

Product Summary

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	I_D
-30V	45m Ω @-10V	-4A
	65m Ω @-4.5V	

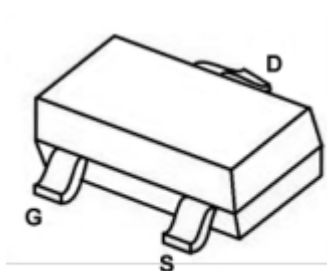
Feature

- TrenchFET Power MOSFET
- Excellent $R_{DS(on)}$ and Low Gate Charge

Applications

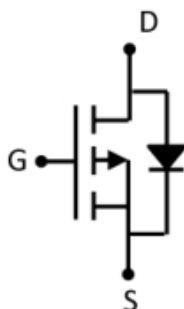
- DC/DC Converter
- Load Switch for Portable Devices
- Battery Switch

Package

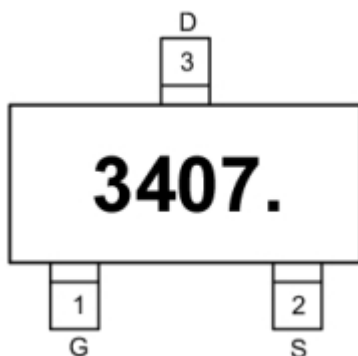


SOT-23

Circuit diagram



Marking



Absolute maximum ratings

($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	-30	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current	I_D	-4	A
Power Dissipation	P_D	1.3	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	96	$^{\circ}\text{C}/\text{W}$
Junction Temperature	T_J	150	
Storage Temperature	T_{STG}	-55~ +150	$^{\circ}\text{C}$

Electrical characteristics

($T_A=25^{\circ}\text{C}$, unless otherwise noted)

