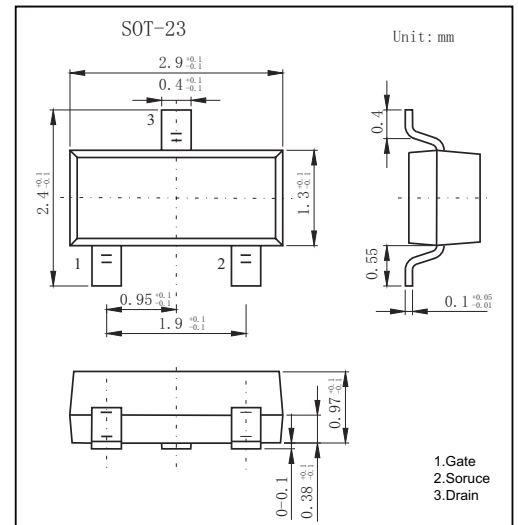# LJ3407

SOT-23 Plastic-Encapsulate MOSFETS

FEATURE

●TrenchFET Power MOSFET

●P-Channel Enhancement Mode Field

 Effect Transistor

MECHANICAL DATA

●Case style:SOT-23molded plastic

●Mounting position:any

SOT-23   Unit: mm

1.Gate
2.Soruce
3.Drain

MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	-30	V
Gate-Source Voltage	V_{GS}	±20	V
Continuous Drain Current	I_D	-4.1	A
Power Dissipation	P_D	350	mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	357	℃/W
Junction Temperature	T_J	150	℃
Storage Temperature	T_{stg}	-55~+150	℃

$V_{(BR)DSS}$	$R_{DS(on)}$MAX	I_D
-30V	60mΩ@-10V	-4.1A
	87mΩ@-4.5V	

MOSFET ELECTRICAL CHARACTERISTICS Ta=25 ℃ unless otherwise specified

Parameter	Symbol	Test Condition	Min	Typ	Max	Units
Static characteristics						
Drain-source breakdown voltage	BV_{DSS}	V_{GS} = 0V, I_D =-250µA	-30			V
Zero gate voltage drain current	I_{DSS}	V_{DS} =-24V, V_{GS} = 0V			-1	µA
Gate-source leakage current	I_{GSS}	V_{GS} =±20V, V_{DS} = 0V			±100	nA
Drain-source on-resistance (note 1)	$R_{DS(on)}$	V_{GS} =-10V, I_D =-4.1A		50	60	mΩ
		V_{GS} =-4.5V, I_D =-3A		68	87	mΩ
Forward tranconductance (note 1)	g_{FS}	V_{DS} =-5V, I_D =-4A	5.5			S
Gate threshold voltage	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =-250µA	-1	-1.4	-3	V
Diode forward voltage (note 1)	V_{SD}	I_S=-1A, V_{GS}=0V			-1	V
Dynamic characteristics (note 2)						
Input capacitance	C_{iss}	V_{DS} =-15V, V_{GS} =0V, f =1MHz		700		pF
Output capacitance	C_{oss}			120		pF
Reverse transfer capacitance	C_{rss}			75		pF
Switching Characteristics (note 2)						
Turn-on delay time	$t_{d(on)}$	V_{GS}=-10V,V_{DS}=-15V, R_L=3.6Ω,R_{GEN}=3Ω		8.6		ns
Turn-on rise time	t_r			5.0		ns
Turn-off delay time	$t_{d(off)}$			28.2		ns
Turn-off fall time	t_f			13.5		ns

Notes:

1.   Pulse test: Pulse width ≤300µs, duty cycle ≤2%.

2.   These parameters have no way to verify.

RATINGS AND CHARACTERISTIC CURVES

Typical Characteristics

Output Characteristics

Transfer Characteristics

$R_{DS(ON)}$ —— I_D

$R_{DS(ON)}$ —— V_{GS}

I_S —— V_{SD}