AUK Semiconductor

STK0602U

N-Channel Enhancement-Mode MOSFET

Description

- High speed switching application.

Features

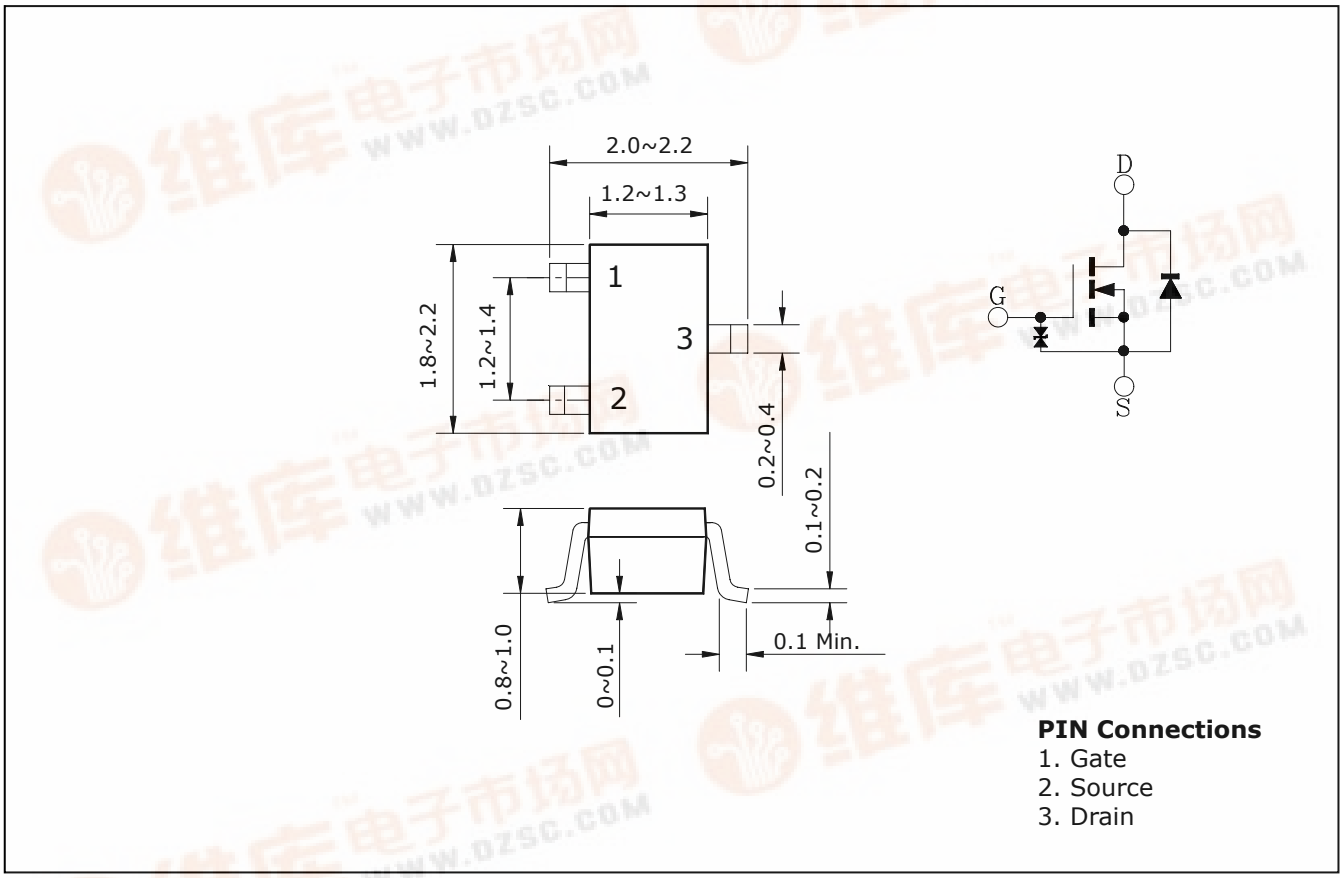
- High density cell design for low $R_{DS(ON)}$.
- Voltage controlled small signal switch
- Include Zener protection for ESD ruggedness.

Ordering Information

Type NO.	Marking	Package Code
STK0602U	K62	SOT-323

Outline Dimensions

unit : mm



PIN Connections
1. Gate
2. Source
3. Drain

Absolute maximum ratings

(Ta=25°C)

Characteristic	Symbol	Rating	Unit
Drain-Source voltage	V_{DSS}	60	V
Gate-Source voltage	V_{GS}	±8	V
Maximum Drain current	I_D	200	mA
Pulsed Drain Current	I_{DP}	800	mA
Drain Power dissipation	P_D	200	mW
Operating Junction and Storage temperature range	T_J , T_{stg}	-55~150	°C

