



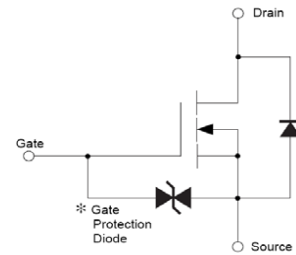
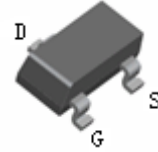
FEATURES

- Low on-resistance.
- Fast switching speed.
- Low voltage drive(2.5V)makes this Device ideal for portable equipment.
- Easily designed drive circuits.
- Easy to parallel.

APPLICATIONS

- Interfacing,switching (30V,100mA)

SOT-23



ORDERING INFORMATION

Type No.	Marking	Package Code
2SK3018	KN	SOT-23

MAXIMUM RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	Value	Units	
V _{DSS}	Drain-Source voltage	30	V	
V _{GSS}	Gate -Source voltage	±20	V	
I _D I _{DP} ^{*1}	drain current	Continuous Pulsed	100 200	mA
I _{DR} I _{DRP} ^{*1}	Reverse drain current	Continuous Pulsed	100 200	mA
P _D ^{*2}	Total Power Dissipation(T _C =25°C)	200	mW	
T _{ch} , T _{stg}	Channel and Storage Temperature	-55 to +150	°C	
R _{θJA}	Thermal Resistance from Junction to Ambient	625	°C /W	

*1Pw≤10us,Duty cycle≤50%

*2With each pin mounted on the recommended lands.

ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Gate- Source Leakage	I_{GSS}	$V_{GS} = \pm 20V, V_{DS} = 0V$			± 1	μA
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = 10\mu A$	30			V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = 3V, I_D = 100\mu A$	0.8		1.5	V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 30V, V_{GS} = 0V$			0.2	μA
Static drain-source on-state resistance	$R_{DS(on)}$	$I_D = 10mA, V_{GS} = 4V$		5	8	Ω
	$R_{DS(on)}$	$I_D = 1mA, V_{GS} = 2.5V$		8	13	Ω
Forward transfer admittance	$ Y_{fs} $	$V_{DS} = 3V, I_D = 10mA$	20			mS
Input capacitance	C_{ISS}	$V_{DS} = 5V, V_{GS} = 0V, f = 1.0MHz$		13		pF
Output capacitance	C_{OSS}			9		
Reverse transfer capacitance	C_{RSS}			4		
Turn-On Delay Time	$t_{D(ON)}$	$V_{DD} = 5V, I_D = 10mA,$ $R_L = 500\Omega, V_{GS} = 5V,$ $R_{GEN} = 10\Omega$		15		ns
Rise time	t_r			35		ns
Turn-Off Delay Time	$t_{D(OFF)}$			80		ns
Fall time	T_f			80		ns

TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

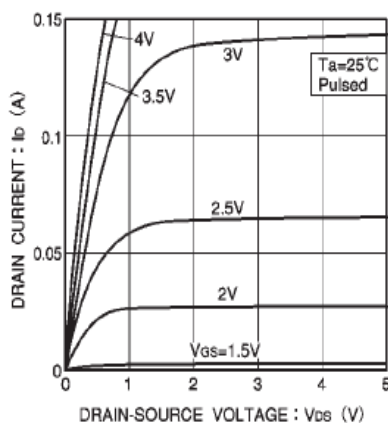


Fig.1 Typical output characteristics

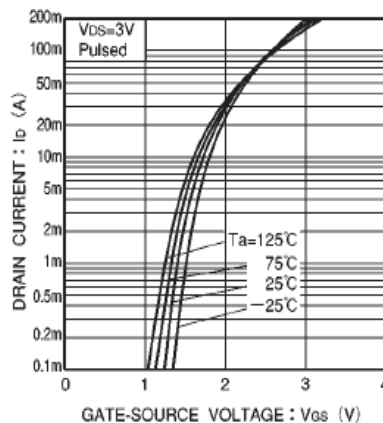


Fig.2 Typical transfer characteristics

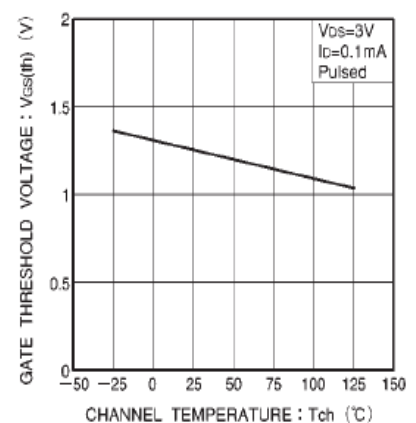


Fig.3 Gate threshold voltage vs. channel temperature

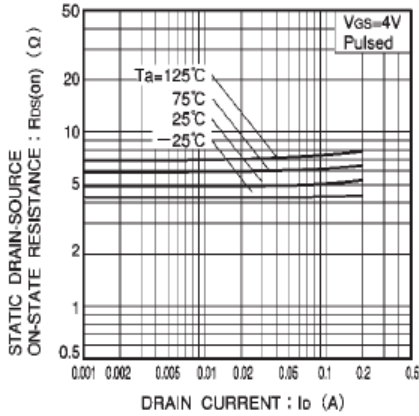


Fig. 4 Static drain-source on-state resistance vs. drain current (I)

