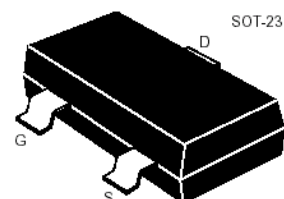


N-Channel Power MOSFET



■ MAXIMUM RATINGS

Characteristic	Symbol	Max	Unit
Drain-Source Voltage	BV_{DSS}	30	V
Gate- Source Voltage	V_{GS}	± 20	V
Drain Current (continuous)	I_{DR}	100	mA
Drain Current (pulsed)	I_{DRM}	400	mA

■ THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation $T_A = 25^\circ\text{C}$	P_D	200	mW
Derate above 25°C		1.8	mW/ $^\circ\text{C}$
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	417	$^\circ\text{C}/\text{W}$
Junction and Storage Temperature	T_J, T_{stg}	$150^\circ\text{C}, -55\text{to}+150^\circ\text{C}$	

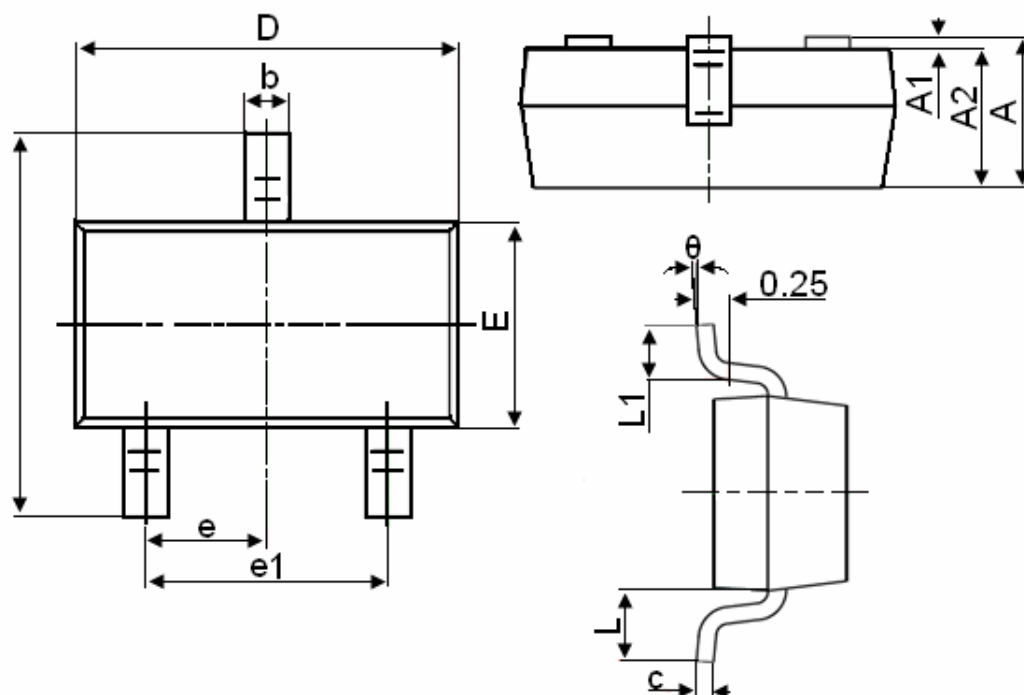
ELECTRICAL CHARACTERISTICS

($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage ($I_D=10\mu\text{A}, V_{GS}=0\text{V}$)	BV_{DSS}	30	—	—	V
Gate Threshold Voltage ($I_D=100\mu\text{A}, V_{GS}=V_{DS}$)	$V_{GS(th)}$	0.8	—	2	V
Drain-Source On Voltage ($I_D=50\text{mA}, V_{GS}=5\text{V}$) ($I_D=400\text{mA}, V_{GS}=10\text{V}$)	$V_{DS(ON)}$	—	—	0.375 3.75	V
Diode Forward Voltage Drop ($I_{SD}=200\text{mA}, V_{GS}=0\text{V}$)	V_{SD}	—	—	1.5	V
Zero Gate Voltage Drain Current ($V_{GS}=0\text{V}, V_{DS}=BV_{DSS}$) ($V_{GS}=0\text{V}, V_{DS}=0.8BV_{DSS}, T_A=125^{\circ}\text{C}$)	I_{DSS}	—	—	1 500	μA
Gate Body Leakage ($V_{GS}=\pm 20\text{V}, V_{DS}=0\text{V}$)	I_{GSS}	—	—	± 100	nA
Static Drain-Source On-State Resistance ($I_D=50\text{mA}, V_{GS}=4.5\text{V}$) ($I_D=400\text{mA}, V_{GS}=10\text{V}$)	$R_{DS(ON)}$	—	—	8 7.5	Ω
Input Capacitance ($V_{GS}=0\text{V}, V_{DS}=25\text{V}, f=1\text{MHz}$)	C_{ISS}	—	—	50	pF
Common Source Output Capacitance ($V_{GS}=0\text{V}, V_{DS}=25\text{V}, f=1\text{MHz}$)	C_{OSS}	—	—	25	pF
Turn-ON Time ($V_{DS}=30\text{V}, I_D=200\text{mA}, R_{GEN}=25\Omega$)	$t_{(on)}$	—	—	20	ns
Turn-OFF Time ($V_{DS}=30\text{V}, I_D=200\text{mA}, R_{GEN}=25\Omega$)	$t_{(off)}$	—	—	40	ns
Reverse Recovery Time ($I_{SD}=800\text{mA}, V_{GS}=0\text{V}$)	t_{Tr}	—	400	—	ns

1. FR-5=1.0×0.75×0.062in.
2. Alumina=0.4×0.3×0.024in.99.5%alumina.
3. Pulse Width≤300 μs ; 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°