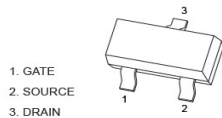
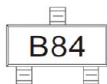


V(BR)DSS	RDS(ON)MAX	ID
-50V	8Ω@-10V 10Ω@-5V	-0.13A

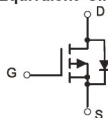
SOT-23



MARKING



Equivalent Circuit



特征 Features

- Energy Efficient
- Low Threshold Voltage
- High-speed Switching.
- DC/DC Converter.
- AEC-Q101 qualified

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}	-50	V
Gate-Source Voltage	V _{GS}	±20	V
Continuous Drain Current	I _D	-0.13	A
Pulsed Drain Current (tp<10us) (note1)	I _{DM}	-0.52	A
Power Dissipation	P _D	225	mW
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-50-+150	°C
Thermal Resistance From Junction to Ambient (note2)	R _{θJA}	556	°C/W
Maximum Lead Temperature for Soldering Purposes, Duration for 5 Seconds	T _L	260	°C

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	
Static						
Drain-Source Breakdown Voltage	V(BR)DSS	VGS=0V, ID=-250uA	-50			V
Gate-Threshold voltage(note3)	V GS (th)	VDS=VGS, ID=-250uA	-0.9	-1.6	-2.0	V
Gate-body Leakage	IGSS	VDS=0V, VGS=±20V			±5	uA
Zero Gate Voltage Drain current	IDSS	VDS=-50V, VGS=0V			-15	uA
		VDS=-25V, VGS=0V			-0.1	
Drain-Source On-Resistance (note3)	RDS(ON)	VGS=-5V, ID=-0.1A		5.8	10	Ω
		VGS=-10V, IC=-0.1A		4.5	8	
Forward trans conductance (note1)	gfs	VDS=-25V, ID=-0.1A	50			mS
Diode forward voltage	VSD	IS=0.34A, VGS=0V			1.3	V
Dynamic(note4)						
Input capacitance	Ciss	VDS=5V, VGS=0V,f=1MHz		30		pF
Output capacitance	Coss			10		
Reverse Transfer capacitance	Crss			5		
Switching(note3,4)						
Turn-on Time	td(on)	VDD=-15V, RL=50Ω, ID≈-0.25A,		2.5		ns
Rise time	tr			1		
Turn-off Time	td(off)			16		
Fall time	tf			8		
SOURCE-DRAIN DIODE CHARACTERISTICS						
Continuous Current	Is				-0.13	A
Pulsed Current	ISM				-0.52	A
Diode forward Voltage(note 3)	VSD	IS=-0.13A, VGS=0V			-2.2	V

Notes: 1). Repetitive rating: Pulse width limited by junction temperature.

2). Surface mounted on FR4 board, t ≤ 10s

3). Pulse Test: Pulse Width ≤ 300us, Duty Cycle ≤ 2%.

