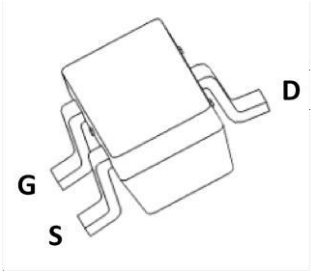
SR3401A

30V P-Channel MOSFET

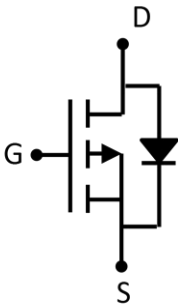
Product Summary

$V_{(BR)DSS}$	$R_{DS(on)MAX}$	I_D
-30V	50mΩ@-10V	-4.2A
	60mΩ@-4.5V	
	85mΩ@-2.5V	

SOT-23-3L



Schematic diagram



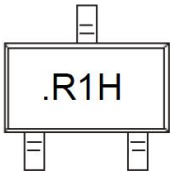
Feature

- TrenchFET Power MOSFET
- Exceptional on-resistance and maximum DC current capability

Application

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

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}	±12	V
Continuous Drain Current	I_D	-4.2	A
Power Dissipation	P_D	0.45	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	277	℃/W
Junction Temperature	T_J	150	℃
Storage Temperature	T_{STG}	-55~ +150	℃

MOSFET ELECTRICAL CHARACTERISTICS(T_a=25℃ unless otherwise noted)

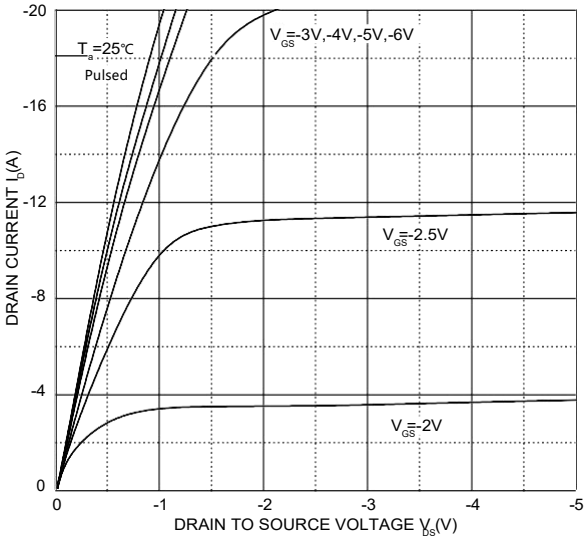
Parameter	Symbol	Test Condition	Min	Type	Max	Unit
Static Characteristics						
Drain-source breakdown voltage	$V_{(BR)DSS}$	V_{GS} = 0V, I_D =-250μA	-30			V
Zero gate voltage drain current	I_{DSS}	V_{DS} =-24V,V_{GS} = 0V			-1	μA
Gate-body leakage current	I_{GSS}	V_{GS} =±12V, V_{DS} = 0V			100	nA
Gate threshold voltage(1)	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =-250μA	-0.7	-1.0	-1.3	V
Drain-source on-resistance(1)	$R_{DS(on)}$	V_{GS} =-10V, I_D =-4.0A		40	50	mΩ
		V_{GS} =-4.5V, I_D =-3.5A		46	60	
		V_{GS} =-2.5V, I_D =-2.5A		58	85	
Forward tranconductance	g_{FS}	V_{DS} =-5V, I_D =-5A	7			S
Dynamic characteristics(2)						
Input Capacitance	C_{iss}	V_{DS} =-15V,V_{GS} =0V,f =1MHz		1050		pF
Output Capacitance	C_{oss}			127		
Reverse Transfer Capacitance	C_{rss}			85		
Switching characteristics(2)						
Turn-on delay time	$t_{d(on)}$	V_{GS}=-10V,V_{DS}=-15V, R_L=3.6Ω,R_{GEN}=6Ω			6.5	ns
Turn-on rise time	t_r				3.5	
Turn-off delay time	$t_{d(off)}$				40	
Turn-off fall time	t_f				13	
Source-Drain Diode characteristics						
Diode Forward voltage(1)	V_{DS}	V_{GS} =0V, I_S=-1A			-1	V

Notes:

