Product Summary

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	I_D
60V	2Ω@10V	100mA
	2.5Ω@4.5V	

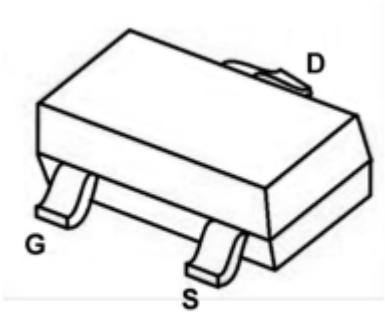
Feature

- Low on-resistance
- Fast switching speed
- Low voltage drive makes this device ideal for Portable equipment
- Easily designed drive circuits
- Easy to parallel
- ESD Protected

Application

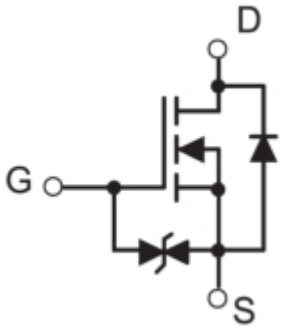
- Interfacing , Switching

Package

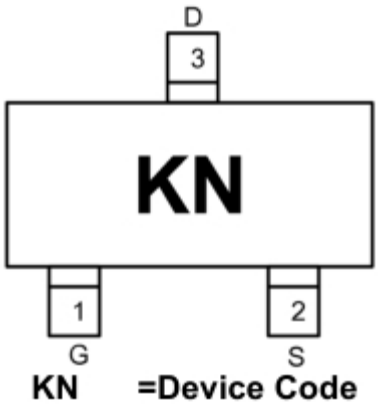


SOT-523

Circuit diagram



Marking



Absolute maximum ratings

(T_a=25℃ unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	60	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	℃

Electrical characteristics

(T_A=25℃, unless otherwise noted)

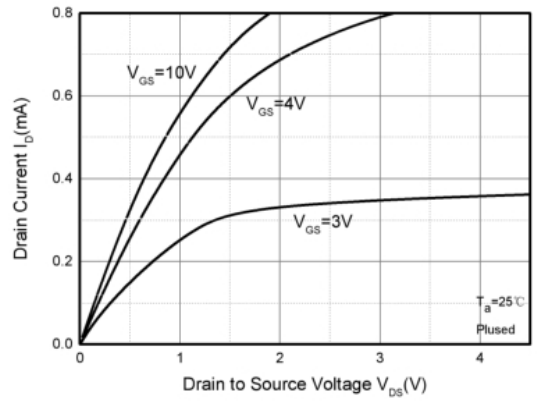
Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Static Characteristics						
Drain-source breakdown voltage	$V_{(BR)DSS}$	V_{GS} = 0V, I_D =250μA	60			V
Zero gate voltage drain current	I_{DSS}	V_{DS} =48V,V_{GS} = 0V			1	uA
Gate-body leakage current	I_{GSS}	V_{GS} =±20V, V_{DS} = 0V			±5	uA
Gate threshold voltage	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =250μA	0.7	1	1.45	V
Drain-source on-resistance	$R_{DS(on)}$	V_{GS} =10V, I_D =200mA		2	5	Ω
		V_{GS} =4.5V, I_D =100mA		2.5	8	
Dynamic characteristics						
Input Capacitance1)	C_{iss}	V_{DS}=25V,V_{GS}=0V,f=1MHz		27		pF
Output Capacitance1)	C_{oss}			13		
Reverse Transfer Capacitance1)	C_{rss}			6		
Switching Characteristics						
Turn-on delay time	$t_{d(on)}$	V_{DD}=30 V,I_D=0.29A, V_{GEN}=10V,R_G=6Ω			5	ns
Rise time	tr				18	
Turn-off delay time	$t_{d(off)}$				36	
Fall tim	tf				14	
Source-Drain Diode Characteristics						
Diode Forward voltage	V_{SD}	V_{GS} =0V, I_S=500mA	0.5		1.4	V