Electrical Characteristics

(Ta=25°C)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Drian-Source breakdown voltage	BV_{DSS}	I_D=10μA, V_{GS}=0	60	-	-	V
Gate-Threshold voltage	$V_{GS(th)}$	I_D=1μA, V_{DS}=5V	0.8	-	1.8	V
Zero Gate voltage drain current	I_{DSS}	V_{DS}=60V, V_{GS}=0	-	-	1.0	μA
Gate-body leakage	I_{GSS}	V_{DS}=0V, V_{GS}=±6V	-	-	±1.0	μA
Drain-Source on-resistance	$R_{DS(ON)}$	V_{GS}=5V, I_D=10mA	-	2.5	6.0	Ω
		V_{GS}=10V, I_D=10mA	-	2.0	4.0	
Forward transconductance	g_{fs}	V_{DS}=5V, I_D=20mA	20	65	-	mS
Input capacitance	C_{iss}	V_{DS}=5V, V_{GS}=0, f=1MHz	-	26	-	pF
Output capacitance	C_{oss}		-	20	-	
Reverse Transfer capacitance	C_{rss}		-	10	-	
Turn-on delay time	$t_{d(on)}$	V_{DD}=5V, I_D=10mA V_{GS}=5V R_L=500Ω		150		ns
Rise time	t_r			240		
Turn-off delay time	$t_{d(off)}$		-	200	-	
Fall time	t_f		-	300	-	

