

Features

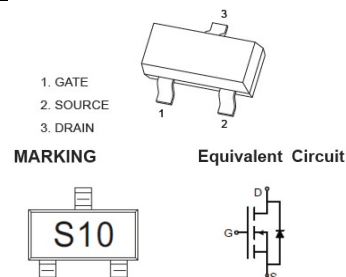
- ◆ TrenchFET Power MOSFET
- ◆ Load Switch for Portable Devices.
- ◆ DC/DC Converter.

Mechanical Data

- ◆ SOT-23 Small Outline Plastic Package.
- ◆ Epoxy UL: 94V-0.
- ◆ Mounting Position: Any.

V(BR)DSS	RDS(ON)MAX	ID
60V	105mΩ@10V	3A
	125mΩ@4.5V	

SOT-23



Maximum Ratings & Thermal Characteristics (T_A=25°C unless otherwise specified)

参数 Parameters	符号 Symbol	数值 Value	单位 Unit
Drain-Source Voltage	V _{DS}	60	V
Gate-Source Voltage	V _{GS}	±20	V
Continuous Drain Current	I _D	3	A
Pulsed Drain Current(note1)	I _{DM}	10	
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(note2)	R _{θJA}	357	°C/W

Electrical Characteristics (T_A=25°C unless otherwise specified)

