Product Summary

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	I_D
-30V	45mΩ@-10V	-4.1A
	65mΩ@-4.5V	

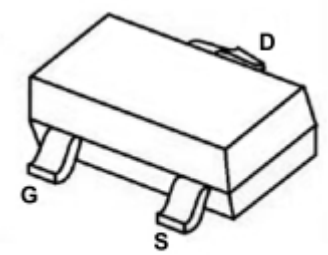
Feature

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

Applications

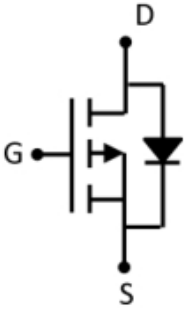
- DC/DC Converter
- Load Switch for Portable Devices
- Battery Switch

Package

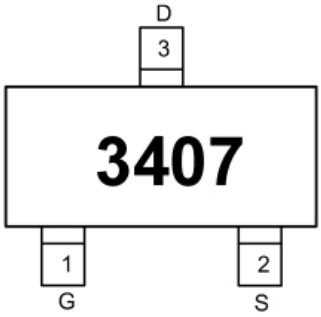


SOT-23-3L

Circuit diagram



Marking



Absolute maximum ratings

(T_a=25℃ 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	-4.1	A
Power Dissipation	P_D	1.4	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	90	℃/W
Junction Temperature	T_J	150	
Storage Temperature	T_{STG}	-55~ +150	℃

Electrical characteristics

(T_A=25℃, unless otherwise noted)

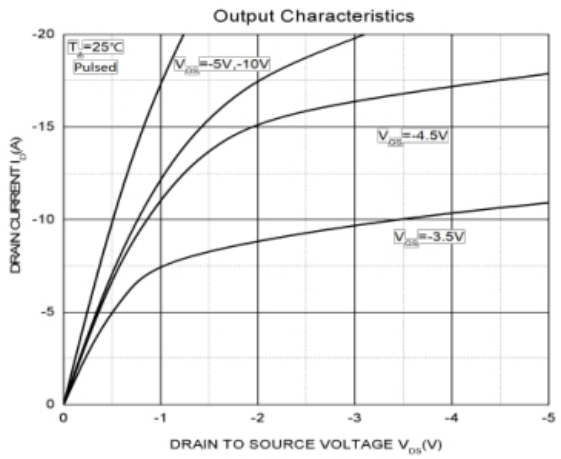
Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Static Characteristics						
Drain-source breakdown voltage	$BV_{(BR)DSS}$	V_{GS} = 0V, I_D =-250μA	-30			V
Zero gate voltage drain current	I_{DSS}	V_{DS} =-24V, V_{GS} = 0V			-1	uA
Gate-body leakage current	I_{GSS}	V_{GS} =±20V, V_{DS} = 0V			±100	uA
Gate threshold voltage[1)]	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =-250μA	-1	-1.6	-2.5	V
Drain-source on-resistance[1)]	$R_{DS(on)}$	V_{GS} =-10V, I_D =-4.1A		45	60	mΩ
		V_{GS} =-4.5V, I_D =-3A		65	90	
Forward transconductance[1)]	g_{FS}	V_{DS} =-5V, I_D =-4A		10		S
Dynamic Characteristics [(4)]						
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		
Total Gate Charge	Q_g	V_{DS} =-15V, V_{GS} =-10V, I_D=-4.1A		13		nC
Gate-Source Charge	Q_{gs}			3		
Gate-Drain Charge	Q_{gd}			3		
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			-1.2	V

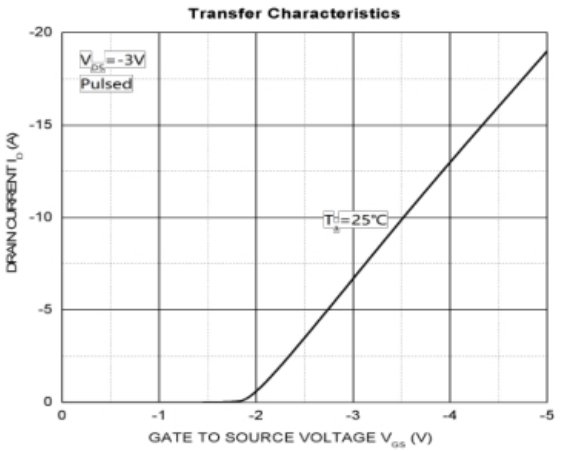
Notes:

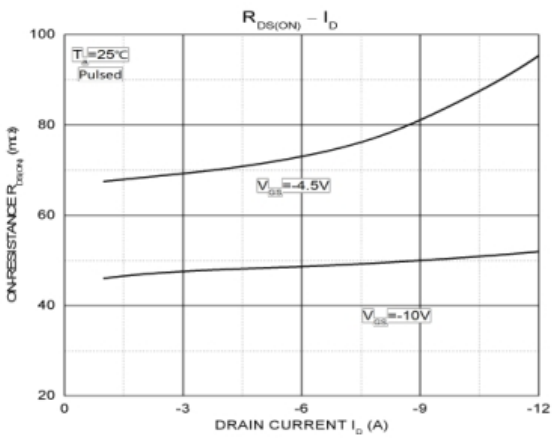
1. Pulse test: pulse width≤300μs, duty cycle≤2%.

