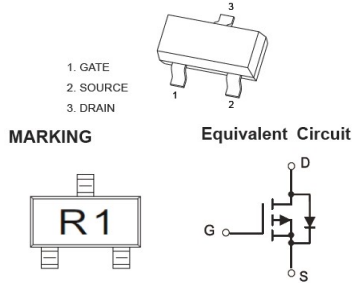


V(BR)DSS	RDS(ON)MAX	ID
30V	65mΩ@-10V	-4.2A
	75mΩ@-4.5V	
	90mΩ@-2.5V	

SOT-23 贴片塑封场效应管

SOT-23 Plastic-Encapsulate MOSFET

SOT-23



特征 Features

- High dense cell design for extremely low RDS(on).
- Exceptional on-resistance and maximum DC current capability.
- Load/Power Switching.
- Interfacing Switching

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°C 除非另有规定)

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

参数 Parameters	符号 Symbol	数值 Value	单位 Unit
Drain-Source Voltage	V _{DS}	-30	V
Gate-Source Voltage	V _{GS}	±12	V
Continuous Drain Current	I _D	-4.2	A
Power Dissipation	P _D	350	mW
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-50-+150	°C
Thermal Resistance From Junction to Ambient (note 2)	R _{θJA}	357	°C/W

电特性 (TA = 25°C 除非另有规定)

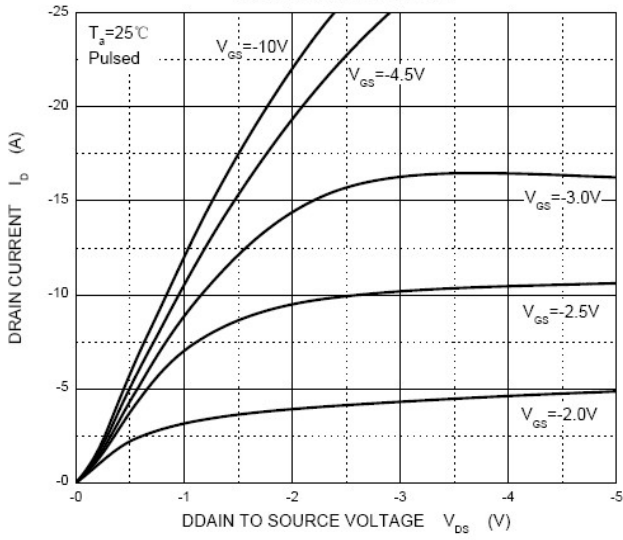
Electrical Characteristics (Ratings at 25°C ambient temperature unless otherwise specified.)

参数 Parameter	符号 Symbols	测试条件 Test Condition	界限 Limits			单位 Unit
			Min	Typ	Max	
Off characteristics						
Drain-Source Breakdown Voltage	V(BR)DSS	VGS=0V, ID=-250uA	-30			V
Zero Gate Voltage Drain current	IDSS	VDS=-24V, VGS=0V			-1	uA
Gate-body Leakage	IGSS	VDS=±12V, VGS=0V			±100	nA
On characteristics						
Drain-Source On-Resistance (note 1)	RDS(ON)	VGS=-10V, ID=-4.2A		50	65	mΩ
		VGS=-4.5V, ID=-4A		60	75	
		VGS=-2.5V, ID=-1A		75	90	
Forward trans conductance	gfs	VDS=-5V, ID=-5A	7			S
Gate-Threshold voltage*	VGS(th)	VDS=VGS, ID=-250uA	-0.7	-0.9	-1.3	V
Dynamic characteristics (note 2)						
Input capacitance	Ciss	VDS=-15V, VGS=0V, f=1MHz		954		pF
Output capacitance	Coss			115		
Reverse Transfer capacitance	Crss			77		
Switching characteristics (note 2)						
Turn-on Time	td(on)	VGS=-10V, RL=3.6Ω, VDS=-15V, RGEN=6Ω			6.3	ns
Rise time	tr				3.2	
Turn-off Time	td(off)				38.2	
Fall time	tf				12	
Drain-source diode characteristics and maximum ratings						
Diode forward voltage(note 1)	VSD	IS=-1A, VGS=0V			-1.0	V

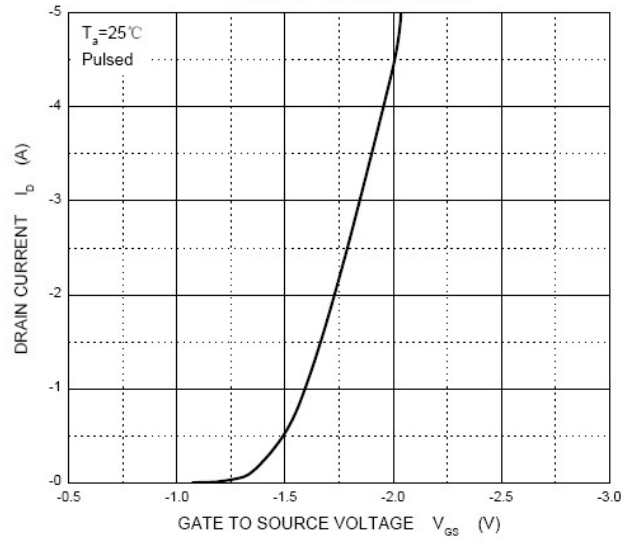
Notes: 1. Pulse Test: Pulse Width ≤300us, Duty Cycle≤2%.