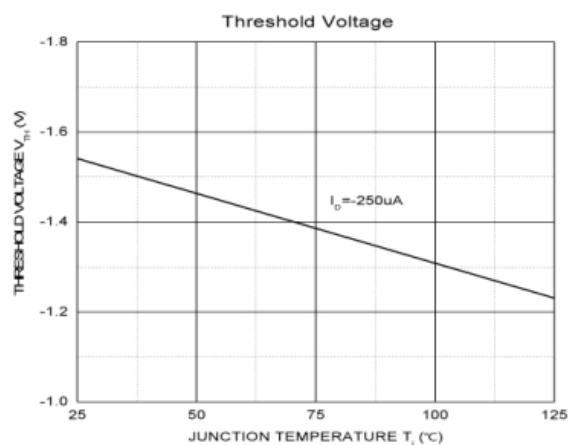
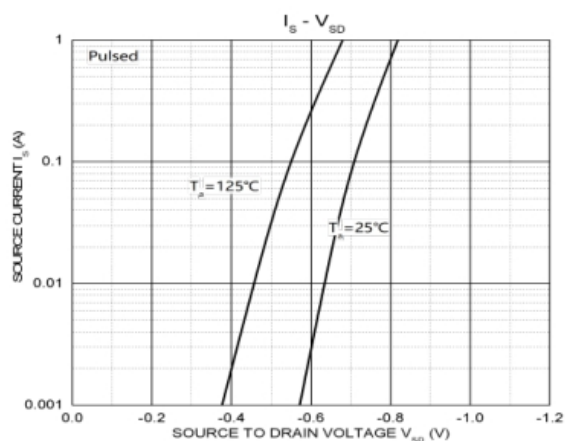
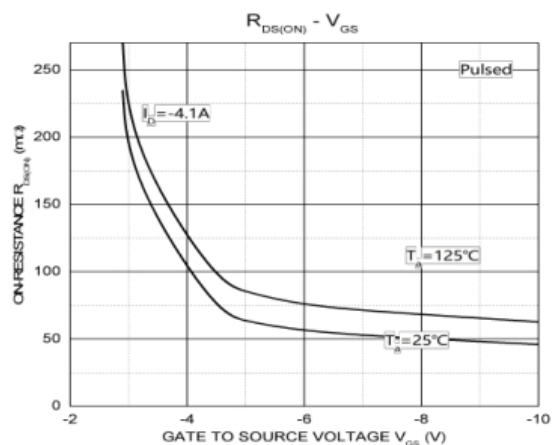
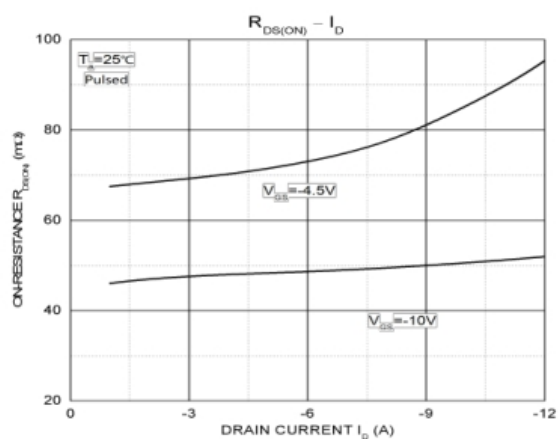
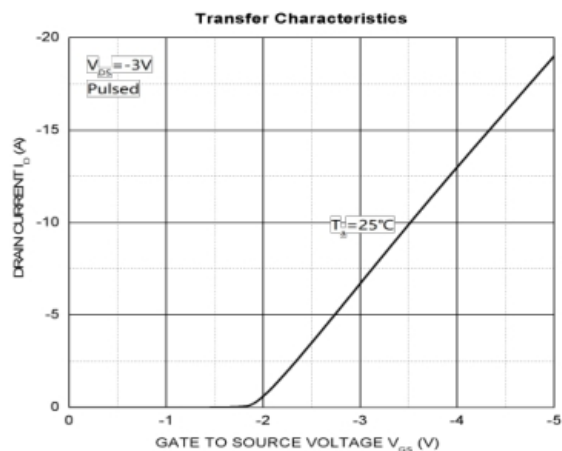
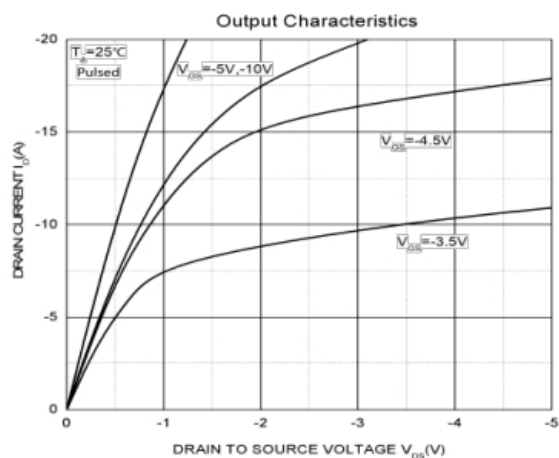
Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Static Characteristics						
Drain-source breakdown voltage	BV (BR)DSS	V _{GS} = 0V, I _D = -250μA	-30			V
Zero gate voltage drain current	I _{DSS}	V _{DS} = -24V, V _{GS} = 0V			-1	uA
Gate-body leakage current	I _{GSS}	V _{GS} = ±20V, V _{DS} = 0V			±100	uA
Gate threshold voltage ¹⁾	V _{GS(th)}	V _{DS} =V _{GS} , I _D = -250μA	-1	-1.6	-3	V
Drain-source on-resistance ¹⁾	R _{DS(on)}	V _{GS} = -10V, I _D = -4.1A		45	56	mΩ
		V _{GS} = -4.5V, I _D = -3A		65	87	
Forward transconductance ¹⁾	g _{FS}	V _{DS} = -5V, I _D = -4A	5.5			S
Dynamic Characteristics ²⁾						
Input capacitance	C _{iSS}	V _{DS} =-15V, V _{GS} =0V, f=1MHz		700		pF
Output capacitance	C _{oss}			120		
Reverse transfer capacitance	C _{rSS}			75		
Turn-on Delay Time	T _{d(on)}	V _{DS} = -15V, V _{GS} = -10V, R _L =3.6Ω, R _{GEN} =3Ω		8.6		nS
Turn-on Rise Time	T _r			5.0		
Turn-Off Delay Time	T _{d(off)}			28.2		
Turn-Off Fall Time	t _f			13.5		
Source-Drain Diode Characteristics						
Diode Forward voltage	V _{DS}	I _S = -1A, V _{GS} = 0V			-1	V

