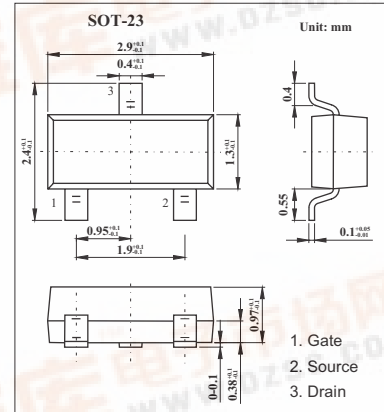
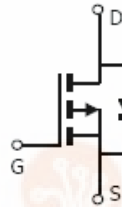


SMD Type Transistors

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_{DS}	-30	V
Drain-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current *1 $T_A=25^\circ C$	I_D	-4.1	A
Current *1 $T_A=70^\circ C$		-3.5	
Pulsed Drain Current *2	I_{DM}	-20	
Power Dissipation *1 $T_A=25^\circ C$	P_D	1.4	W
$T_A=70^\circ C$		1	
Junction and Storage Temperature Range	T_J, T_{STG}	-55 to 150	$^\circ C$

*1The value of $R_{\theta JA}$ is measured with the device mounted on $1in^2$ 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 $t \leq 10s$	$R_{\theta JA}$	65	90	$^\circ C/W$
Maximum Junction-to-Ambient *1 Steady-State		85	125	$^\circ C/W$
Maximum Junction-to-Lead *2 Steady-State	$R_{\theta JL}$	43	60	$^\circ C/W$

*1The value of $R_{\theta JA}$ is measured with the device mounted on $1in^2$ 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 Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BVDSS	$I_D=250\mu A, V_{GS}=0V$	-30			V
Zero Gate Voltage Drain Current	IDSS	$V_{DS}=-24V, V_{GS}=0V$			-1	μA
		$V_{DS}=-24V, V_{GS}=0V, T_J=55^\circ C$			-5	
Gate-Body leakage current	IGSS	$V_{DS}=0V, V_{GS}=\pm 20V$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=-250\mu A$	-1	-1.8	-3	V
On state drain current	$I_{D(ON)}$	$V_{GS}=-4.5V, V_{DS}=-5V$	-10			A
Static Drain-Source On-Resistance	RDS(ON)	$V_{GS}=-10V, I_D=4.1A$		40.5	52	m Ω
		$V_{GS}=-10V, I_D=4.2A, T_J=125^\circ C$		57	73	
		$V_{GS}=-4.5V, I_D=-3A$		64	87	m Ω
Forward Transconductance	gFS	$V_{DS}=-5V, I_D=-4A$	5.5	8.2		S
Diode Forward Voltage	VSD	$I_S=-1A, V_{GS}=0V$		-0.77	-1	V
Maximum Body-Diode Continuous Current	IS				-2.2	A
Reverse Transfer Capacitance	Ciss			700		pF
Gate resistance	Coss	$V_{GS}=0V, V_{DS}=-15V, f=1MHz$		120		pF
Input Capacitance	Crss			75		pF
Output Capacitance	Rg	$V_{GS}=0V, V_{DS}=0V, f=1MHz$		10		Ω
Total Gate Charge(10V)	Qg	$V_{GS}=-4.5V, V_{DS}=-15V, I_D=-4A$		14.3		nC
Total Gate Charge (4.5V)	Qg			7		nC
Gate Source Charge	Qgs			3.1		nC
Gate Drain Charge	Qgd			3		nC
Turn-On Rise Time	tD(on)				8.6	
Turn-Off DelayTime	tr	$V_{GS}=-10V, V_{DS}=-15V, R_L=3.6\Omega, R_{GEN}=3\Omega$		5		ns
Turn-Off Fall Time	tD(off)			28.2		ns
Turn-On DelayTime	tr			13.5		ns
Body Diode Reverse Recovery Time	trr		$I_F=-4A, di/dt=100A/\mu s$		27	
Body Diode Reverse Recovery Charge	Qrr	$I_F=-4A, di/dt=100A/\mu s$		15		nC

■ Marking

Marking	A7
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