

2SK3541

Product Summary

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

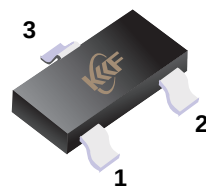
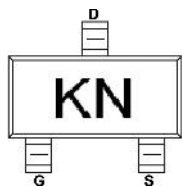
Feature

- 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

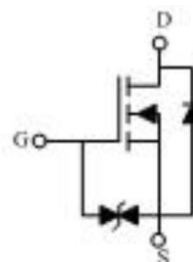
MARKING:



1. Base
2. Emitter
3. Collector

■ Simplified outline(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}	±20	V
Continuous Drain Current	I_D	±100	mA
Power Dissipation	P_D	0.15	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	833	$^{\circ}\text{C}/\text{W}$
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55~ +150	$^{\circ}\text{C}$

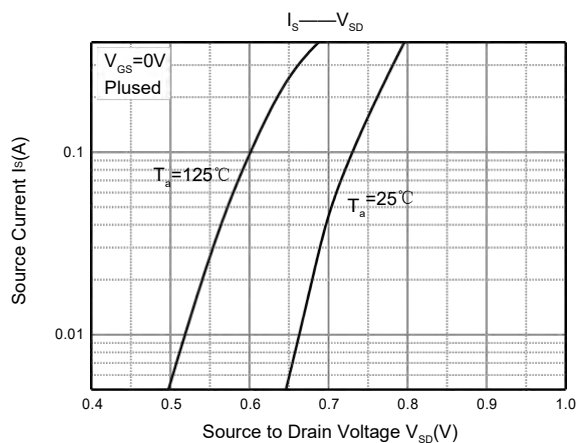
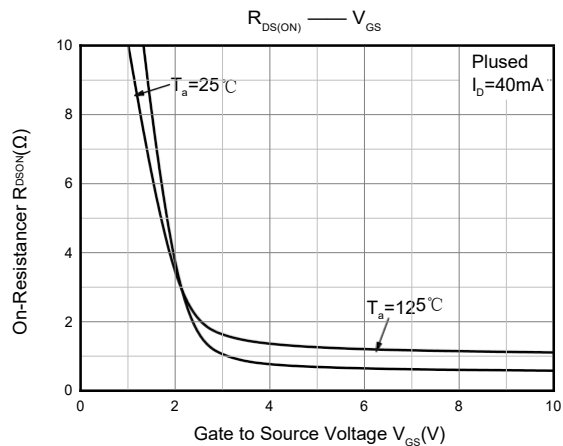
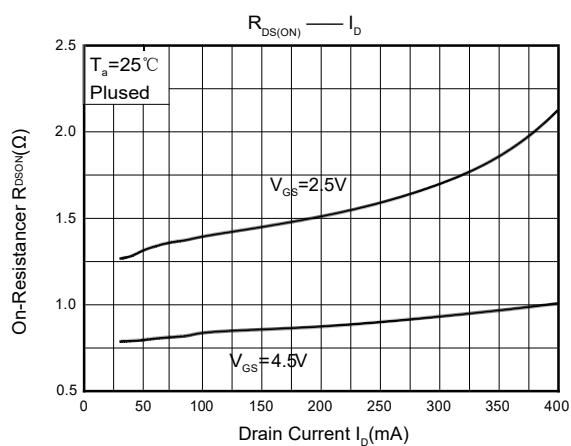
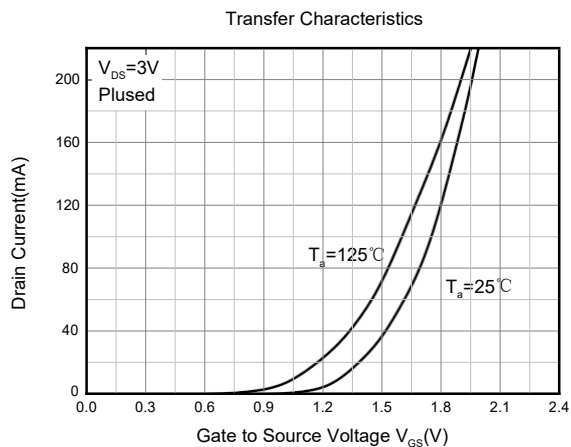
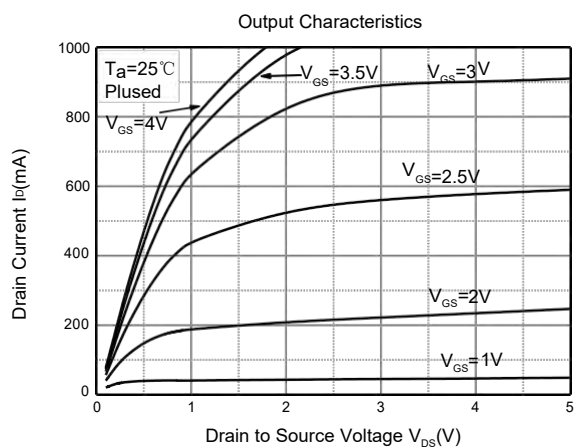
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MOSFET ELECTRICAL CHARACTERISTICS($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Type	Max	Unit
Static Characteristics						
Drain-source breakdown voltage	V _{(BR)DSS}	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	V _{GS(th)}	V _{DS} =3V, I _D =100μA	0.75		1.5	V
Drain-source on-resistance	R _{DS(on)}	V _{GS} =4V, I _D =10mA		1.1	8	Ω
		V _{GS} =2.5V, I _D =1mA		1.5	13	
Forward transconductance	g _{FS}	V _{DS} =3V, I _D =10mA	20			mS
Dynamic characteristics						
Input Capacitance	C _{iss}	V _{DS} =5V, V _{GS} =0V, f =1MHz		13		pF
Output Capacitance	C _{oss}			9		pF
Reverse Transfer Capacitance	C _{rss}			4		pF
Switching Characteristics						
Turn-on delay time	t _{d(on)}	V _{DD} =5V, V _{GS} =5V, R _L =500Ω I _D =10mA, R _G =10Ω		15		ns
Rise time	t _r			35		ns
Turn-off delay time	t _{d(off)}			80		ns
Fall time	t _f			80		ns

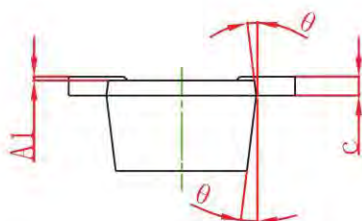
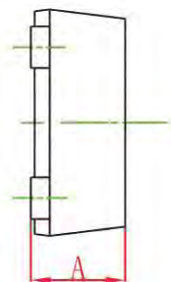
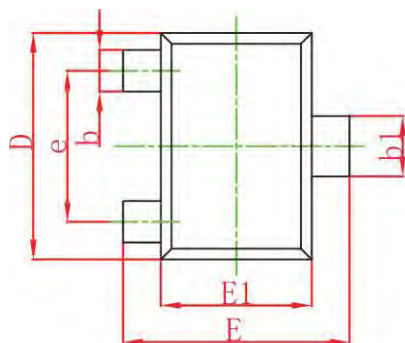
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Typical Characteristics



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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.	