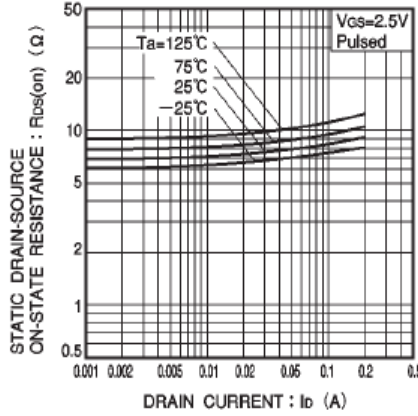


Fig. 5 Static drain-source on-state resistance vs. drain current (II)

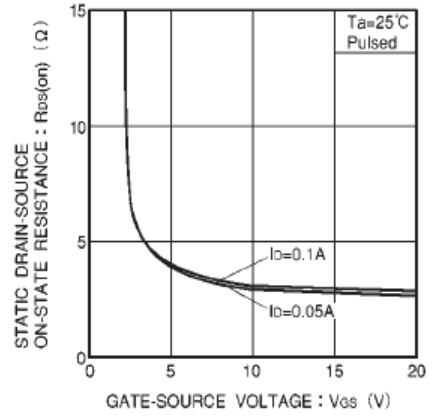


Fig. 6 Static drain-source on-state resistance vs. gate-source voltage

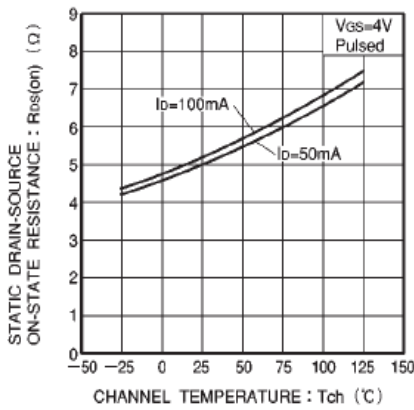


Fig. 7 Static drain-source on-state resistance vs. channel temperature

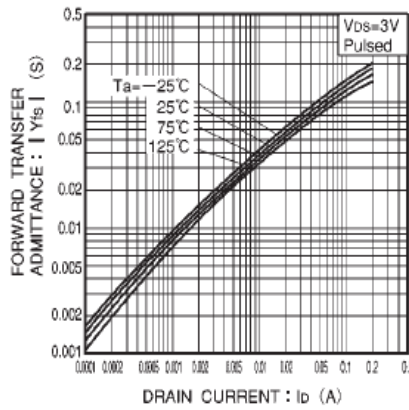


Fig. 8 Forward transfer admittance vs. drain current

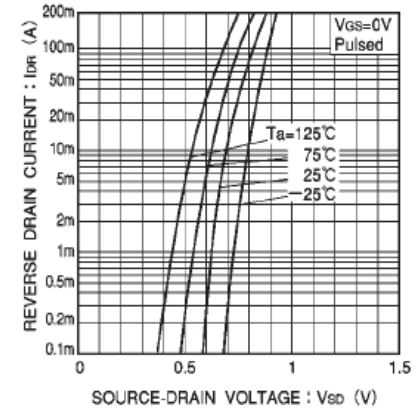


Fig. 9 Reverse drain current vs. source-drain voltage (I)

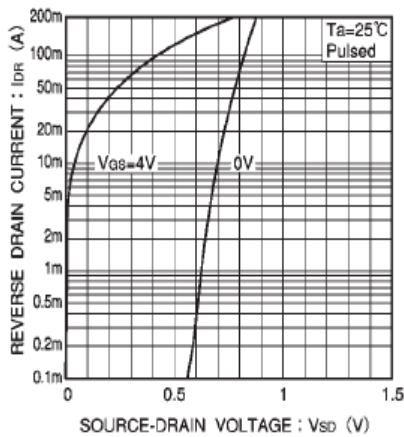


Fig. 10 Reverse drain current vs. source-drain voltage (II)

