

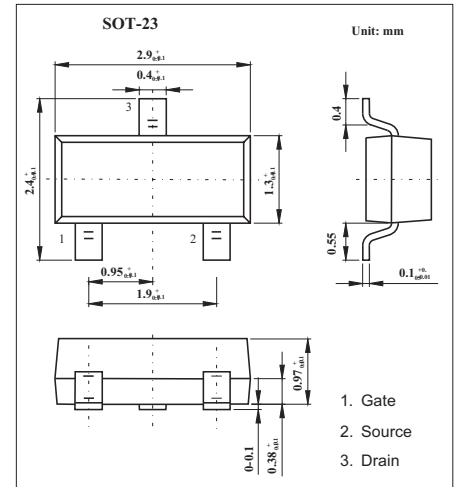
SOT-23 Plastic-Encapsulate MOSFETS

Features

- $V_{DS}$  (V) = -30V
- $I_D$  = -2.6A (VGS = -10V)
- $R_{DS(ON)} < 130m$  (VGS = -10V)
- $R_{DS(ON)} < 200m$  (VGS = -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	$V_{GS}$	$\pm 20$	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	$\mu A$
		$V_{DS}=-24V, V_{GS}=0V, T_J=55^\circ C$			-5	
Gate-Body leakage current	$I_{GSS}$	$V_{DS}=0V, V_{GS}=\pm 20V$			$\pm 100$	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	$\Omega$
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
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.