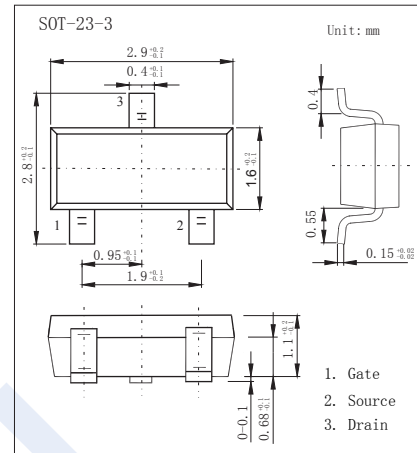
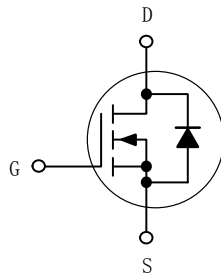


N-Channel MOSFET

KI1N60DS

■ Features

- $V_{DS} (V) = 600V$
- $I_D = 0.4 A (V_{GS} = 10V)$
- $R_{DS(ON)} < 30 \Omega (V_{GS} = 10V)$



■ Absolute Maximum Ratings $T_a = 25^\circ C$

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	600	V
Gate-Source Voltage	V_{GS}	± 30	
Continuous Drain Current	I_D	$T_c=25^\circ C$	0.4
		$T_c=70^\circ C$	0.25
Pulsed Drain Current @ $t_p=10\mu s$	I_{DM}	1.5	A
Power Dissipation	P_D	0.4	W
Single Pulse Drain-to-Source Avalanche Energy ($I_{PK} = 1.0 A$)	E_{AS}	13	mJ
Peak Diode Recovery (Note.1)	dv/dt	4.5	V/ns
Thermal Resistance.Junction- to-Ambient	R_{thJA}	141	$^\circ C/W$
Thermal Resistance.Junction- to-Case	R_{thJC}	2.7	
Junction Temperature	T_J	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55 to 150	

Note.1: $I_s = 1.5 A$, $di/dt \leq 100 A/\mu s$, $V_{DD} \leq BV_{DS}$

N-Channel MOSFET

KI1N60DS

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V _{DSS}	I _D =250 μA, V _{GS} =0V	600			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =600V, V _{GS} =0V, T _J =25°C			1	μA
		V _{DS} =600V, V _{GS} =0V, T _J =125°C			50	
Gate-Body Leakage Current	I _{GSS}	V _{DS} =0V, V _{GS} =±20V			±100	nA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250 μA (Note.1)	2.2		4	V
Static Drain-Source On-Resistance	R _{DS(on)}	V _{GS} =10V, I _D =0.2A (Note.1)		25	30	Ω
Forward Transconductance	g _{FS}	V _{DS} =15V, I _D =0.2A (Note.1)		0.9		S
Input Capacitance	C _{iss}	V _{GS} =0V, V _{DS} =25V, f=1MHz		160		pF
Output Capacitance	C _{oss}			22		
Reverse Transfer Capacitance	C _{rss}			4		
Gate Resistance	R _g	V _{GS} =0V, V _{DS} =0V, f=1MHz		6.7		Ω
Total Gate Charge	Q _g	V _{GS} =4.5V, V _{DS} =15V, I _D =0.4A		7.2		nC
Gate Source Charge	Q _{gs}			1.2		
Gate Drain Charge	Q _{gd}			3.1		
Plateau Voltage	V _{GP}			4.5		
Turn-On DelayTime	t _{d(on)}	V _{GS} =10V, V _{DS} =300V, I _D =0.4A, R _G =0 Ω		8		ns
Turn-On Rise Time	t _r			5.1		
Turn-Off DelayTime	t _{d(off)}			16.5		
Turn-Off Fall Time	t _f			21.3		
Body Diode Reverse Recovery Time	t _{rr}			179		
Charge Time	t _a	V _{GS} =0V, V _{DD} =30V, I _S =1A, di/dv=100A/us		37		nA
Discharge Time	t _b			141		
Body Diode Reverse Recovery Charge	Q _{rr}			288		
Diode Forward Voltage	V _{SD}	I _S =0.4A, V _{GS} =0V, T _J =25°C		0.78	1.6	V
		I _S =0.4A, V _{GS} =0V, T _J =125°C		0.63		

Note.1:Pulse Width ≤ 300us, Duty Cycle ≤ 2%.

■ Marking

Marking	01N60
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