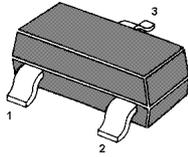


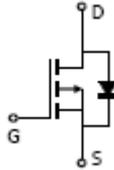
P-Channel 12-V(D-S) MOSFET

SOT-23



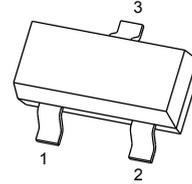
MARKING : 1F-**

Equivalent Circuit



SOT-23

- 1. GATE
- 2. SOURCE
- 3. DRAIN



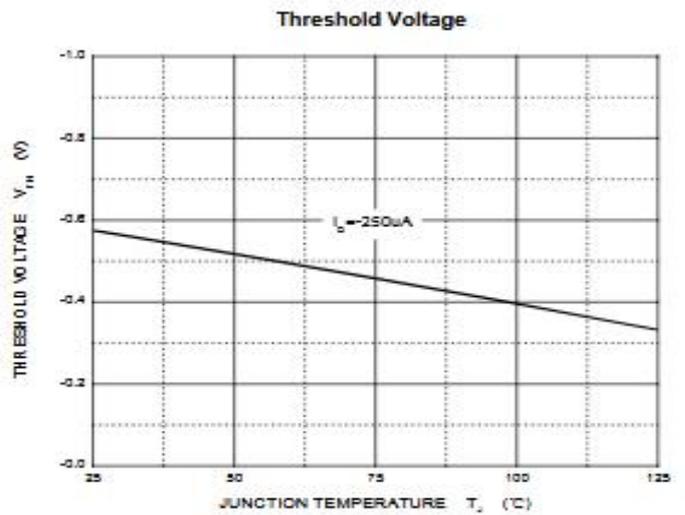
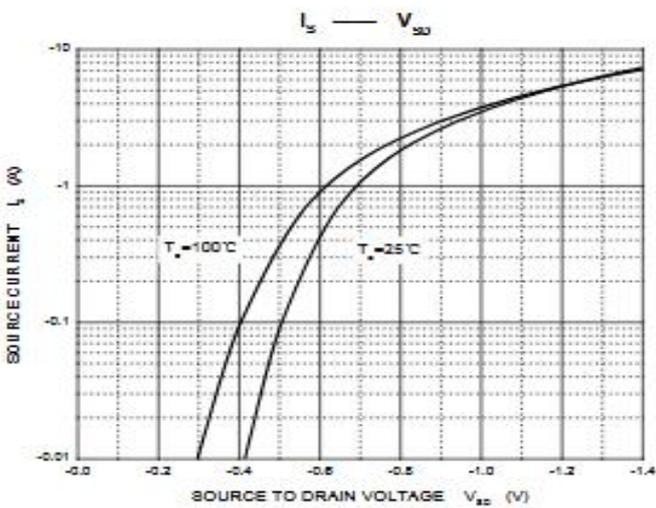
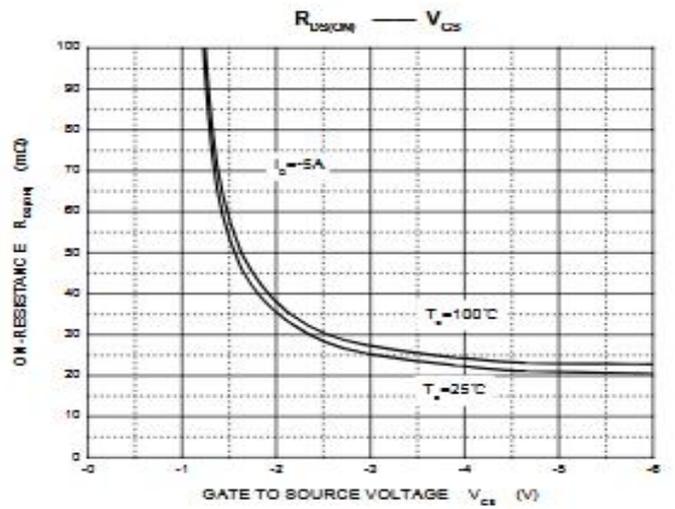
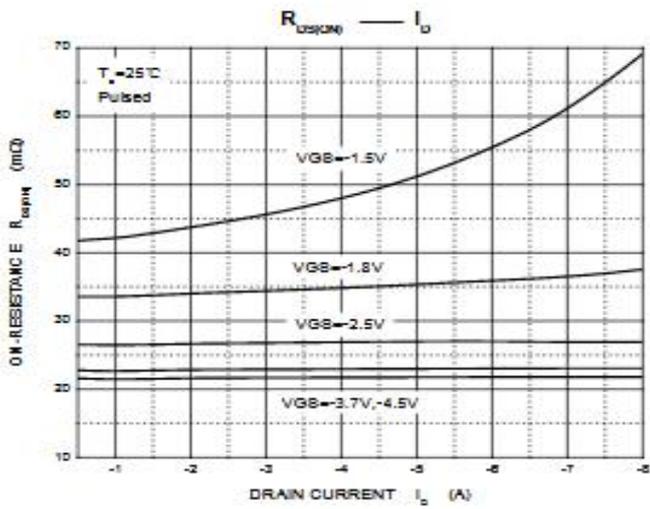
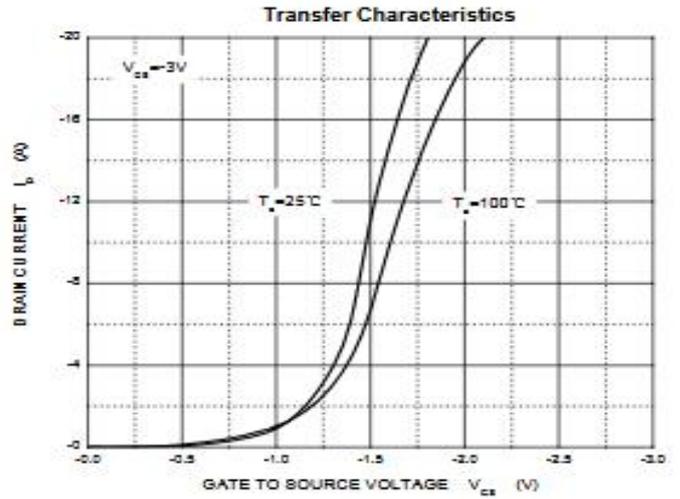
