



SOT-23 Plastic-Encapsulate MOSFETS

BSS84

P-Channel 50-V(D-S) MOSFET

V(BR)DSS	RDS(on)MAX	ID
-50 V	4Ω@10V	-130mA
	5Ω@4.5V	

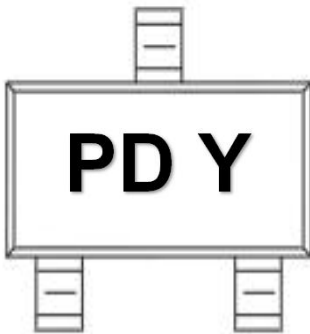
FEATURE:

- Energy Efficient
- Low Threshold Voltage
- High-speed Switching
- Miniature Surface Mount Package Saves Board Spac
- ESD Protected

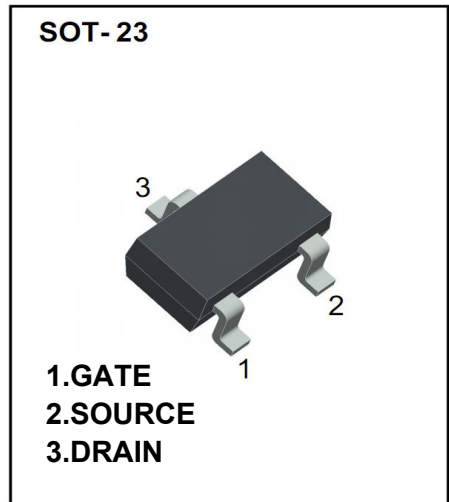
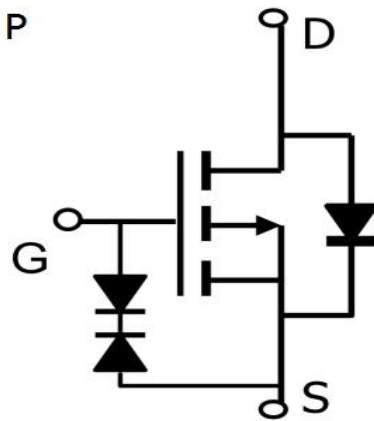
APPLICATION:

※ DC-DC converters,load switching, power management in portable and battery-powered products such as computers, printers, cellular and cordless telephones.

MARKING:



Equivalent Circuit:



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

Parameter	Symbol	Value	Unit
Drain-Source Voltage	VDS	-50	V
Gate-Source Voltage	VGS	±20	
Continuous Drain Current	ID	-130	mA
Pulsed Drain Current (note 1) @tp <10 μs	IDM	-520	
Power Dissipation	PD	225	mW
Thermal Resistance from Junction to Ambient	RθJA	556	°C/W
Junction Temperature	TJ	150	°C
Storage Temperature	TSTG	-55~+150	°C
Maximum Lead Temperature for Soldering Purposes , Duration for 5 Seconds	TL	260	°C



