

Product Summary

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	I_D
60V	$2\Omega@10V$	100mA
	$12.5\Omega@4.5V$	

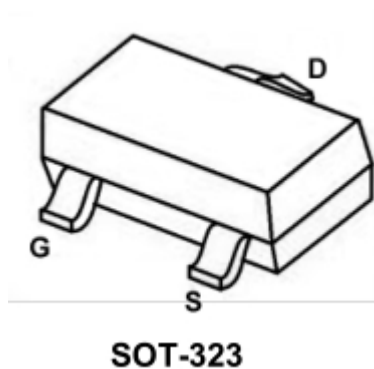
Feature

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

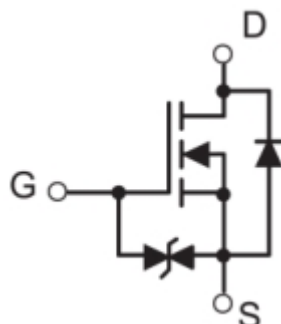
Application

- Interfacing , Switching

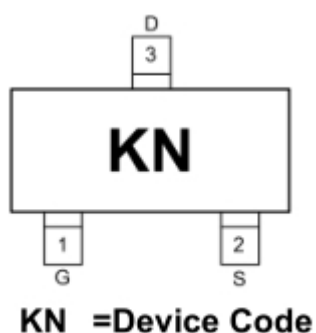
Package



Circuit diagram



Marking



Absolute maximum ratings

($T_a=25^{\circ}\text{C}$ 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	0.2	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	625	$^{\circ}\text{C}/\text{W}$
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55~ +150	$^{\circ}\text{C}$

Electrical characteristics

($T_A=25^{\circ}\text{C}$, unless otherwise noted)

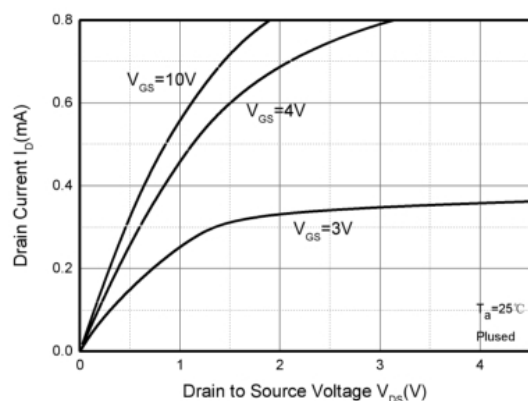
Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Static Characteristics						
Drain-source breakdown voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D =250μA	60			V
Zero gate voltage drain current	I _{DSS}	V _{DS} =48V,V _{GS} = 0V			1	uA
Gate-body leakage current	I _{GSS}	V _{GS} = ±20V, V _{DS} = 0V			±10	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 =200mA		2.5	8	
Dynamic characteristics						
Input Capacitance1)	C _{iss}	V _{DS} =25V,V _{GS} =0V,f=1MHz z		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:

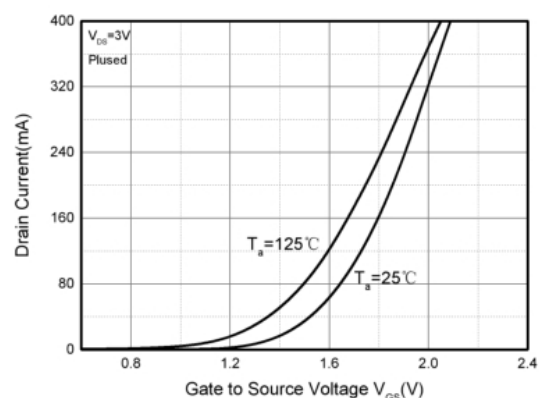
1.Pulse Test: Pulse Width $\leq 300\mu s$, Duty Cycle $\leq 2\%$.

2.These parameters have no way to verify.