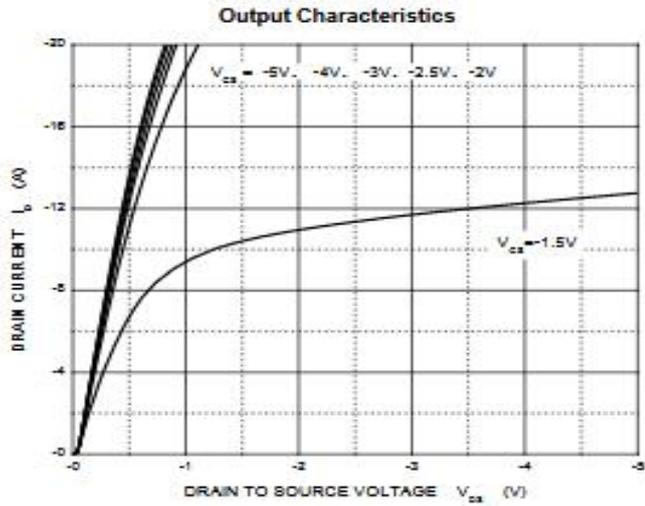
Maximum ratings (Ta=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	VDS	-12	V
Gate-Source Voltage	VGS	±8	
Continuous Drain Current	ID	-6	A
Pulsed Diode Current	IDM	-20	
Continuous Source-Drain Current(Diode Conduction)	IS	-0.72	
Power Dissipation	PD	1.1	W
Thermal Resistance from Junction to Ambient (t≤5s)	RθJA	113	°C/W
Operating Junction	TJ	150	°C
Storage Temperature	TSTG	-55~+150	°C