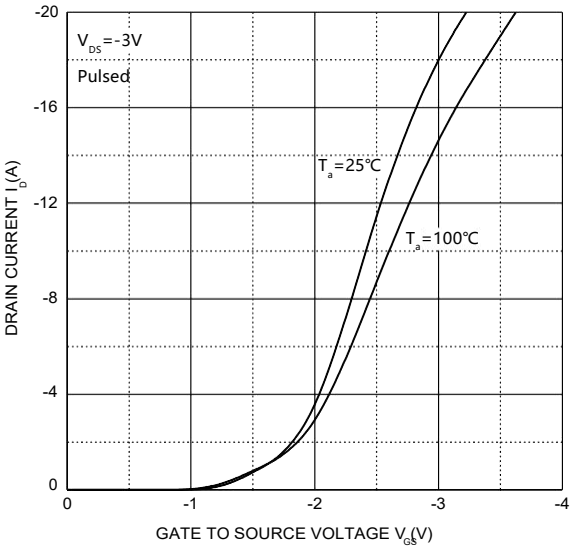
1. Pulse test; pulse width≤300μs, duty cycle≤2%.
2. Guaranteed by design, not subject to production testing.

Typical Electrical and Thermal Characteristics

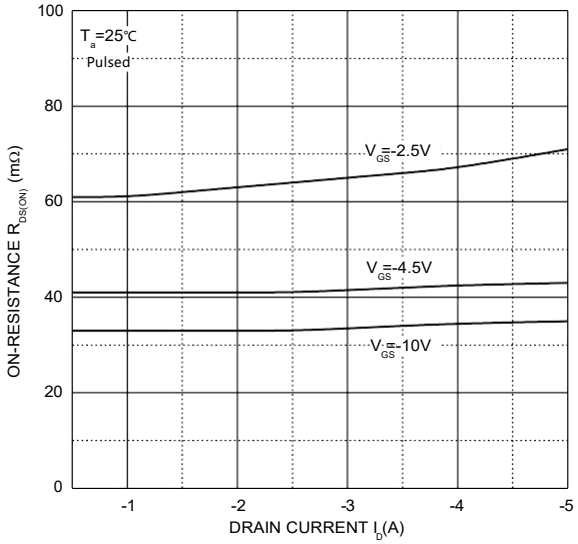
Output Characteristics



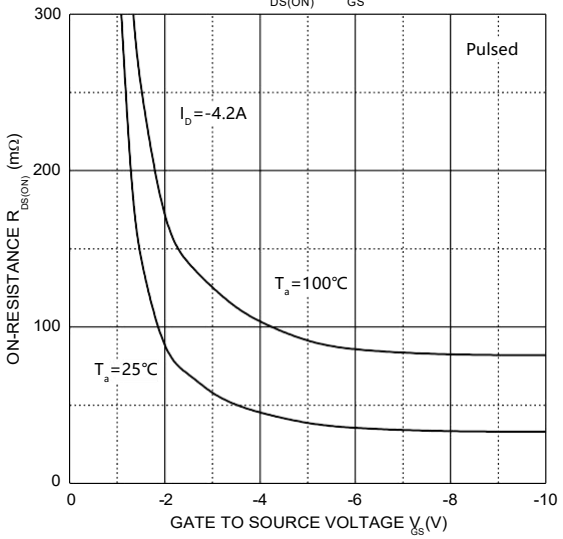
Transfer Characteristics



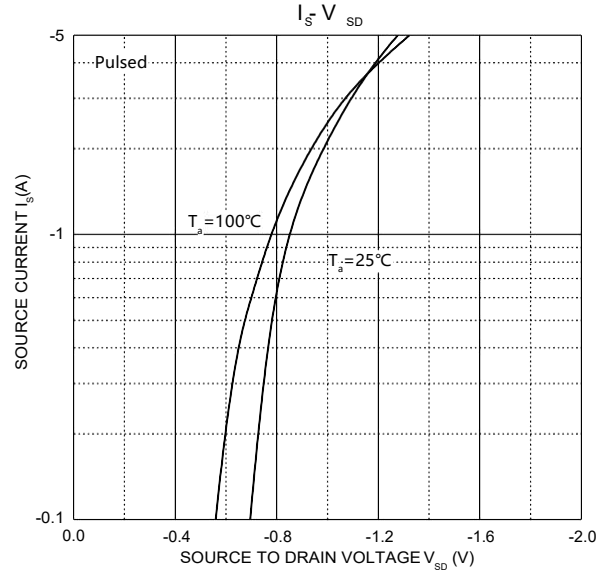
$R_{DS(ON)}$ – I_D



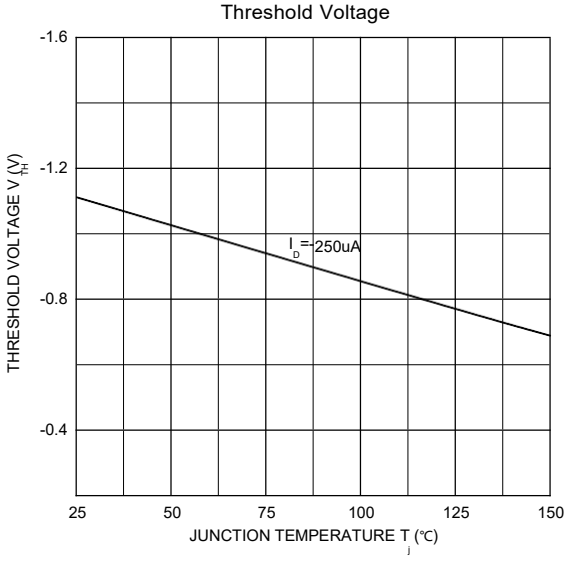
