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