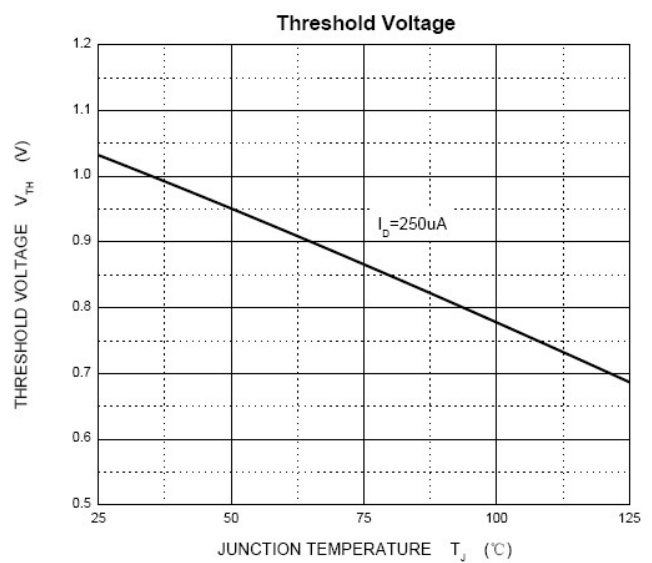
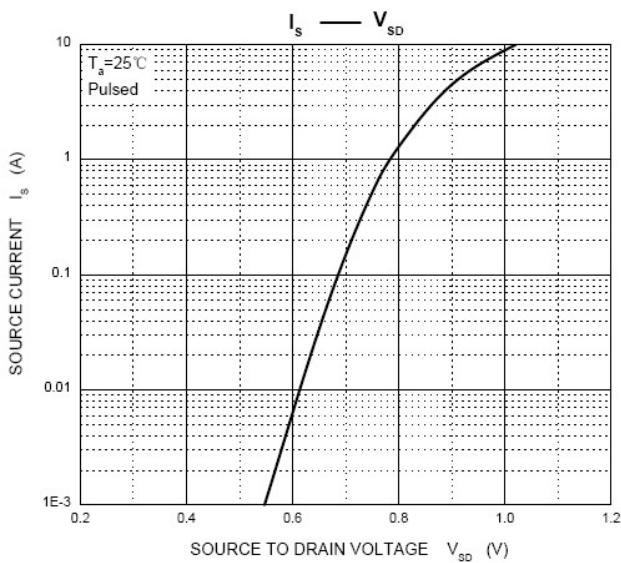
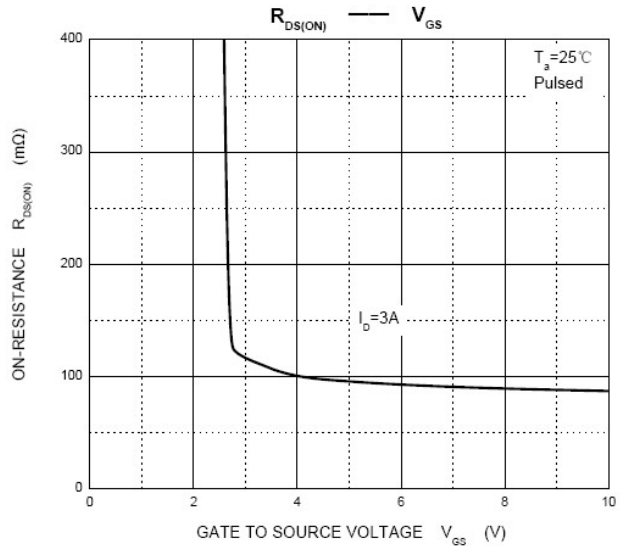
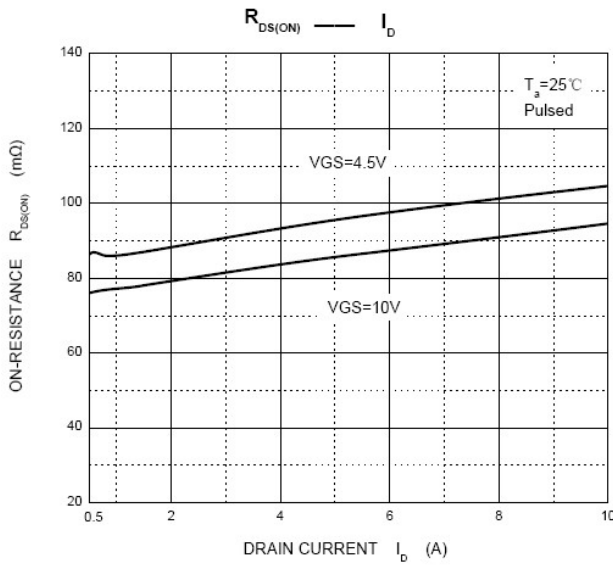
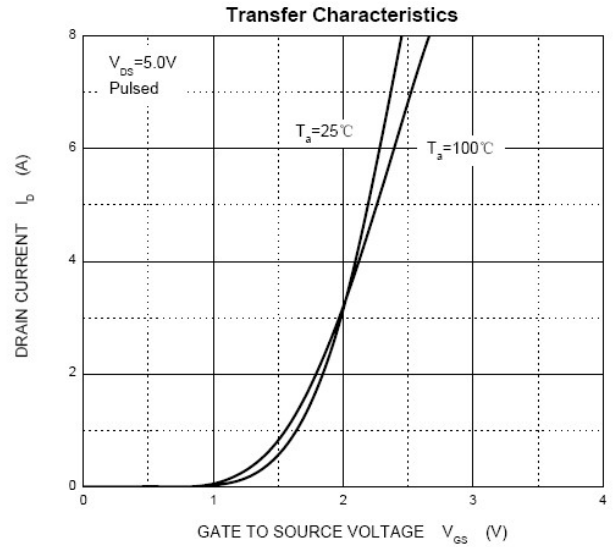
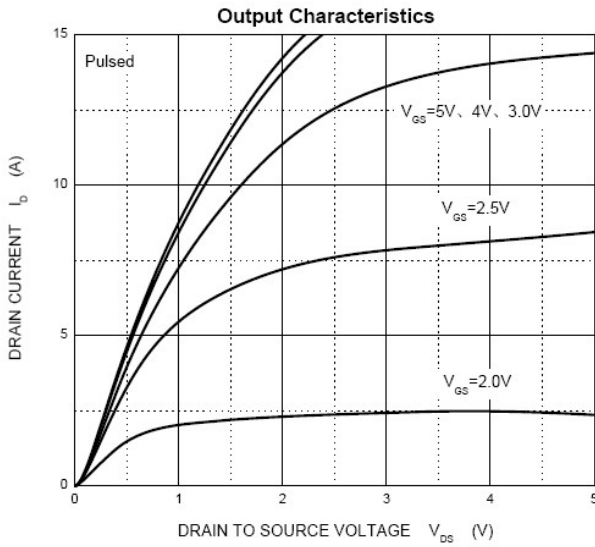
参数 Parameter	符号 Symbols	测试条件 Test Condition	界限 Limits			单位 Unit
			Min	Typ	Max	
Static						
Drain-Source Breakdown Voltage	V(BR)DSS	V _{GS} =0V, I _D =250uA	60			V
Gate-Threshold voltage(note3)	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250uA	0.5		2	V
Gate-body Leakage	I _{GSS}	V _{DS} =0V, V _{GS} =±20V			±100	nA
Zero Gate Voltage Drain current	I _{DSS}	V _{DS} =60V, V _{GS} =0V			1	uA
Drain-Source On-Resistance (note3)	RDS(ON)	V _{GS} =10V, I _D =3A			105	mΩ
		V _{GS} =4.5V, I _C =3A			125	
Forward trans conductance(note3)	g _{fs}	V _{DS} =15V, I _D =2A	1.4			S
Diode forward voltage(note3)	V _{SD}	I _S =3A, V _{GS} =0V			1.2	V
Dynamic Characteristics(note4)						
Input capacitance	C _{iss}	V _{DS} =30V, V _{GS} =0V, f=1MHz		247		pF
Output capacitance	C _{oss}			34		
Reverse Transfer capacitance	C _{rss}			19.5		
Total gate charge	Q _g	V _{DS} =30V, V _{GS} =4.5V, I _D =3A		6		nC
Gate-source charge	Q _{gs}			1		
Gate-drain charge	Q _{gd}			1.3		
Switching (b)						
Turn-on Time	t _{d(on)}	V _{DD} =30V, R _L =1Ω, V _{GS} =10V, I _D ≈1.5A, R _G =6Ω		6		ns
Rise time	t _r			15		
Turn-off Time	t _{d(off)}			15		
Fall time	t _f			10		

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

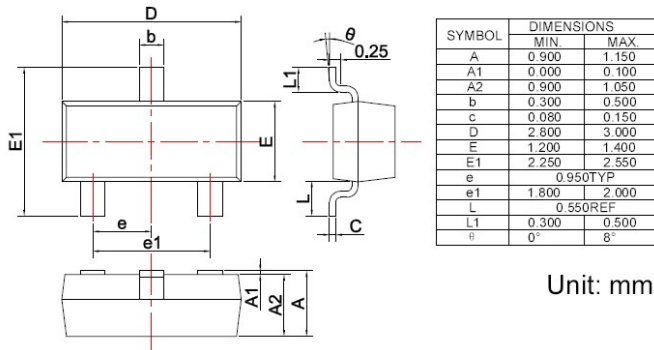
2, Surface mounted on FR4 board, t≤10s.

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

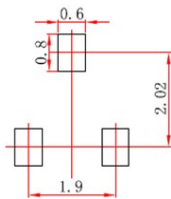
Typical Performance Characteristics (TA=25°C unless otherwise Specified)



SOT-23 Package Outline Drawing



Suggested Land Pattern



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