

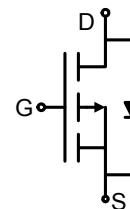
P-Channel Power MOSFET

General Features

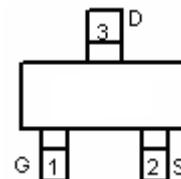
- $V_{DS} = -20V, I_D = -2.4A$
- $R_{DS(ON)} < 200m\Omega @ V_{GS}=-2.5V$
- $R_{DS(ON)} < 140m\Omega @ V_{GS}=-4.5V$
- High power and current handing capability
- Lead free product is acquired
- Surface mount package

Application

- PWM applications
- Load switch
- Power management



Schematic diagram



Marking and Pin Assignment



SOT-23 top view

MAXIMUM RATINGS

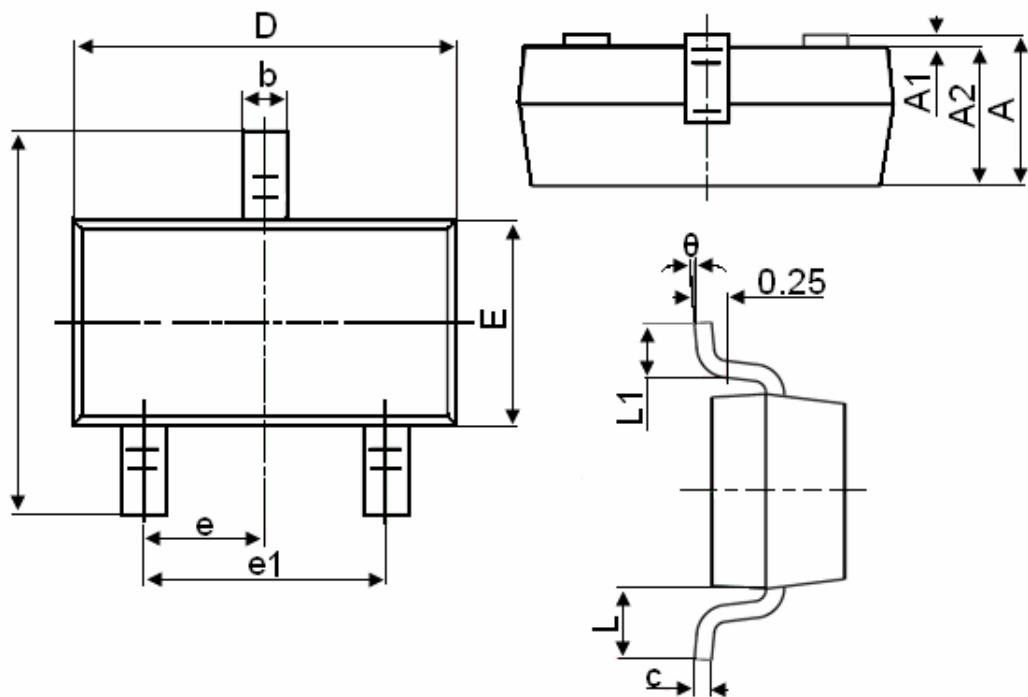
Characteristic	Symbol	Max	Unit
Drain-Source Voltage	BV_{DSS}	-20	V
Gate- Source Voltage	V_{GS}	± 8	V
Drain Current (continuous)	I_D	-2.4	A
Drain Current (pulsed)	I_{DM}	-10	A
Total Device Dissipation $T_A=25^\circ C$	P_D	900	mW
Junction	T_J	150	°C
Storage Temperature	T_{stg}	-55 to +150	°C

ELECTRICAL CHARACTERISTICS(T_A=25°C unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage (I _D = -250uA, V _{GS} =0V)	BVDSS	-20	—	—	V
Gate Threshold Voltage (I _D = -250uA, V _{GS} = V _{DS})	V _{GS(th)}	-0.4	—	-1.5	V
Diode Forward Voltage Drop (I _S = -0.75A, V _{GS} =0V)	V _{SD}	—	—	-1.5	V
Zero Gate Voltage Drain Current (V _{GS} =0V, V _{DS} = -16V, T _A =55°C)	IDSS	—	—	-1 -10	uA
Gate Body Leakage (V _{GS} =±8V, V _{DS} =0V)	I _{GSS}	—	—	±100	nA
Static Drain-Source On-State Resistance (I _D = -2.4A, V _{GS} = -4.5V)	R _{DS(ON)}	—	—	140	mΩ
Static Drain-Source On-State Resistance (I _D = -2A, V _{GS} = -2.5V)	R _{DS(ON)}	—	—	200	mΩ
Input Capacitance (V _{GS} =0V, V _{DS} = -10V,f=1MHz)	C _{ISS}	—	600	—	pF
Output Capacitance (V _{GS} =0V, V _{DS} = -10V,f=1MHz)	C _{OSS}	—	120	—	pF
Turn-ON Time (V _{DS} = -10V, I _D = -2.4A, R _{GEN} =6Ω)	t _(on)	—	8	—	ns
Turn-OFF Time (V _{DS} = -10V, I _D = -2.4A, R _{GEN} =6Ω)	t _(off)	—	60	—	ns

Pulse Width≤300 μ s; Duty Cycle≤2.0%

SOT-23 Package Information



Symbol	Dimensions in Millimeters	
	MIN.	MAX.
A	0.900	1.150
A1	0.000	0.100
A2	0.900	1.050
b	0.300	0.500
c	0.080	0.150
D	2.800	3.000
E	1.200	1.400
E1	2.250	2.550
e	0.950TYP	
e1	1.800	2.000
L	0.550REF	
L1	0.300	0.500
θ	0°	8°