Notes:

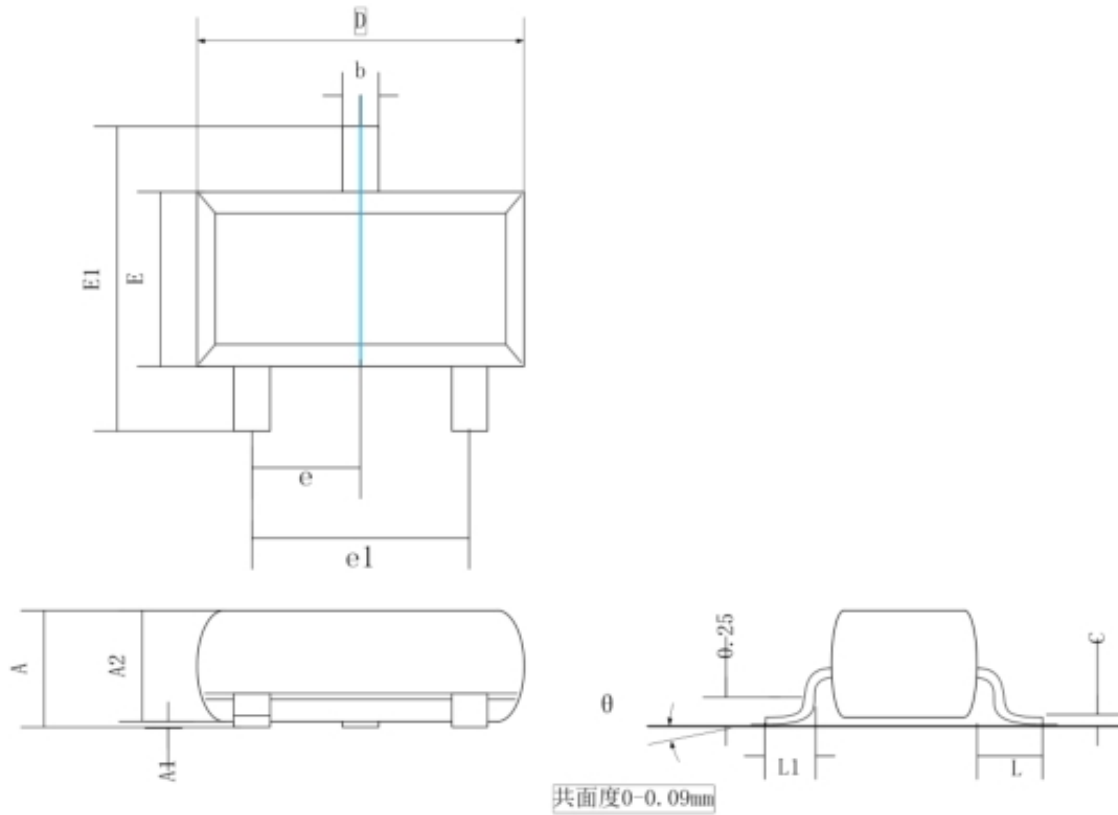
1. Pulse test: pulse width $\leq 300\mu s$, duty cycle $\leq 2\%$.

2. These parameters have no way to verify.

Typical Characteristics



SOT-23 Package Information



Symbol	Dimensions In Millimeters	
	Min.	Max.
A	0.90	1.15
A1	0.00	0.10
A2	0.90	1.05
b	0.30	0.50
c	0.08	0.15
D	2.80	3.00
E	1.20	1.40
E1	2.25	2.55
e	0.95 REF.	
e1	1.80	2.00
L	0.55 REF.	
L1	0.30	0.50
θ	0°	8°

制 修 订 记 录					
文件版本	制修日期	修订页次	修订人	变更内容	
Ver-1.0	2022/7/18		王余林	规格书建立	
批准		审核		编制	
日期		日期		日期	