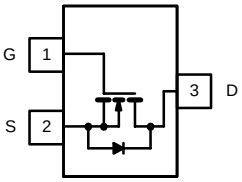
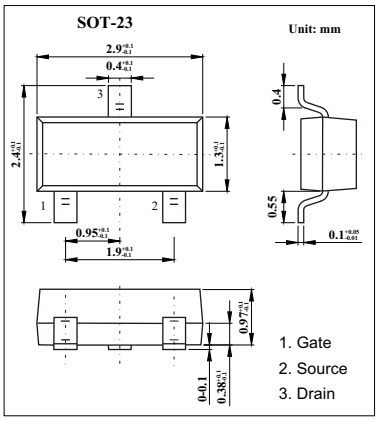
N-Channel MOSFET

KI2302DS

■ Features

- V_{DS}=20V
- $R_{DS(on)}$= 0.085Ω@V_{GS}=4.5V ,I_D=3.6A
- $R_{DS(on)}$= 0.115Ω@V_{GS}=2.5V ,I_D= 3.1A





■ Absolute Maximum Ratings Ta = 25°C

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	20	V
Gate-Source Voltage		V_{GS}	±8	
Continuous Drain Current	Ta = 25°C	I_D	2.1	A
	Ta=70°C		1.7	
Pulsed Drain Current		I_{DM}	10	
Power Dissipation	Ta = 25°C	P_D	0.7	W
	Ta=70°C		0.46	
Thermal Resistance. Junction-to-Ambient		R_{thJA}	178	°C/W
Junction Temperature		T_J	150	°C
Storage Temperature		T_{stg}	-55 to 150	°C

KI2302DS

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V_{DSS}	V_{GS} = 0 V, I_D = 10 μA	20			V
Gate-Threshold Voltage	$V_{GS(th)}$	V_{DS} = V_{GS}, I_D = 250 μA	0.62	0.95	1.9	V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS} = 20 V, V_{GS} = 0 V			1	μA
		V_{DS} = 20 V, V_{GS} = 0 V, T_J = 55°C			10	
Gate-Body Leakage	I_{GSS}	V_{DS} = 0 V, V_{GS} = ±8 V			±100	nA
Drain-Source On-Resistance *	$r_{DS(on)}$	V_{GS} = 4.5 V, I_D = 3.6 A		0.045	0.085	Ω
		V_{GS} = 2.5 V, I_D = 3.1 A		0.070	0.115	
On-State Drain Current	$I_{D(on)}$	V_{DS} ≥ 5 V, V_{GS} = 4.5 V	6			A
		V_{DS} ≥ 5 V, V_{GS} = 2.5 V	4			
Forward Transconductance *	g_{fs}	V_{DS} = 5 V, I_D = 3.6 A		8		S
Input Capacitance	C_{iss}	V_{DS}=10V,V_{GS}=0V,f=1MHz		300		pF
Output Capacitance	C_{oss}			120		
Reverse Transfer Capacitance	C_{rss}			80		
Total Gate Charge	Q_g	V_{DS}=10V,V_{GS}=4.5V,I_D=3.6A		4.0	10	nC
Gate-Source Charge	Q_{gs}			0.65		
Gate-Drain Charge	Q_{gd}			1.5		
Turn-On Delay Time	$t_{d(on)}$	V_{DD}=10V,R_L=5.5 Ω,I_D≅3.6A,V_{GEN}=4.5V,R_G=6Ω		7	15	ns
Rise Time	t_r			55	80	
Turn-Off Delay Time	$t_{d(off)}$			16	60	
Fall-Time	t_f			10	25	
Continuous Source Current (Diode Conduction)	I_S			0.94		A
Diode Forward Voltage	V_{SD}	I_S = 0.94A, V_{GS} = 0 V		0.76	1.2	V

*Pulse test: PW ≤300 μs duty cycle≤2%..

■ Marking

Marking	A2SHB