Typical characteristics

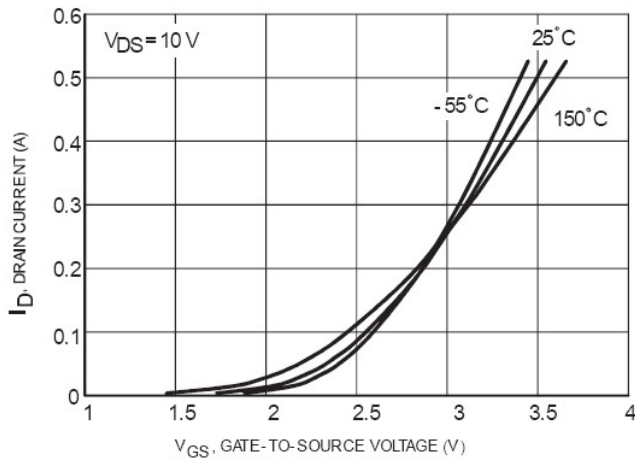


Fig1. Transfer Characteristics

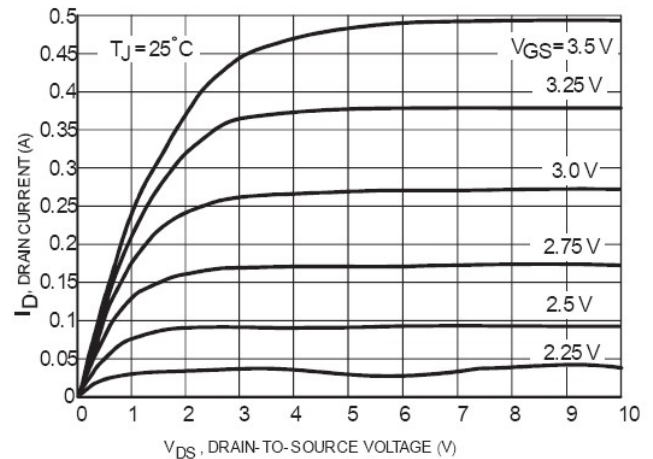


Fig2. On-Region Characteristics

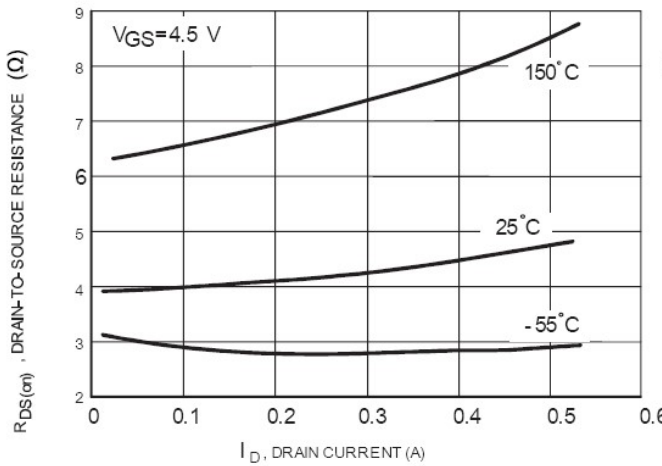


Fig3. On-Resistance versus Drain Current

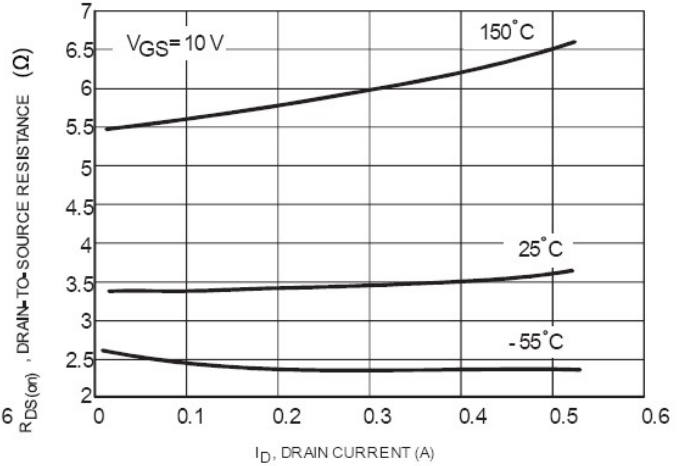


Fig4. On-Resistance versus Drain Current

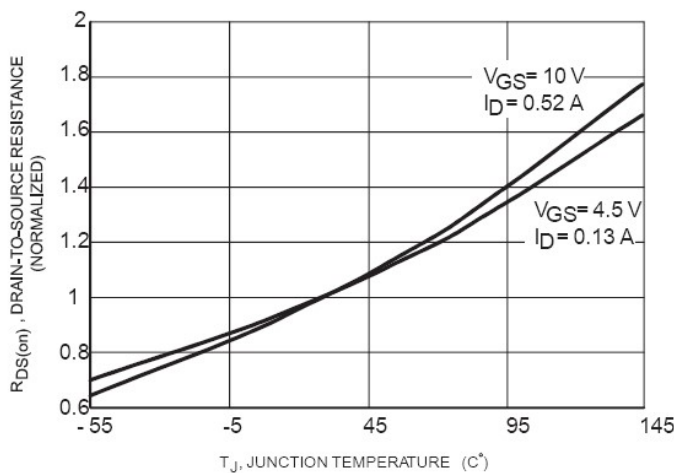


