

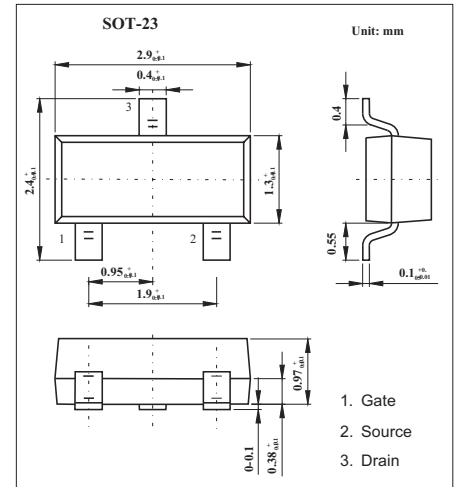
SOT-23 Plastic-Encapsulate MOSFETS

Features

- V_{DS} (V) = -30V
- $I_D = -2.6A$ ($V_{GS} = -10V$)
- $R_{DS(ON)} < 130m$ ($V_{GS} = -10V$)
- $R_{DS(ON)} < 200m$ ($V_{GS} = -4.5V$)
- P-Channel Enhancement Mode Field Effect Transistor

MECHANICAL DATA

- Case style: SOT-23 molded plastic
- Mounting position: any



MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	-30	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current	I_D	$T_A=25^\circ C$	-2.6
		$T_A=70^\circ C$	-2.2
Pulsed Drain Current	I_{DM}	-20	A
Power Dissipation	P_D	$T_A=25^\circ C$	1.4
		$T_A=70^\circ C$	1
Thermal Resistance. Junction-to-Ambient	R_{thJA}	100	$^\circ C/W$
Thermal Resistance. Junction-to-Case	R_{thJC}	63	$^\circ C/W$
Junction and Storage Temperature Range	T_J, T_{STG}	-55 to 150	$^\circ C$

MOSFET ELECTRICAL CHARACTERISTICS $T_a=25^\circ C$ unless otherwise specified

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit	
Drain-Source Breakdown Voltage	V_{DSS}	$I_D=250 \mu A, V_{GS}=0V$	-30			V	
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=-24V, V_{GS}=0V$			-1	μA	
		$V_{DS}=-24V, V_{GS}=0V, T_J=55^\circ C$			-5		
Gate-Body leakage current	I_{GSS}	$V_{DS}=0V, V_{GS}=\pm 20V$			± 100	nA	
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=-250 \mu A$	-1	-1.9	-3	V	
Static Drain-Source On-Resistance	$r_{DS(ON)}$	$V_{GS}=-10V, I_D=-2.6A$		97	130	$m\Omega$	
		$V_{GS}=-10V, I_D=-2.6A, T_J=125^\circ C$		135	150		
		$V_{GS}=-4.5V, I_D=-2A$		166	200	$m\Omega$	
On state drain current	$I_{D(ON)}$	$V_{GS}=-4.5V, V_{DS}=-5V$	-5			A	
Forward Transconductance	g_{fs}	$V_{DS}=-5V, I_D=-5A$	3	3.8		S	
Input Capacitance	C_{iss}			302	370	pF	
Output Capacitance	C_{oss}	$V_{GS}=0V, V_{DS}=-15V, f=1MHz$		50.3		pF	
Reverse Transfer Capacitance	C_{rss}			37.8		pF	
Gate resistance	R_g	$V_{GS}=0V, V_{DS}=0V, f=1MHz$		12	18	Ω	
Total Gate Charge (10V)	Q_g	$V_{GS}=-4.5V, V_{DS}=-15V, I_D=-2.6A$		6.8	9	nC	
Total Gate Charge (4.5V)				2.4		nC	
Gate Source Charge			Q_{gs}		1.6		nC
Gate Drain Charge			Q_{gd}		0.95		nC
Turn-On DelayTime	$t_{D(on)}$	$V_{GS}=-10V, V_{DS}=-15V, R_L=5.8\Omega, R_{GEN}=3\Omega$		7.5		ns	
Turn-On Rise Time	t_r			3.2		ns	
Turn-Off DelayTime	$t_{D(off)}$			17		ns	
Turn-Off Fall Time	t_f			6.8		ns	
Body Diode Reverse Recovery Time	t_{rr}		$I_F=-2.6A, di/dt=100A/\mu s$		16.8	22	ns
Body Diode Reverse Recovery Charge	Q_{rr}	$I_F=-2.6A, di/dt=100A/\mu s$		10		nC	
Maximum Body-Diode Continuous Current	I_S				-2	A	
Diode Forward Voltage	V_{SD}	$I_S=-1A, V_{GS}=0V$		-0.82	-1	V	

*Repetitive rating, pulse width limited by junction temperature.