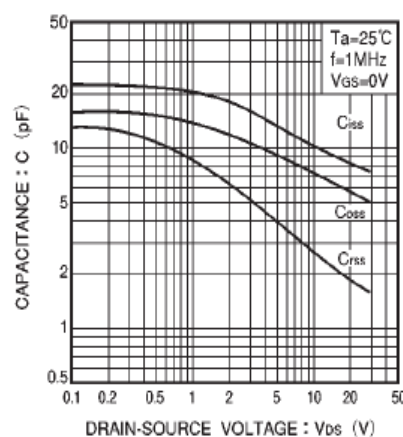


Fig. 11 Typical capacitance vs. drain-source voltage

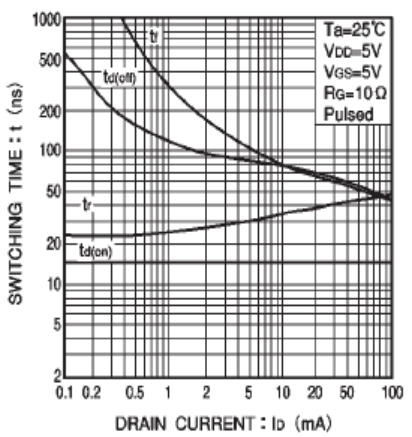


Fig. 12 Switching characteristics (See Figures. 13 and 14 for the measurement circuit and resultant waveforms)

Switching characteristics measurement circuit

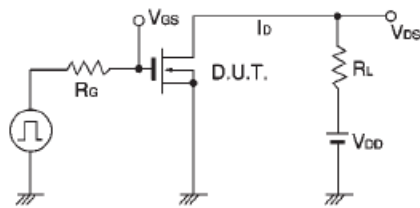


Fig.13 Switching time measurement circuit

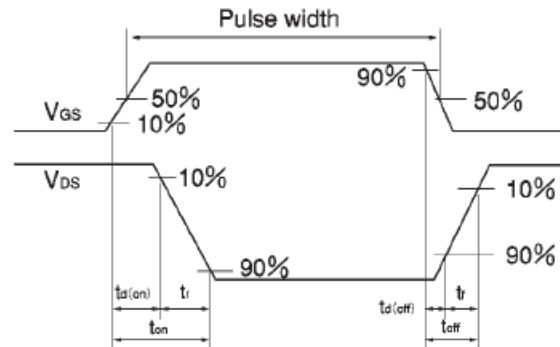
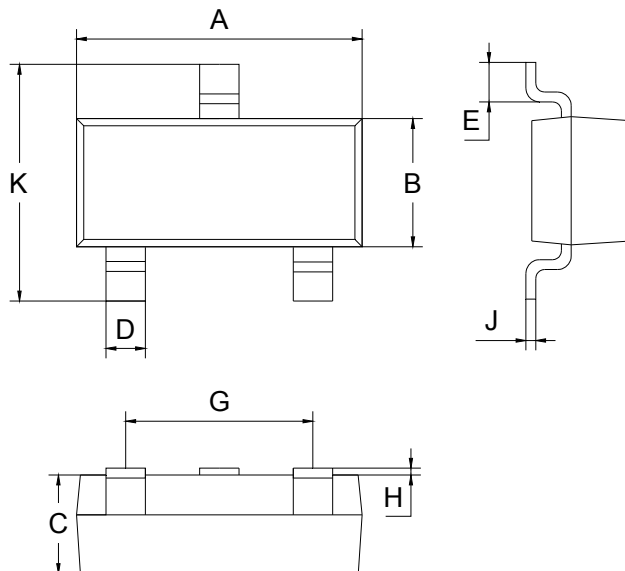


Fig.14 Switching time waveforms

PACKAGE OUTLINE

Plastic surface mounted package

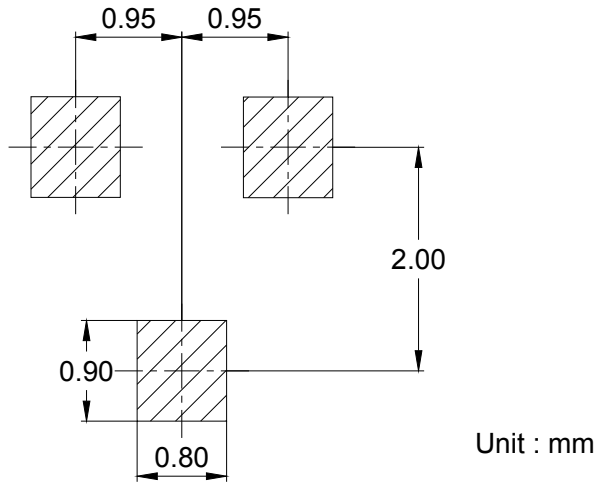
SOT-23



SOT-23		
Dim	Min	Max
A	2.70	3.10
B	1.10	1.50
C	1.0 Typical	
D	0.4 Typical	
E	0.35	0.48
G	1.80	2.00
H	0.02	0.1
J	0.1 Typical	
K	2.20	2.60
All Dimensions in mm		



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
2SK3018	SOT-23	3000/Tape&Reel