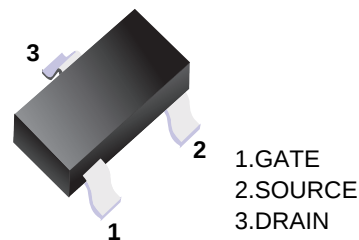


»Features

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

»Marking

Marking	KN
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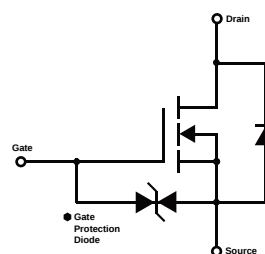


»Simplified outline(SOT-23)

»MAXIMUM RATINGS (Ta = 25°C unless otherwise noted)

Symbol	Parameter	Value	Units
V_{DS}	Drain-Source voltage	30	V
V_{GS}	Gate-Source Voltage	± 20	V
I_D	Continuous Drain Current	0.1	A
P_D	Power Dissipation	0.2	W
T_J	Junction Temperature	150	°C
T_{stg}	Storage Temperature	-55-150	°C
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	625	°C /W

Equivalent circuit

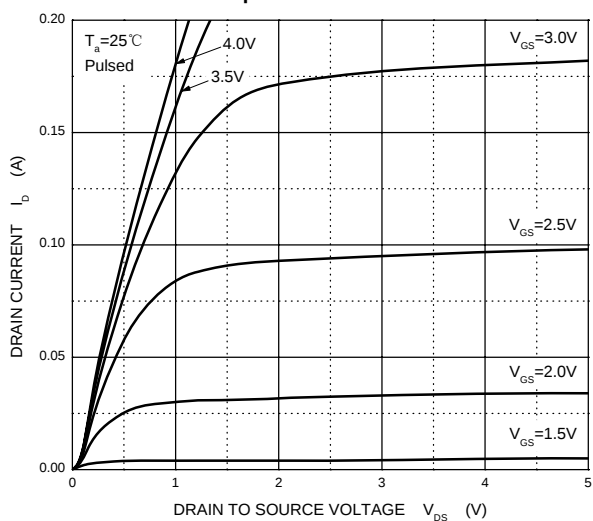


»ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)

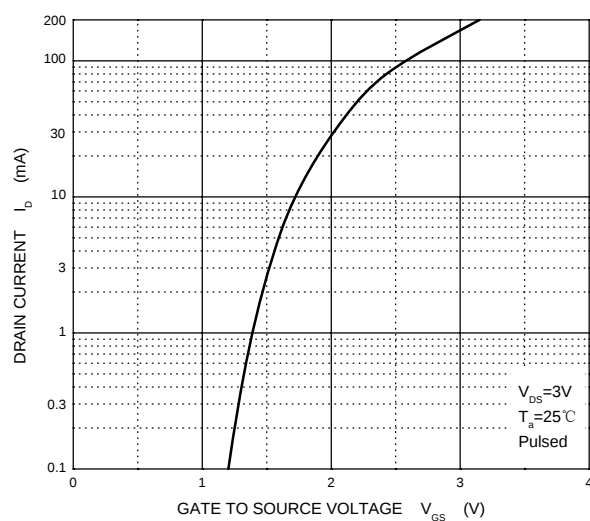
Parameter	Symbol	Test Condition	Min	Typ	Max	Units
Off Characteristics						
Drain-Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D = 10μA	30			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =30V,V _{GS} = 0V			0.2	μA
Gate –Source leakage current	I _{GSS}	V _{GS} =±20V, V _{DS} = 0V			±500	nA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = 3V, I _D =100μA	0.8		1.5	V
Drain-Source On-Resistance	R _{DS(on)}	V _{GS} = 4V, I _D =10mA			8	Ω
		V _{GS} =2.5V,I _D =1mA			13	Ω
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 _{GS} =5V, V _{DD} =5V, I _D =10mA, R _g =10Ω, R _L =500Ω		15		ns
Rise Time	t _r			35		ns
Turn-Off Delay Time	t _{d(off)}			80		ns
Fall Time	t _f			80		ns

*These parameters have no way to verify.