MOSFET ELECTRICAL CHARACTERISTICS

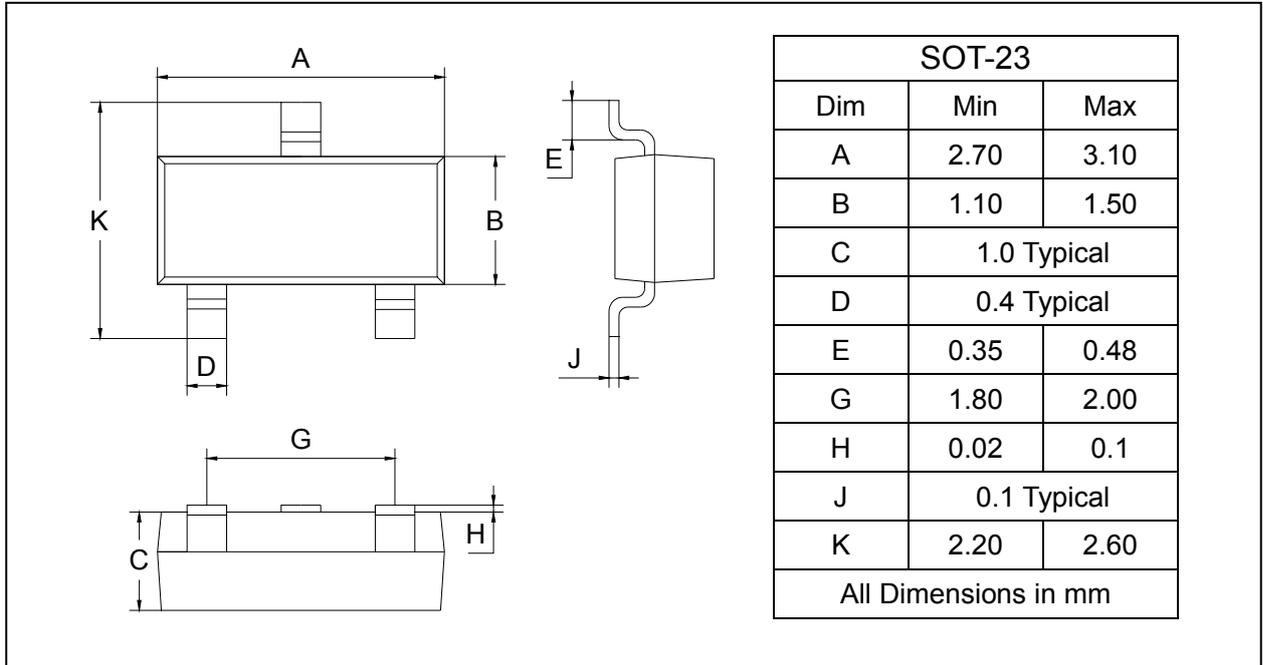
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Static						
Drain-source breakdown voltage	V(BR)DSS	VGS = 0V, ID = -250μA	-12			V
Gate-source threshold voltage	VGS(th)	VDS = VGS, ID = -250μA	-0.4		-1	V
Gate-source leakage	IGSS	VDS = 0V, VGS = ±8V			±100	nA
Zero gate voltage drain current	IDSS	VDS = -12V, VGS = 0V			-1	μA
Drain-source on-state resistance ^a	RDS(on)	VGS = -4.5V, ID = -5A			35	mΩ
		VGS = -2.5V, ID = -4.3A			45	mΩ
		VGS = -1.8V, ID = -1A			63	mΩ
Forward transconductance ^a	gfs	VDS = -4.5V, ID = -5A		18		S
Diode forward voltage	VSD	IS = -1.25A, VGS = 0V		-0.8	-1.2	V
Dynamic						
Input capacitance	Ciss	VDS = -6V, VGS = 0V, f = 1MHz		1275		pF
Output capacitance	Coss			255		pF
Reverse transfer capacitance ^b	Crss			236		pF
Total gate charge	Qg	VDS = -6V, VGS = -4.5V, ID = -5A		14	21	nC
Gate-source charge	Qgs			2.3		nC
Gate-drain charge	Qgd			3.6		nC
Gate resistance	Rg	f = 1MHz		10		Ω
Switching^b						
Turn-on delay time	td(on)	VDS = -6V RL = 6Ω, ID = -4A, VGEN = -4.5V, Rg = 1Ω		26	40	ns
Rise time	tr			24	40	ns
Turn-off delay time	td(off)			45	70	ns
Fall time	tf			20	35	ns
Drain-source body diode characteristics						
Continuous Source-Drain Diode Current	IS	Tc = 25°C			-1.4	A
Pulsed Diode forward Current	ISM				-20	A

Typical Characteristics

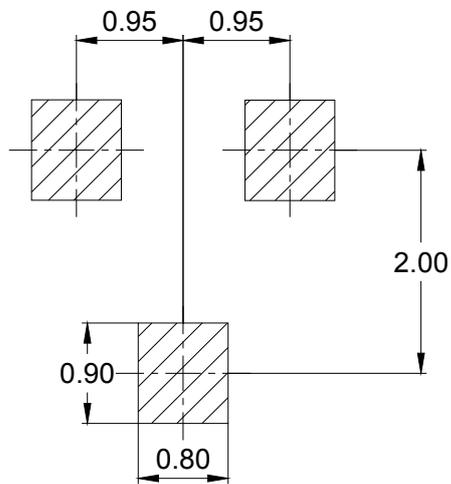


Plastic surface mounted package

SOT-23



SOLDERING FOOTPRINT



Unit : mm