Typical characteristics

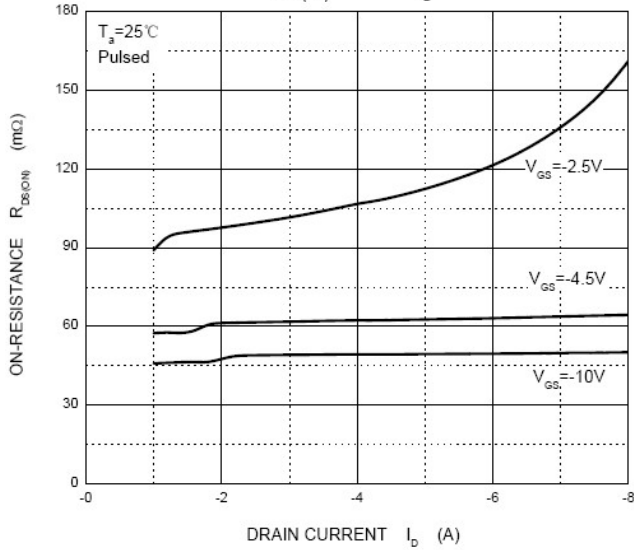
Output Characteristics



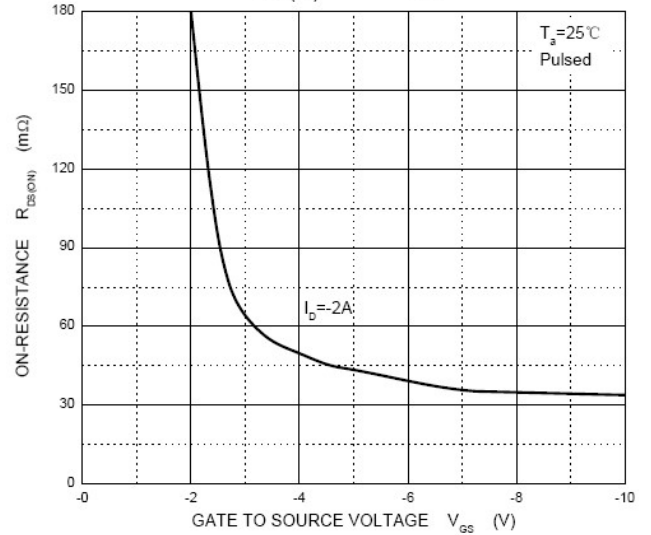
Transfer Characteristics



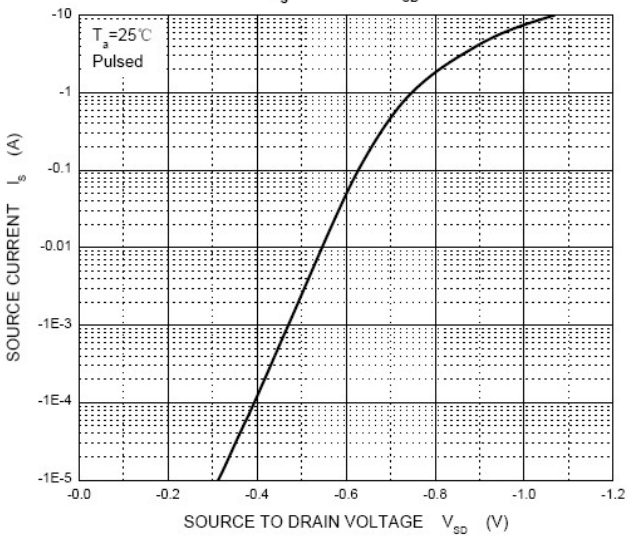
$R_{DS(ON)}$ — I_D

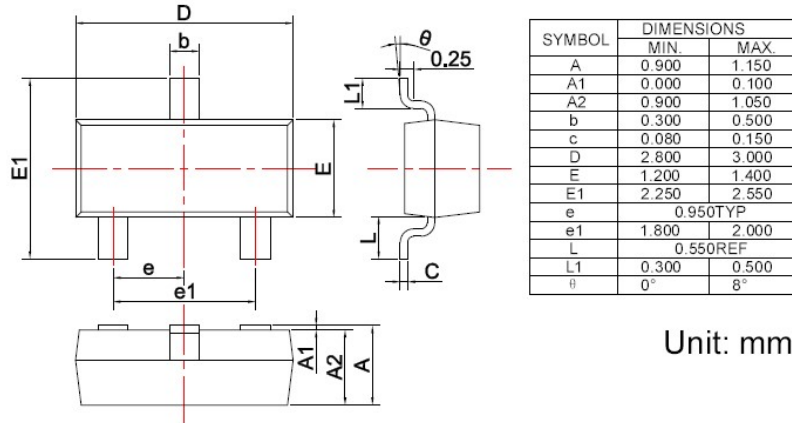


$R_{DS(ON)}$ — V_{GS}



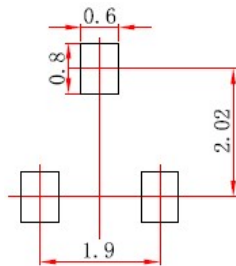
I_S — V_{SD}



SOT-23 PACKAGE OUTLINE Plastic surface mounted package


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: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.