Notes:

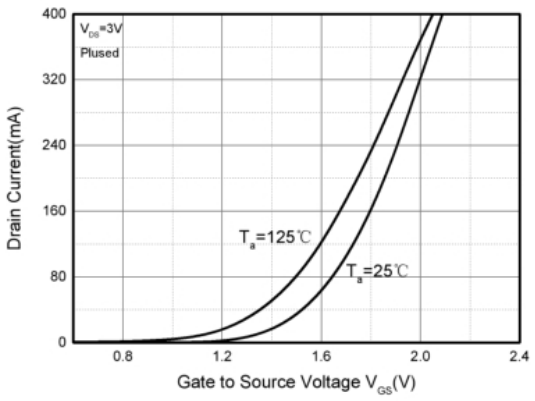
1.Pulse Test: Pulse Width ≤300μs, Duty Cycle ≤2%.

2.These parameters have no way to verify.

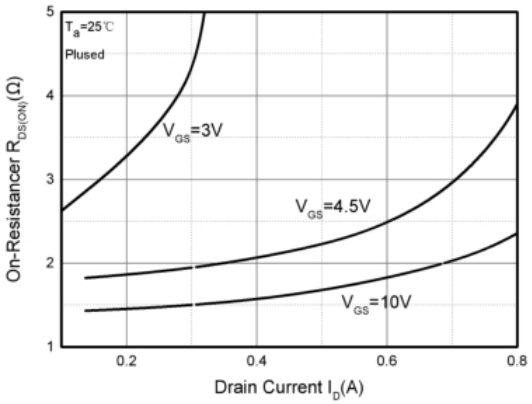
Typical Characteristics



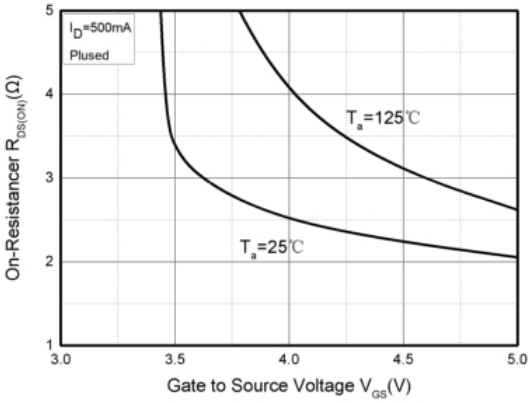
Output Characteristics



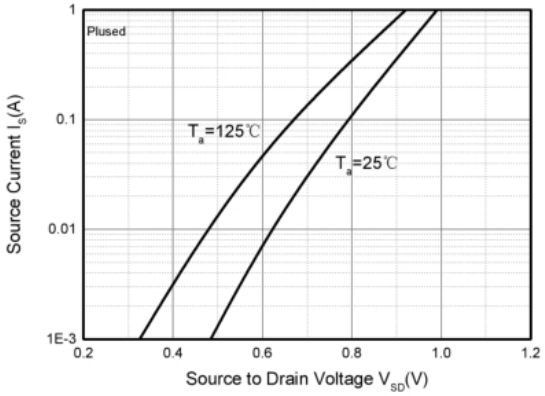
Transfer Characteristics



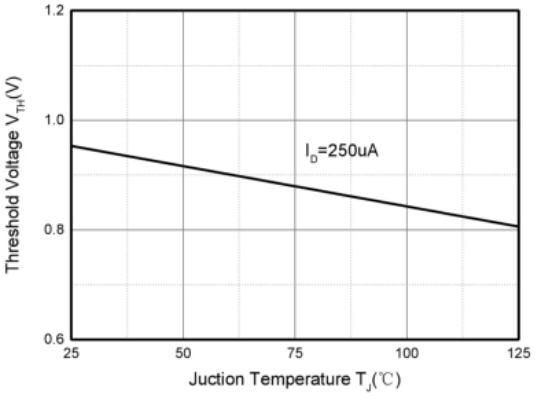