Fig5. On-Resistance Variation with Temperature

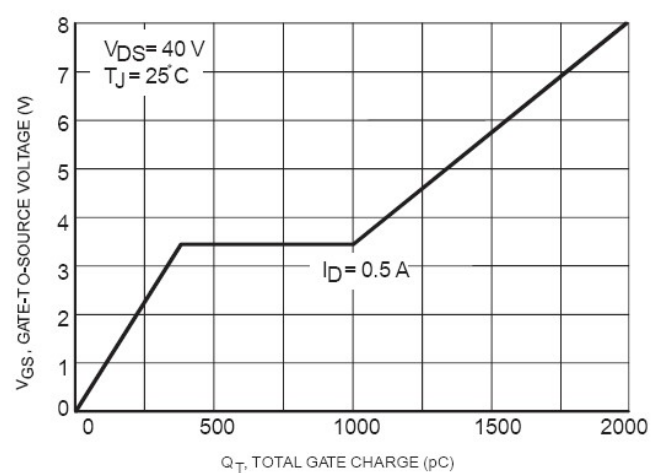
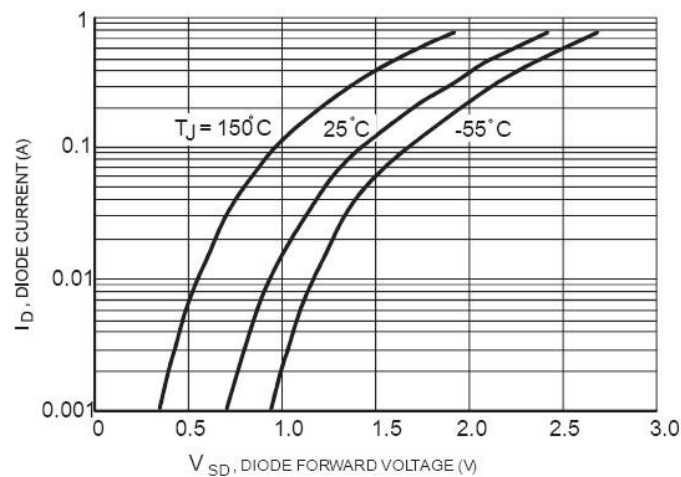
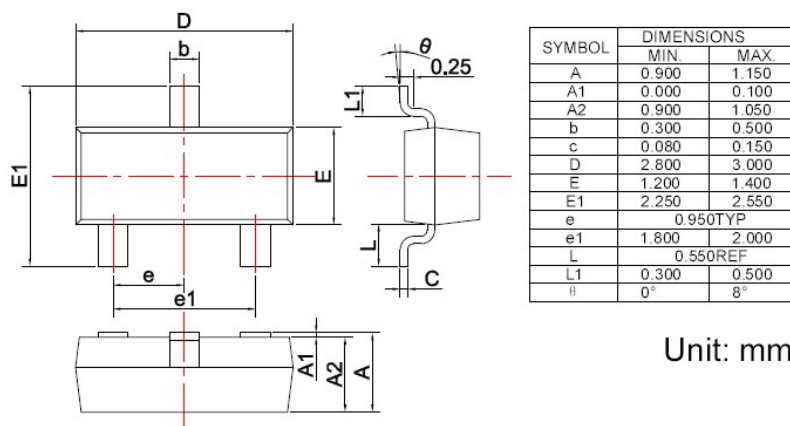


Fig6. Gate Charge

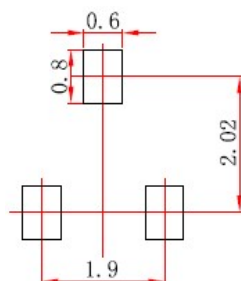


SOT-23 PACKAGE OUTLINE Plastic surface mounted package



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.

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