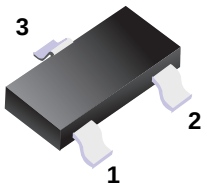
Product Summary

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



1. Base
2. Emitter
3. Collector

■ **Simplified outline(SOT-723)**

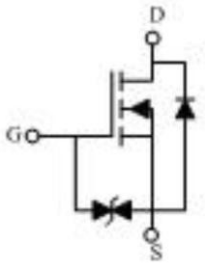
Feature

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

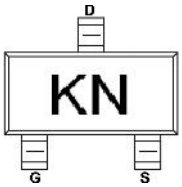
Application

- Load Switch for Portable Devices
- Battery Switch

Schematic diagram



MARKING:



ABSOLUTE MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

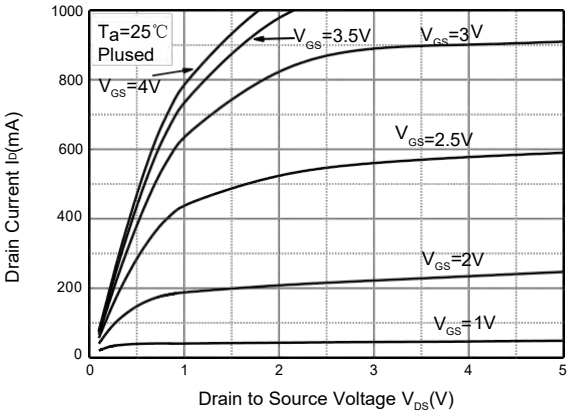
Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	30	V
Gate-Source Voltage	V_{GS}	±20	V
Continuous Drain Current	I_D	±100	mA
Power Dissipation	P_D	0.15	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	833	℃/W
Junction Temperature	T_J	150	℃
Storage Temperature	T_{STG}	-55~ +150	℃

MOSFET ELECTRICAL CHARACTERISTICS(T_a=25℃ unless otherwise noted)

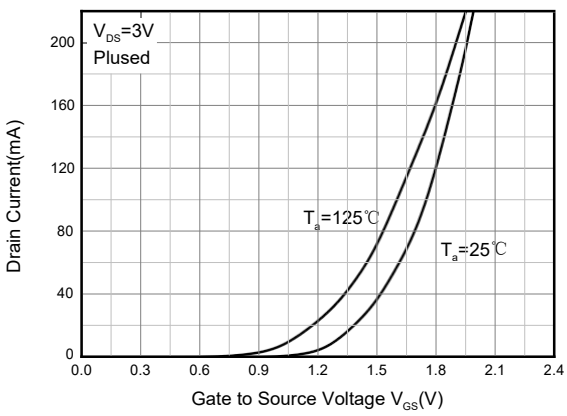
Parameter	Symbol	Test Condition	Min	Type	Max	Unit
Static Characteristics						
Drain-source breakdown voltage	$V_{(BR)DSS}$	V_{GS} = 0V, I_D =10μA	30			V
Zero gate voltage drain current	I_{DSS}	V_{DS} =30V,V_{GS} = 0V			1	μA
Gate-body leakage current	I_{GSS}	V_{GS} =±20V, V_{DS} = 0V			±2	μA
Gate threshold 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	$td_{(off)}$			80		ns
Fall time	t_f			80		ns

Typical Characteristics

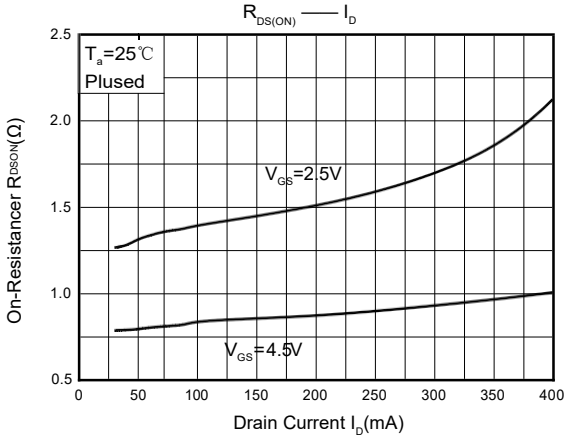
Output Characteristics



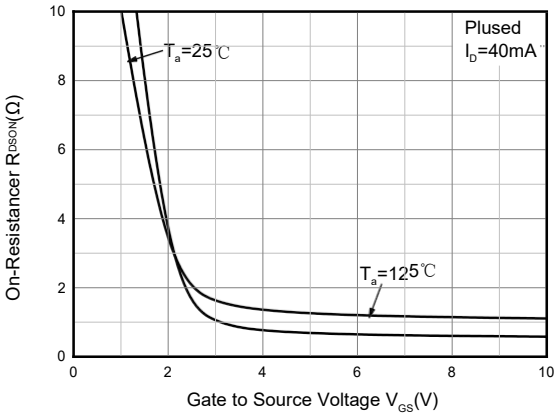
Transfer Characteristics



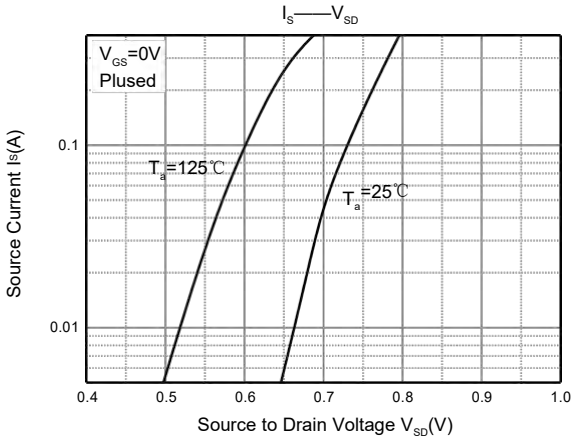
RDS(ON) —— ID



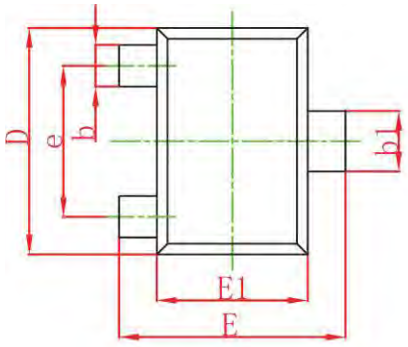
RDS(ON) —— VGS

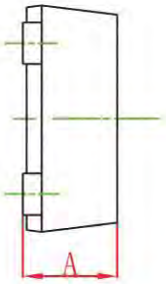


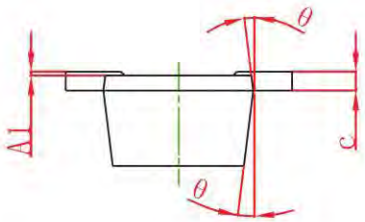
IS——VSD



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.	