RDS(ON)——ID



RDS(ON)——VGS

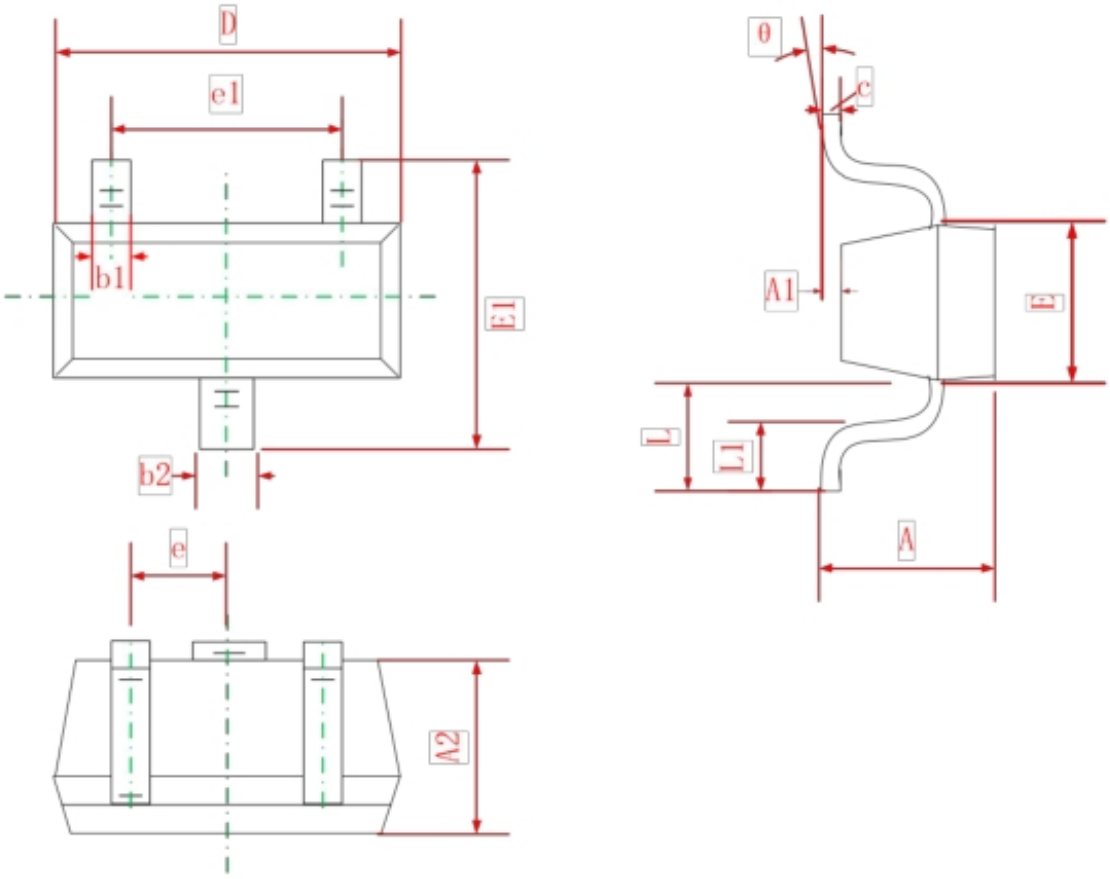


IS——VSD



Threshold Voltage

SOT-523 Package Information



Symbol	Dimensions In Millimeters	
	Min	Max
A	0.700	0.900
A1	0.000	0.100
A2	0.700	0.800
b1	0.150	0.250
b2	0.250	0.350
C	0.100	0.200
D	1.500	1.700
E	0.700	0.900
E1	1.450	1.750
e	0.500 TYP	
e1	0.900	1.100
L	0.400 REF	
L1	0.260	0.460
θ	0°	8°