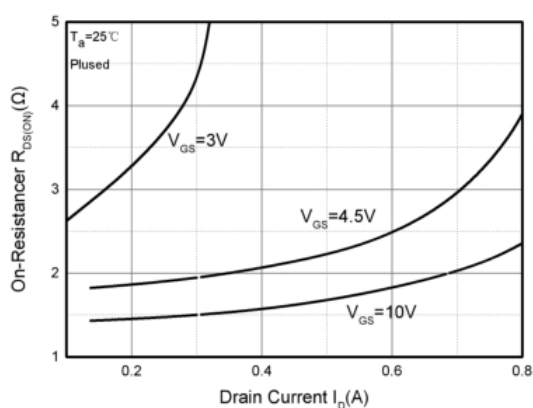
Typical Characteristics



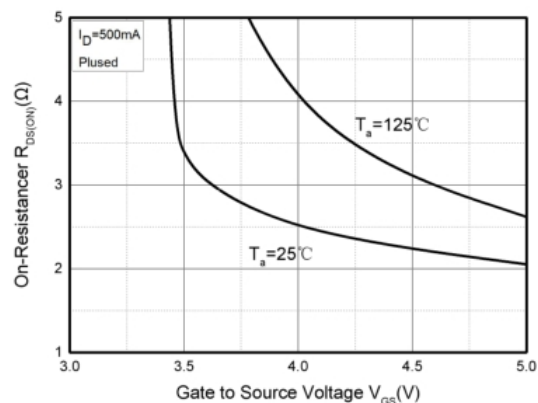
Output Characteristics



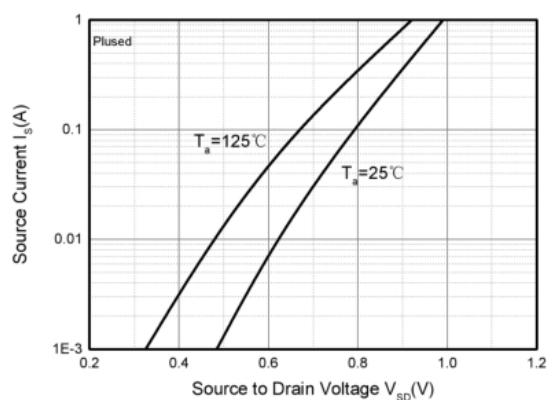
Transfer Characteristics



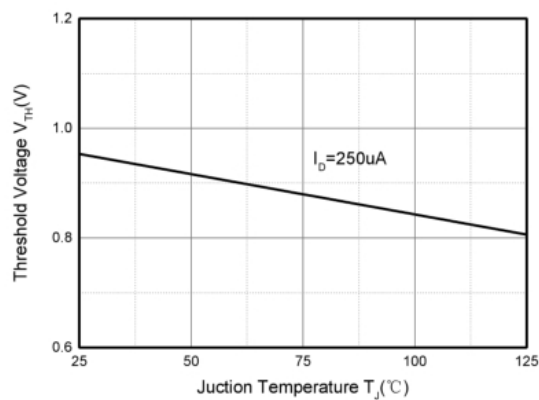
RDS(ON)—I_D



RDS(ON)—V_{GS}

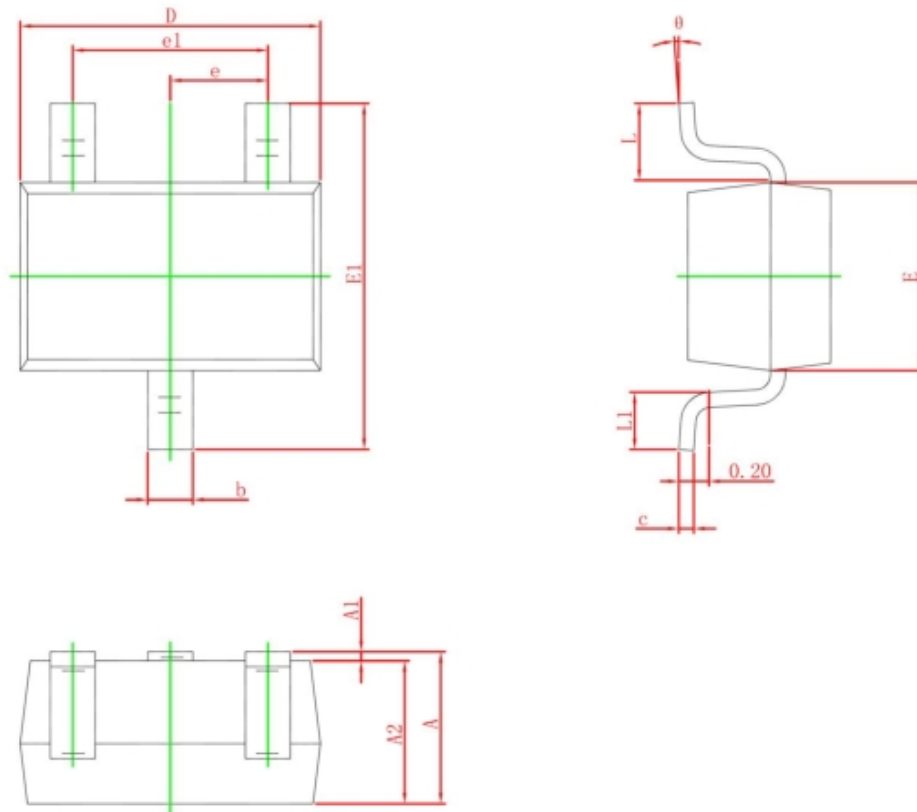


I_S—V_{SD}



Threshold Voltage

SOT-323 Package Information



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.200	0.400	0.008	0.016
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.000	2.450	0.085	0.096
e	0.650 TYP.		0.026 TYP.	
e1	1.200	1.400	0.047	0.055
L	0.525 REF.		0.021 REF.	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°