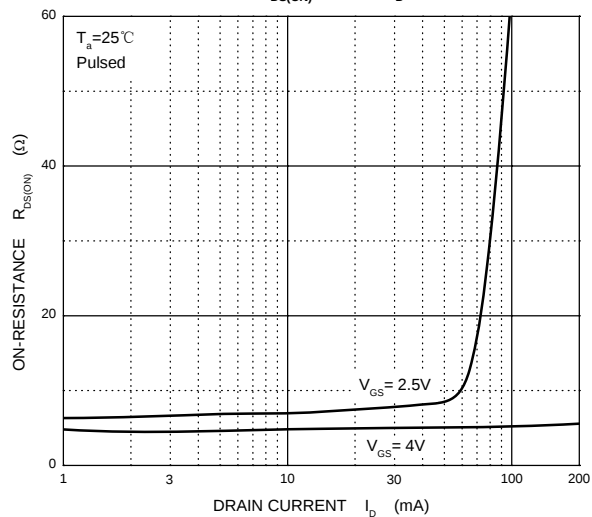
Output Characteristics



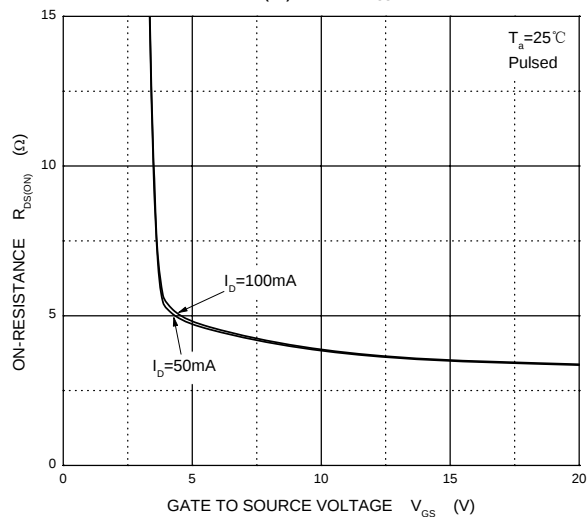
Transfer Characteristics



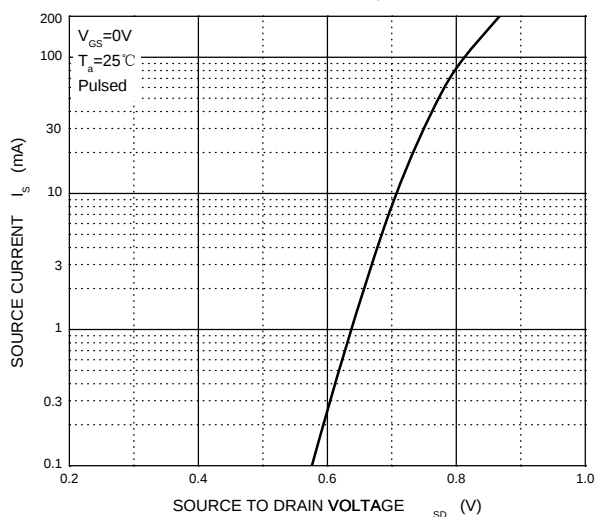
$R_{DS(ON)}$ — I_D



$R_{DS(ON)}$ — V_{GS}

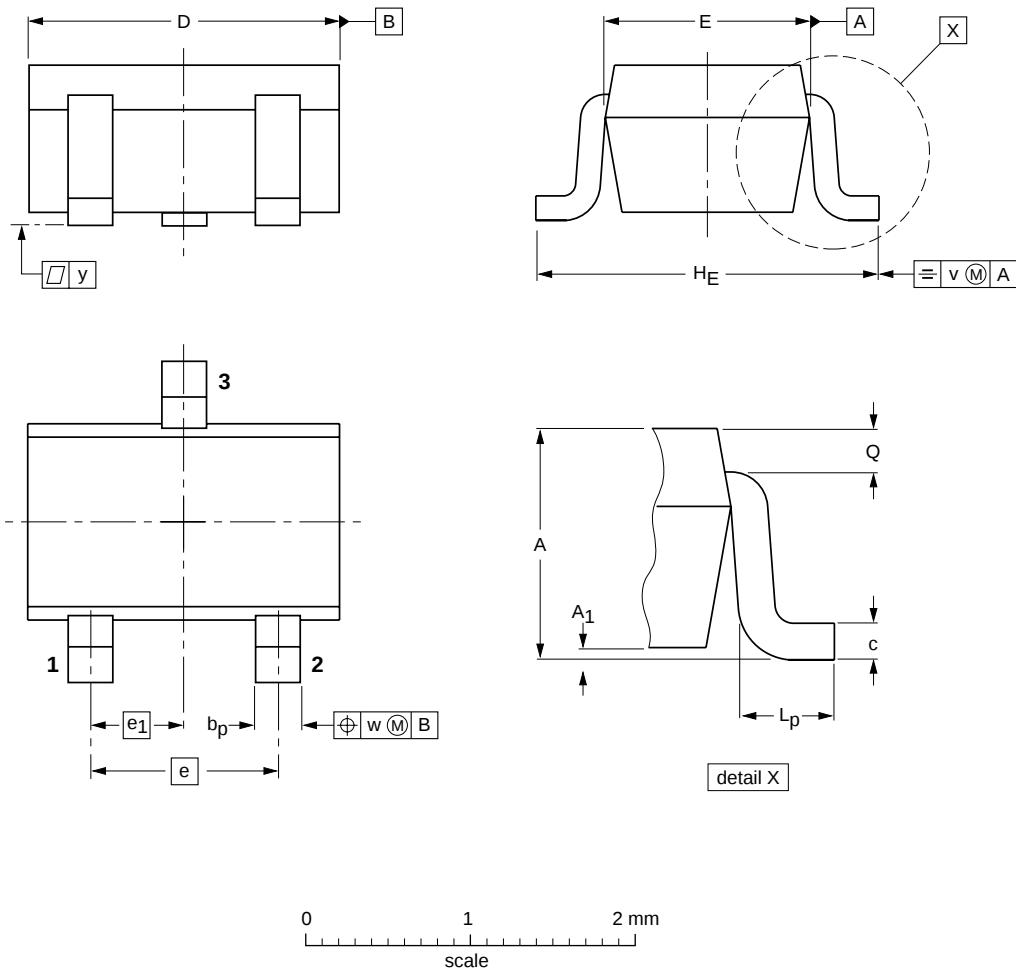


I_S — V_{SD}



»Package Information

■ SOT-323



DIMENSIONS (mm are the original dimensions)

UNIT	A	A ₁ max	b _p	c	D	E	e	e ₁	H _E	L _p	Q	v	w
mm	1.1 0.8	0.1	0.4 0.3	0.25 0.10	2.2 1.8	1.35 1.15	1.3	0.65	2.2 2.0	0.45 0.15	0.23 0.13	0.2	0.2