

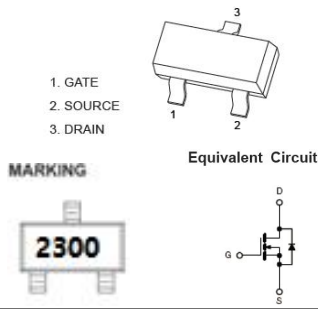
2300 MOSFET(N-Channel)

V(BR)DSS	RDS(ON)MAX	ID
20V	25mΩ@4.5V	4.5A
	32mΩ@2.5V	

SOT-23 贴片塑封场效应管

SOT-23 Plastic-Encapsulate MOSFET

SOT-23



特征 Features

- TrenchFET Power MOSFET
- Load Switch for Portable Devices.
- DC/DC Converter.

机械数据 Mechanical Data

- 封装: SOT-23 封装 SOT-23 Small Outline Plastic Package.
- 环氧树脂 UL 易燃等级 Epoxy UL: 94V-0.
- 安装位置: 任意 Mounting Position: Any.

极限值和温度特性(TA = 25℃ 除非另有规定)

Maximum Ratings & Thermal Characteristics (Ratings at 25℃ ambient temperature unless otherwise specified.)

参数 Parameters	符号 Symbol	数值 Value	单位 Unit
Drain-Source Voltage	V _{DS}	20	V
Gate-Source Voltage	V _{GS}	±10	V
Continuous Drain Current	I _D	4.5	A
Power Dissipation	P _D	400	mW
Junction Temperature	T _j	150	℃
Storage Temperature	T _{stg}	-50-+150	℃
Thermal Resistance From Junction to Ambient	R _{θJA}	100	℃/W

Note: The R_{θJA} is the sum of the thermal resistance from junction to ambient and depend on package type

电特性 (TA = 25℃ 除非另有规定)

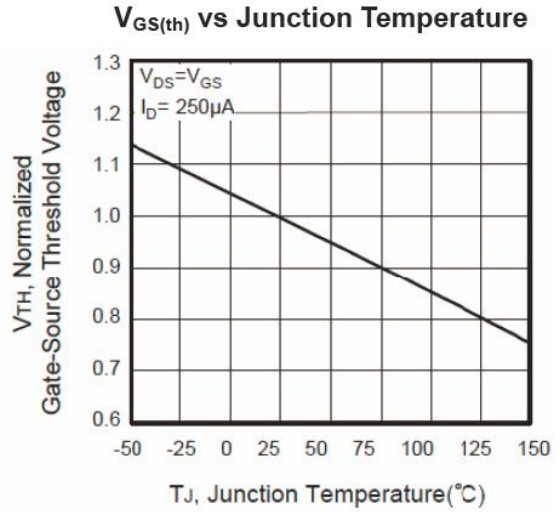
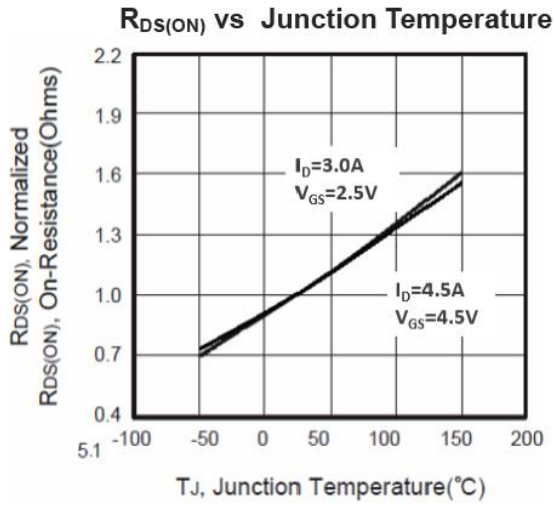
Electrical Characteristics (Ratings at 25℃ ambient temperature unless otherwise specified).

参数 Parameter	符号 Symbols	测试条件 Test Condition	界限 Limits			单位 Unit
			Min	Typ	Max	
Static						
Drain-Source Breakdown Voltage	V(BR)DSS	V _{GS} =0V, I _D =10uA	20			V
Gate-Threshold voltage*	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250uA	0.45	0.62	1.0	V
Gate-body Leakage	I _{GSS}	V _{DS} =0V, V _{GS} =±10V			±100	nA
Zero Gate Voltage Drain current	I _{DSS}	V _{DS} =16V, V _{GS} =0V			1	uA
Drain-Source On-Resistance (a)	R _{DS(ON)}	V _{GS} =4.5V, I _D =4.5A		19.5	25	mΩ
		V _{GS} =2.5V, I _C =3.0A		25	32	
		V _{GS} =1.8V, I _C =2.7A		33	49	
Forward trans conductance (a)	g _{fs}	V _{DS} =5V, I _D =3.6A		8		S
Diode forward voltage	V _{SD}	I _S =1A, V _{GS} =0V		0.7	1.3	V

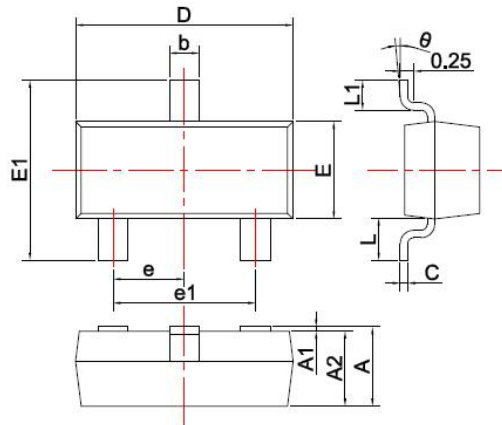
Notes: a. Pulse Test: Pulse Width ≤300us, Duty Cycle≤2%.

b. These parameters have no way to verify.

Typical characteristics



SOT-23 PACKAGE OUTLINE Plastic surface mounted package

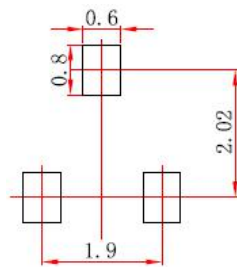


SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.900	1.150
A1	0.000	0.100
A2	0.900	1.050
b	0.300	0.500
c	0.080	0.150
D	2.800	3.000
E	1.200	1.400
E1	2.250	2.550
e	0.950TYP	
e1	1.800	2.000
L	0.550REF	
L1	0.300	0.500
θ	0°	8°

Unit: mm

焊盘设计参考 Precautions: PCB Design

Recommended land dimensions for SOT-23 diode. Electrode patterns for PCBs



- Note:
1. Controlling dimension; In millimeters.
 2. General tolerance: ±0.05mm.
 3. The pad layout is for reference purposes only.