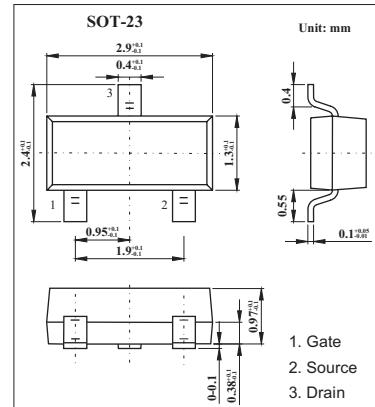
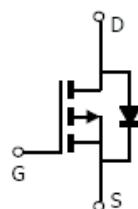


P-Channel Enhancement Mode Field Effect Transistor KO3407

■ Features

- $V_{DS}(V) = -30V$
- $I_D = -4.1 A$
- $R_{DS(ON)} < 52m\Omega$ ($V_{GS} = -10V$)
- $R_{DS(ON)} < 87m\Omega$ ($V_{GS} = -4.5V$)



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

Parameter	Symbol	Rating	Unit
Gate-Source Voltage	V_{GS}	-30	V
Drain-Source Voltage	V_{DS}	± 20	V
Continuous Drain Current *1	I_D	-4.1	A
TA=70°C		-3.5	
Pulsed Drain Current *2	I_{DM}	-20	
Power Dissipation *1	P_D	1.4	W
TA=70°C		1	
Junction and Storage Temperature Range	T_J, T_{STG}	-55 to 150	°C

*1The value of $R_{\theta JA}$ is measured with the device mounted on 1in² FR-4 board with 2oz.

Copper, in a still air environment with $T_A = 25^\circ C$

*2 Repetitive rating, pulse width limited by junction temperature.

■ Thermal Characteristics

Parameter	Symbol	Typ	Max	Unit
Maximum Junction-to-Ambient*1	$R_{\theta JA}$	65	90	°C/W
Maximum Junction-to-Ambient *1		85	125	°C/W
Maximum Junction-to-Lead *2	$R_{\theta JL}$	43	60	°C/W

*1The value of $R_{\theta JA}$ is measured with the device mounted on 1in² FR-4 board with 2oz.

Copper, in a still air environment with $T_A = 25^\circ C$

*2 . The $R_{\theta JA}$ is the sum of the thermal impedance from junction to lead $R_{\theta JL}$ and lead to ambient.

KO3407■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	$Bvdss$	$I_d=250\mu\text{A}, V_{gs}=0\text{V}$	-30			V
Zero Gate Voltage Drain Current	I_{dss}	$V_{ds}=-24\text{V}, V_{gs}=0\text{V}$			-1	μA
		$V_{ds}=-24\text{V}, V_{gs}=0\text{V}, T_j=55^\circ\text{C}$			-5	
Gate-Body leakage current	I_{gss}	$V_{ds}=0\text{V}, V_{gs}=\pm 20\text{V}$			± 100	nA
Gate Threshold Voltage	$V_{gs(th)}$	$V_{ds}=V_{gs}, I_d=-250\mu\text{A}$	-1	-1.8	-3	V
On state drain current	$I_{d(on)}$	$V_{gs}=-4.5\text{V}, V_{ds}=-5\text{V}$	-10			A
Static Drain-Source On-Resistance	$R_{ds(on)}$	$V_{gs}=-10\text{V}, I_d=4.1\text{A}$		40.5	52	$\text{m}\Omega$
		$V_{gs}=-10\text{V}, I_d=4.2\text{A}, T_j=125^\circ\text{C}$		57	73	
		$V_{gs}=-4.5\text{V}, I_d=3\text{A}$		64	87	$\text{m}\Omega$
Forward Transconductance	g_{fs}	$V_{ds}=-5\text{V}, I_d=-4\text{A}$	5.5	8.2		S
Diode Forward Voltage	V_{sd}	$I_s=-1\text{A}, V_{gs}=0\text{V}$		-0.77	-1	V
Maximum Body-Diode Continuous Current	I_s				-2.2	A
Reverse Transfer Capacitance	C_{iss}	$V_{gs}=0\text{V}, V_{ds}=-15\text{V}, f=1\text{MHz}$		700		pF
Gate resistance	C_{oss}			120		pF
Input Capacitance	C_{rss}			75		pF
Output Capacitance	R_g	$V_{gs}=0\text{V}, V_{ds}=0\text{V}, f=1\text{MHz}$		10		Ω
Total Gate Charge(10V)	Q_g	$V_{gs}=-4.5\text{V}, V_{ds}=-15\text{V}, I_d=-4\text{A}$		14.3		nC
Total Gate Charge (4.5V)	Q_g			7		nC
Gate Source Charge	Q_{gs}			3.1		nC
Gate Drain Charge	Q_{gd}			3		nC
Turn-On Rise Time	$t_{D(on)}$	$V_{gs}=-10\text{V}, V_{ds}=-15\text{V}, R_L=3.6\Omega, R_{gen}=3\Omega$		8.6		ns
Turn-Off DelayTime	t_r			5		ns
Turn-Off Fall Time	$t_{D(off)}$			28.2		ns
Turn-On DelayTime	t_f			13.5		ns
Body Diode Reverse Recovery Time	t_{rr}	$I_F=-4\text{A}, di/dt=100\text{A}/\mu\text{s}$		27		ns
Body Diode Reverse Recovery Charge	Q_{rr}	$I_F=-4\text{A}, di/dt=100\text{A}/\mu\text{s}$		15		nC

■ Marking

Marking	A7
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