$R_{DS(ON)}$ - V_{GS}



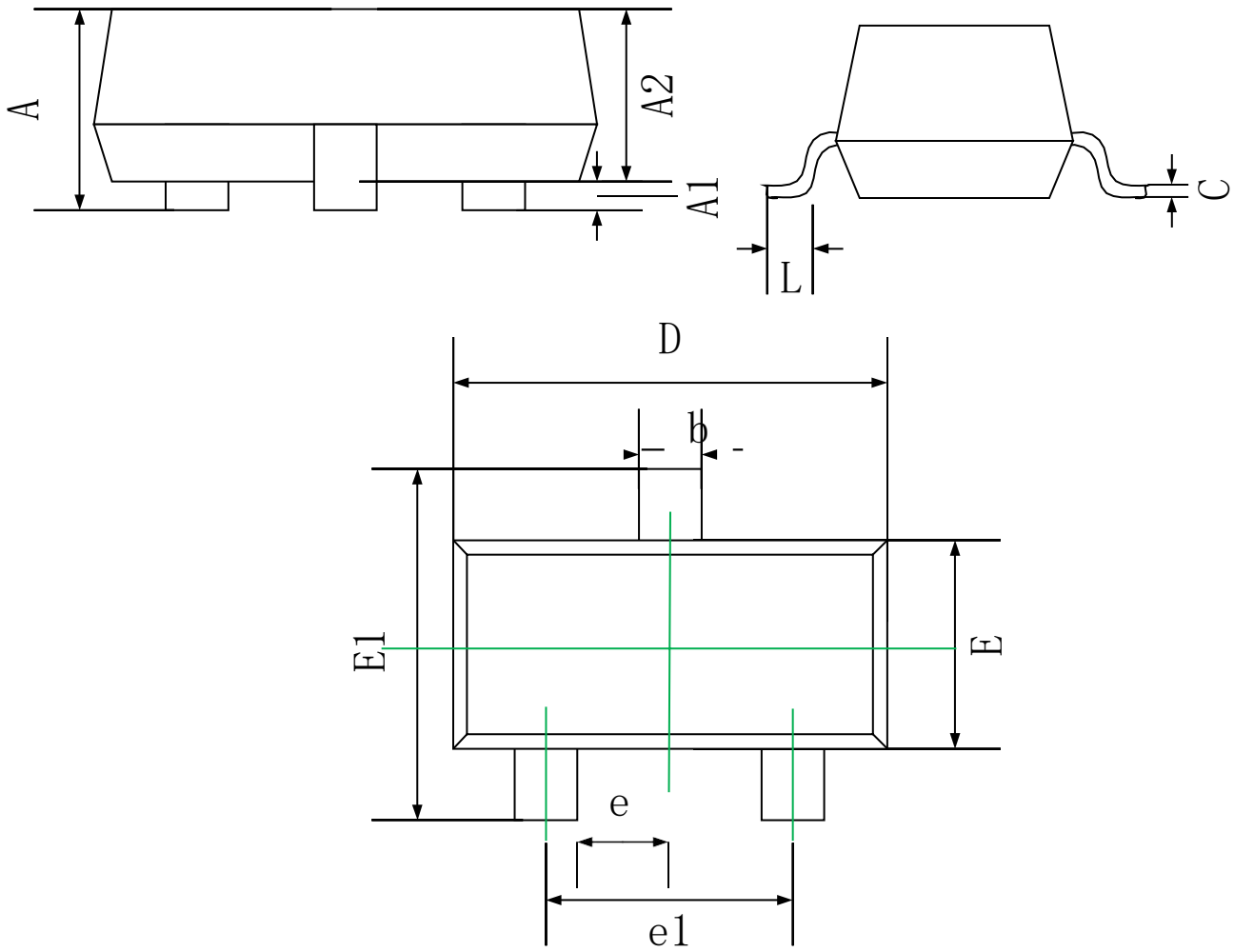
I_S- V_{SD}



Threshold Voltage



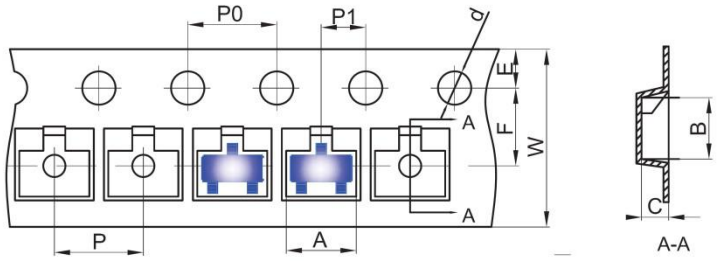
SOT-23-3L Package Information



Symbol	Dimensions In Millimeters	
	Min.	Max.
A	1.05	1.25
A1	0.00	0.10
A2	1.05	1.15
b	0.30	0.50
c	0.10	0.20
D	2.82	3.02
E	1.50	1.70
E1	2.65	2.95
e	0.95 REF.	
e1	1.80	2.00
L	0.30	0.50

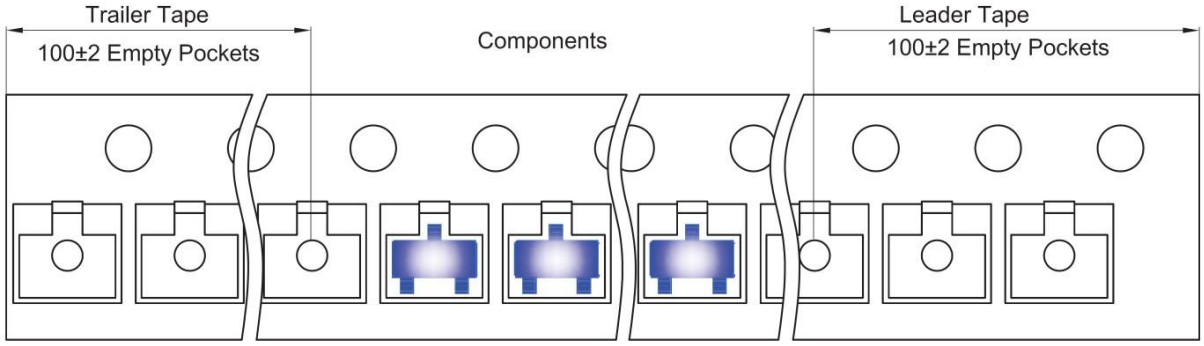
SOT-23 Tape and Reel

SOT-23-3L Embossed Carrier Tape

