

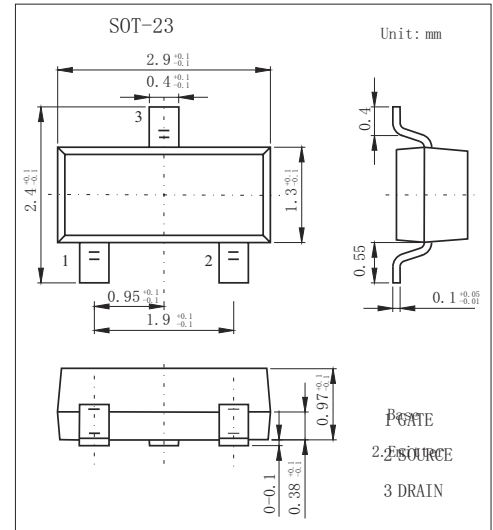
SOT-23 Plastic-Encapsulate MOSFETS

Features

- N-Channel Enhancement Mode Field Effect Transistor
- VDS=20V,RDS(ON)=40m @VGS=4.5V,ID=5.0A
- VDS=20V,RDS(ON)=60m @VGS=2.5V,ID=4.0A VDS=20V
- RDS(ON)=75m @VGS=1.8V,ID=1.0A

MECHANICAL DATA

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



MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V _{DS}	20	V
Gate-Source Voltage	V _{GS}	±10	V
Drain-Current	I _D	-Continuous * T _J =125°C	3.8
		-Pulsed	15
Power Dissipation *	P _D	1.25	W
Thermal Resistance,Junction- to-Ambient	R _{thJA}	100	°C/W
Operating Junction and Storage Temperature Range	T _J ,T _{stg}	-55 to 150	°C

* Surface Mounted on FR 4 Board ,t≤10 sec.

MOSFET ELECTRICAL CHARACTERISTICS Ta=25 °C unless otherwise specified

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V _{DSS}	V _{GS} =0V,I _D =250uA	20			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =20V,V _{GS} =0V			1	uA
Gate-Body Leakage	I _{GSS}	V _{GS} =±10V,V _{DS} =0V			±100	nA
Gate Threshold Voltage *	V _{GS(th)}	V _{GS} =V _{DS} ,I _D =250uA	0.6	0.78	1.5	V
Drain- Source on-state Resistance *	R _{DS(ON)}	V _{GS} =4.5V,I _D =5.0A		32	40	mΩ
		V _{GS} =2.5V,I _D =4.0A		50	60	mΩ
		V _{GS} =1.8V,I _D =1.0A		62	75	mΩ
On-State Drain Current *	I _{D(ON)}	V _{DS} =5V,V _{GS} =4.5V	18			A
Forward Transconductance *	g _{FS}	V _{DS} =5V,I _D =5A	5			S
Input Capacitance	C _{ISS}	V _{DS} = 15V, V _{GS} = 0V,f =1.0MHZ		888		pF
Output Capacitance	C _{OSS}		144		pF	
Reverse Transfer Capacitance	C _{RSS}		115		pF	
Turn-On Delay Time	t _{D(on)}		31.8		ns	
Rise Time	t _r	V _{DD} =10V,I _D =1A,V _{GS} =4.5V,R _L =10Ω ,R _{GEN} =6Ω		14.5		ns
Turn-Off Delay Time	t _{D(off)}		50.3		ns	
Fall Time	t _f		31.9		ns	
Total Gate Charge	Q _g	V _{DS} = 10V, I _D = 3.5A,V _{GS} = 4.5V		16.8		nC
Gate-Source Charge	Q _{gs}		2.5		nC	
Gate-Drain Charge	Q _{gd}		5.4		nC	
Drain-Source Diode Forward Current *	I _S				1.25	A
Diode Forward Voltage	V _{SD}	V _{GS} =0V,I _S =1.25A		0.825	1.2	V

* Pulse Test:Pulse Width≤300μ ,Duty Cycle≤2%