Electrical Characteristic Curves

Fig. 1 I_D - V_{DS}

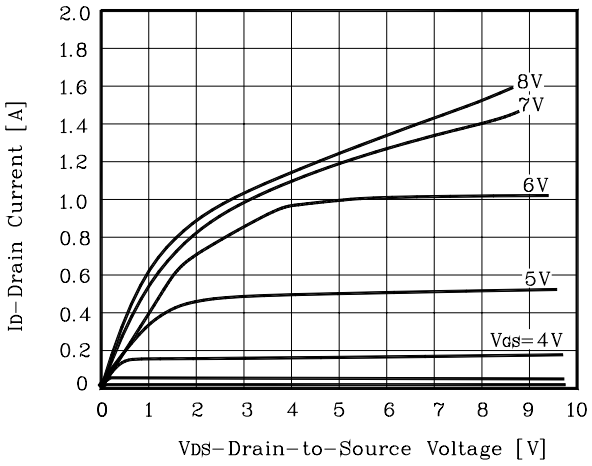


Fig. 2 I_D - V_{DS}

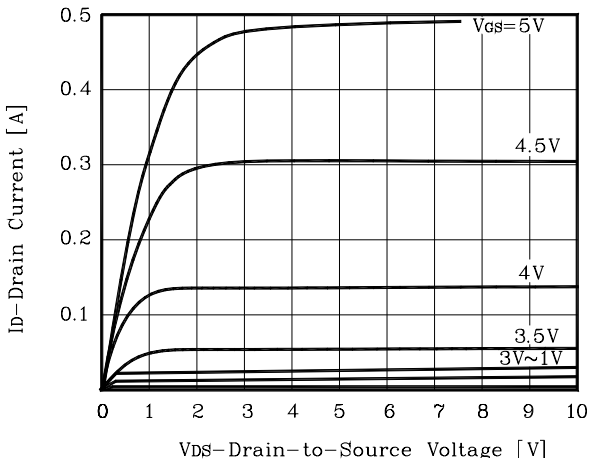


Fig. 3 I_D - V_{GS}

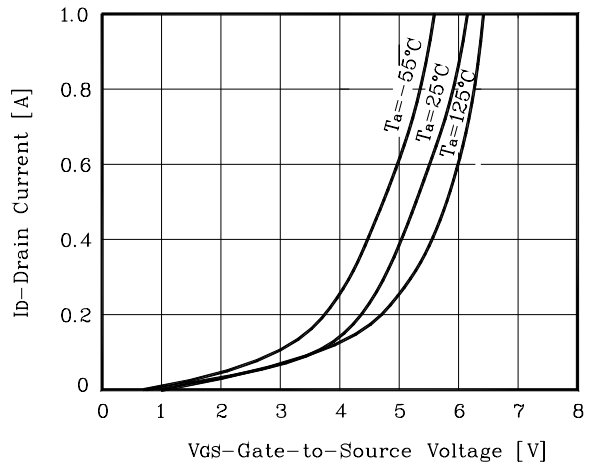


Fig. 4 $r_{DS(on)}$ - I_D

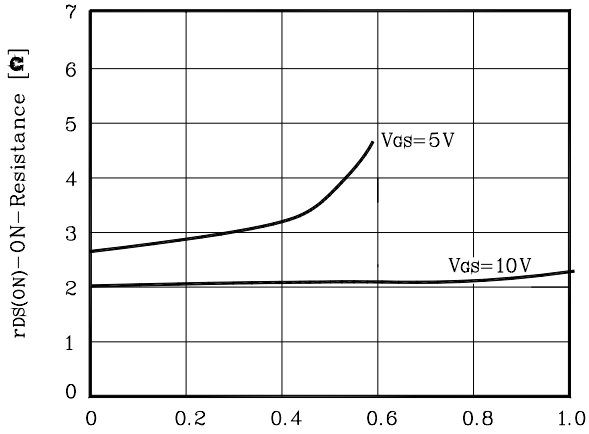


Fig. 5 C - V_{DS}

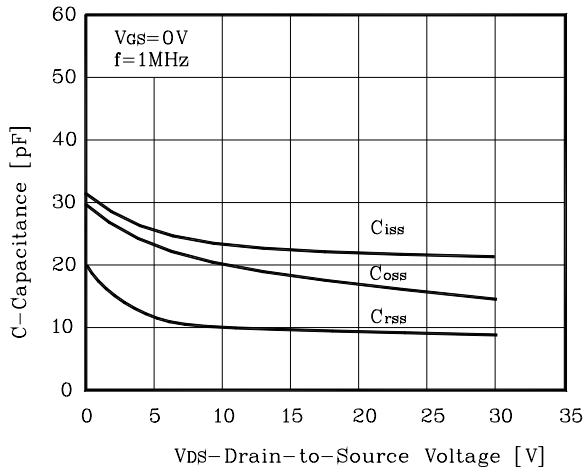
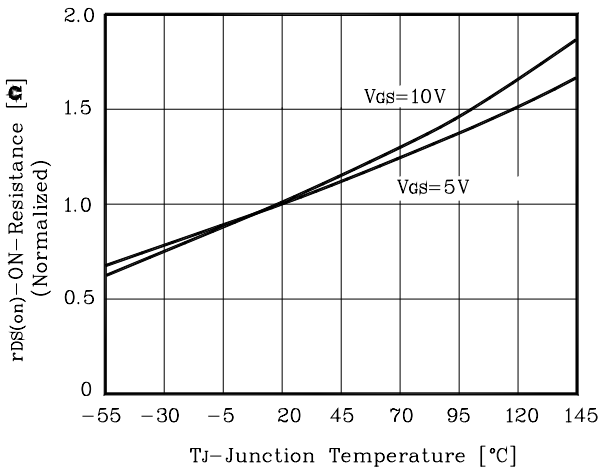


Fig. 6 $r_{DS(on)}$ - T_J



Electrical Characteristic Curves

Fig. 7 $r_{DS(on)}$ - V_{GS}

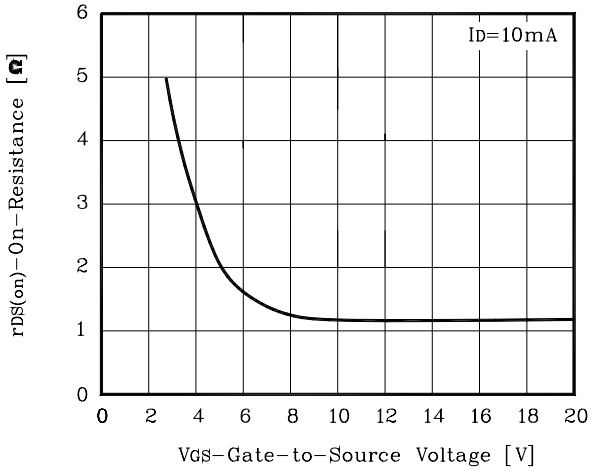


Fig. 8 I_S - V_{SD}

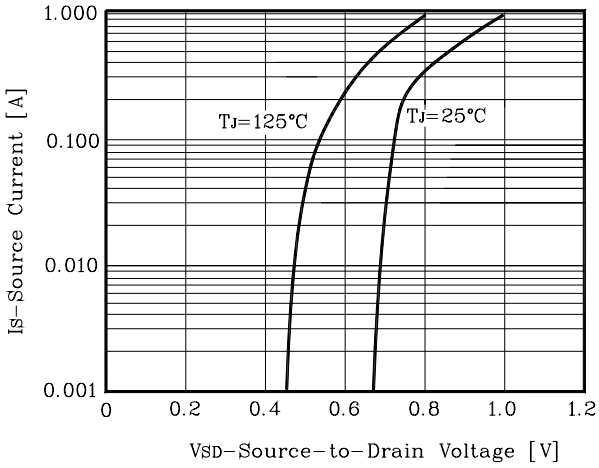
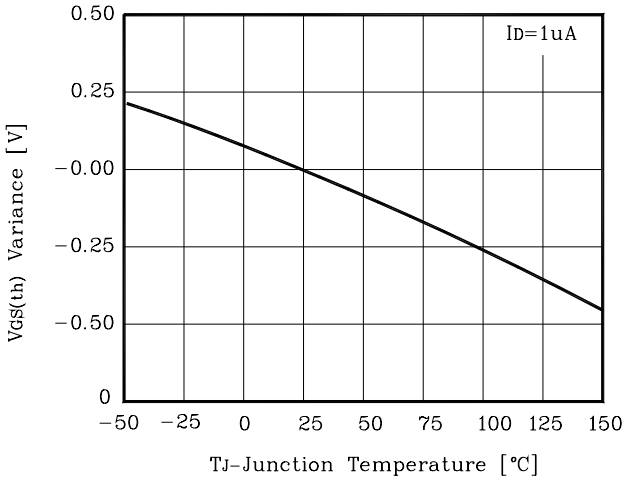


Fig. 9 $V_{GS(th)}$ - T_J



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