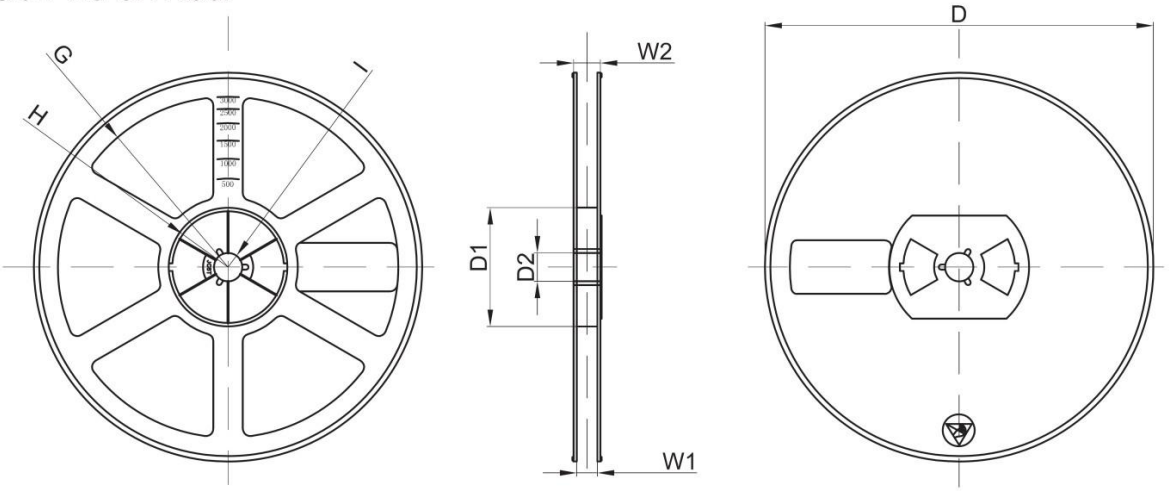


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-23-3L	3.18	3.28	1.32	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

SOT-23-3L Tape Leader and Trailer



SOT-23-3L Reel



Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
7"Dia	Ø180.00	60.00	13.00	R78.00	R25.60	R6.50	9.50	13.10

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
3000 pcs	7 inch	30,000 pcs	203×203×195	120,000 pcs	438×438×220	