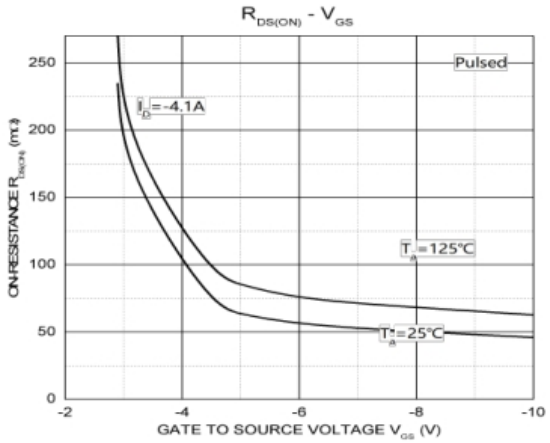
2. These parameters have no way to verify.

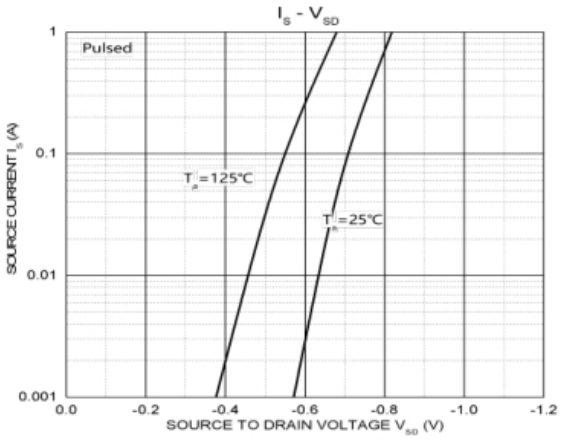
Typical Characteristics

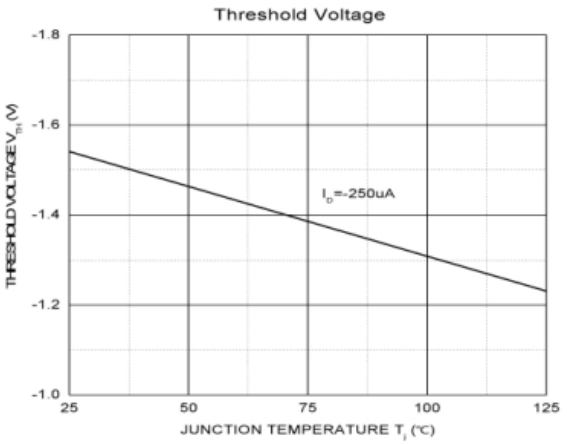




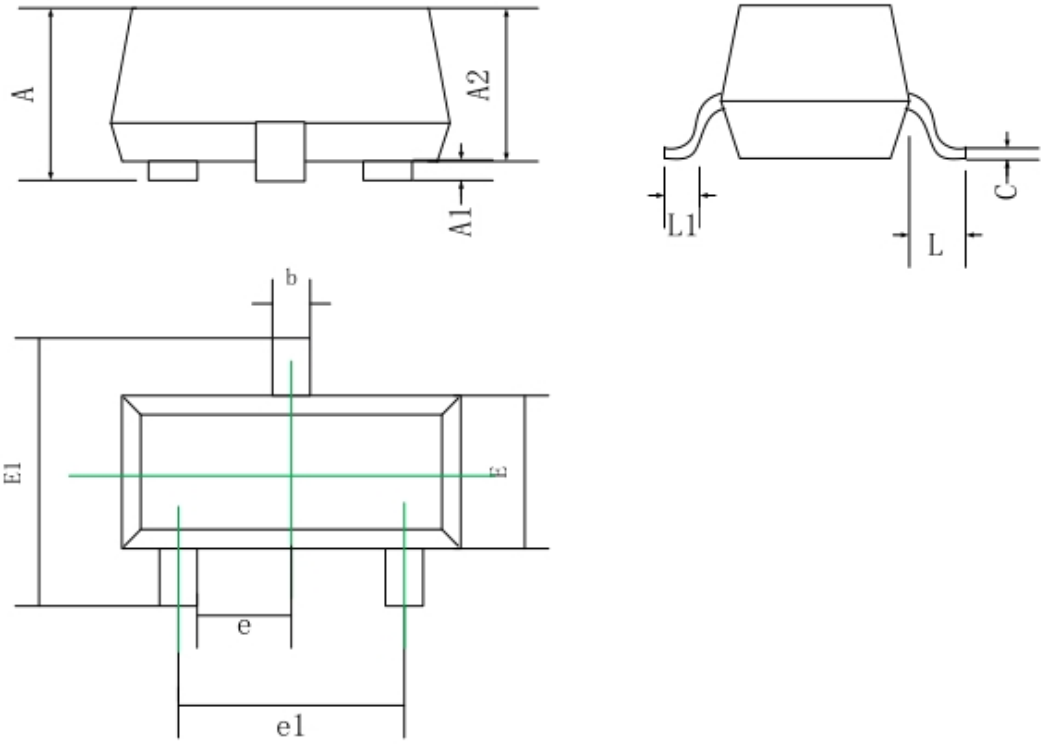








SOT-23-3L Package Information



Symbol	Dimensions in millimeters	
	Min.	Max.
A	1.050	1.250
A1	0.000	0.100
A2	1.050	1.150
b	0.300	0.500
c	0.100	0.200
D	2.820	3.020
E	1.500	1.700
E1	2.650	2.950
e	0.950 Typ.	
e1	1.800	2.000
L	0.300	0.600
θ	0°	8°