MOSFET ELECTRICAL CHARACTERISTICS

unless otherwise specified Ta = 25 °C

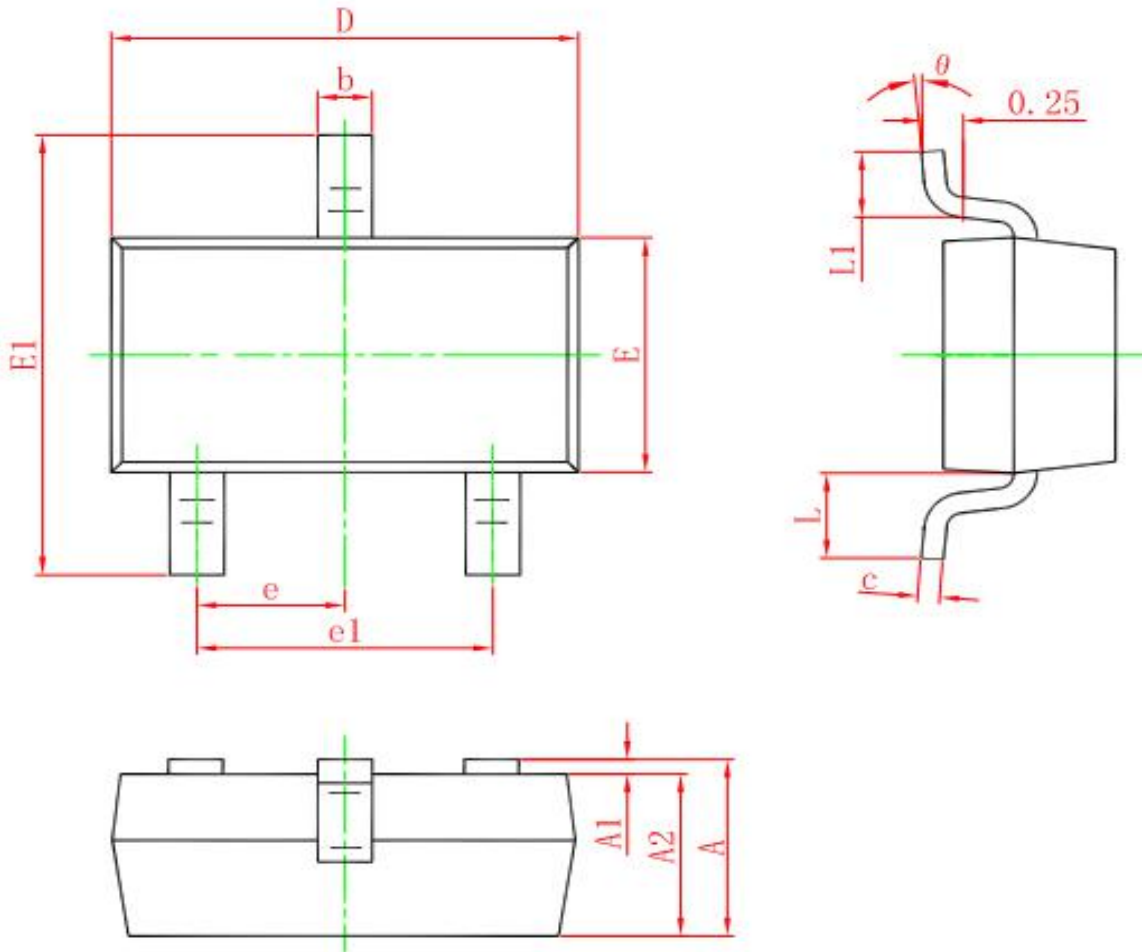
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Static Characteristics						
Drain-source breakdown voltage	V(BR)DSS	VGS = 0V, ID = -250μA	-50			V
Gate-threshold voltage	VGS(th)	VDS = VGS, ID = -250μA	-1		-2	V
Gate-body leakage	IGSS	VDS = 0V, VGS = ±20V			±10	μA
Zero gate voltage drain current	IDSS	VDS = -50V, VGS = 0V			-15	μA
Drain-source on-resistancea	RDS(on)	VGS = -10V, ID = -100mA		1.9	4	Ω
		VGS = -4.5V, ID = -100mA		2.4	5	Ω
Forward transconductancea	gfs	VDS = -10V, ID = -100mA	50			S
Diode forward voltage	VSD	IS = -0.13A, VGS = 0V		-0.8	-1.3	V
Dynamic Characteristics						
Input capacitance	Ciss	VDS = -5V, VGS = 0V, f = 1MHz		30		pF
Output capacitance	Coss			10		pF
Reverse transfer capacitanceb	Crss			5		pF
Switching Characteristics						
Turn-on delay time	td(on)	VDD = -15V RL = 5Ω, ID = -50mA,		2.5		ns
Rise time	tr			1		ns
Turn-off delay time	td(off)			16		ns
Fall time	tf			8		ns
SOURCE-DRAIN DIODE CHARACTERISTICS						
Continuous Current	IS				-0.13	A
Pulsed Current	ISM				-0.52	A

Note :

- 1.Repetitive rating : Pulse width limited by junction temperature.
- 2.Surface mounted on FR4 board , t≤10s.
- 3.Pulse Test : Pulse Width≤300μs, Duty Cycle≤2%.
- 4.Guaranteed by design, not subject to producing.



SOT-23 PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP.		0.037 TYP.	
e1	1.800	2.000	0.071	0.079
L	0.550 REF.		0.022 REF.	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°