重庆平伟实业股份有限公司
CHONGQING PINGWEI ENTERPRISE CO.,LTD

PW3415L

20V P-Channel MOSFET

-4A -20V；$R_{DS(ON)typ}$=33mΩ@-4.5V，$R_{DS(ON)typ}$=46mΩ@-2.5V，$R_{DS(ON)typ}$=63mΩ@-1.8V

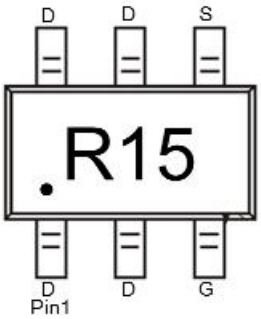
FEATURE

- Excellent $R_{DS(ON)}$, low gate charge,low gate voltages
- TrenchFET power MOSFET
- ESD protected gate

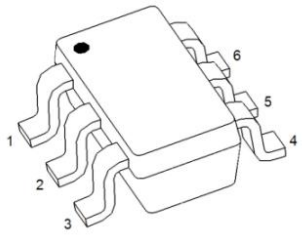
Application

- Load switch and in PWM applicatopns

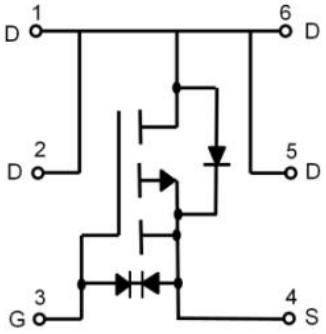
MARKING:



SOT-23-6L



Schematic diagram



ABSOLUTE MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	-20	V
Gate-Source Voltage	V_{GS}	±8	V
Continuous Drain Current(t≤10s)	I_D	-4	A
Maximum Power Dissipation(t≤10s)	P_D	0.35	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	357	℃/W
Junction Temperature	T_J	150	℃
Storage Temperature	T_{STG}	-55~ +150	℃

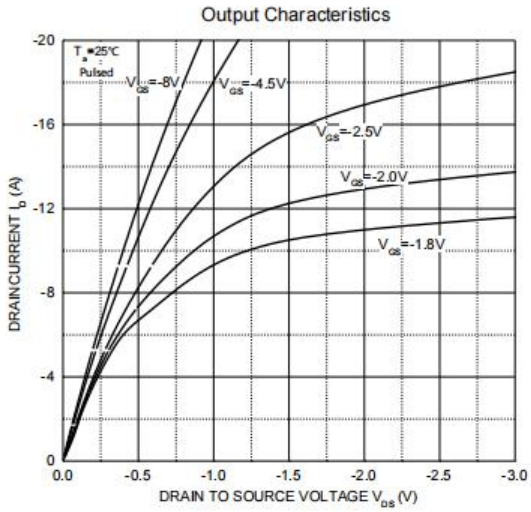
MOSFET ELECTRICAL CHARACTERISTICS(T_a=25°C unless otherwise noted)

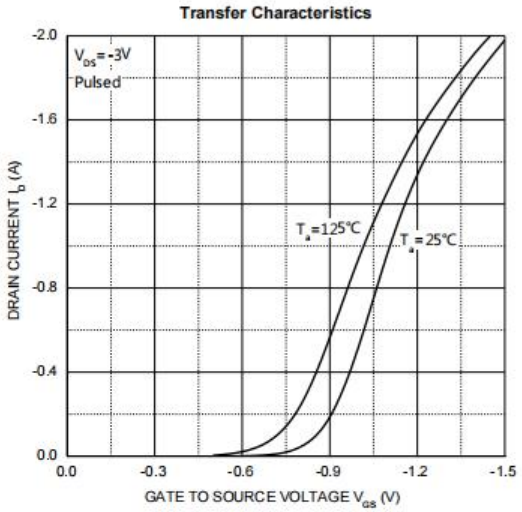
Parameter	Symbol	Test Condition	Min	Type	Max	Unit
Static Characteristics						
Drain-source breakdown voltage	$V_{(BR)DSS}$	V_{GS} = 0V, I_D =-250μA	-20			V
Zero gate voltage drain current	I_{DSS}	V_{DS} =-16V,V_{GS} = 0V			-1	μA
Gate-body leakage current	I_{GSS}	V_{GS} =±8V, V_{DS} = 0V			±10	μA
Gate threshold voltage	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =-250μA	-0.3	-0.65	-1.0	V
Drain-source on-resistance(1)	$R_{DS(on)}$	V_{GS} =-4.5V, I_D =-4A		33	50	mΩ
		V_{GS} =-2.5V, I_D =-4A		46	60	
		V_{GS} =-1.8V, I_D =-2A		63	100	
Forward tranconductance(2)	g_{FS}	V_{DS} =-5V, I_D =-4A	8			S
Dynamic characteristics(3)						
Input Capacitance	C_{iss}	V_{DS}=-10V,V_{GS}=0V,f=1MHz		1450		pF
Output Capacitance	C_{oss}			205		
Reverse Transfer Capacitance	C_{rss}			160		
Gate resistance	Rg	V_{DS} =0V,V_{GS} =0V,f =1MHz		6.5		Ω
Switching Characteristics						
Total gate charge	Q_g	V_{DS} =-10V,V_{GS} =-4.5V,I_D =-4A		17.2		nC
Gate-source charge	Q_{gs}			1.3		
Gate-drain charge	Q_{gd}			4.5		
Turn-on delay time(3)	$t_{d(on)}$	V_{DD}=-10V,V_{GS}=-4.5V, R_{GEN} =3Ω, R_L=2.5Ω		9.5		ns
Turn-on rise time(1)	t_r			17		
Turn-off delay time(1)	$t_{d(off)}$			94		
Turn-off fall time(1)	t_f			35		
Source-Drain Diode characteristics						
Diode Forward voltage(2)	V_{DS}	I_S=-1A, V_{GS} = 0V			-1	V

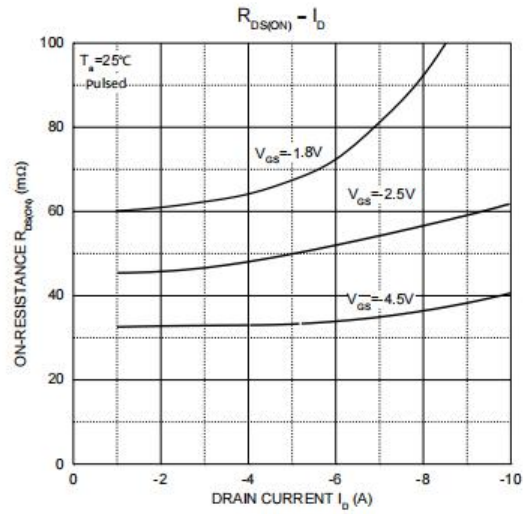
Notes:

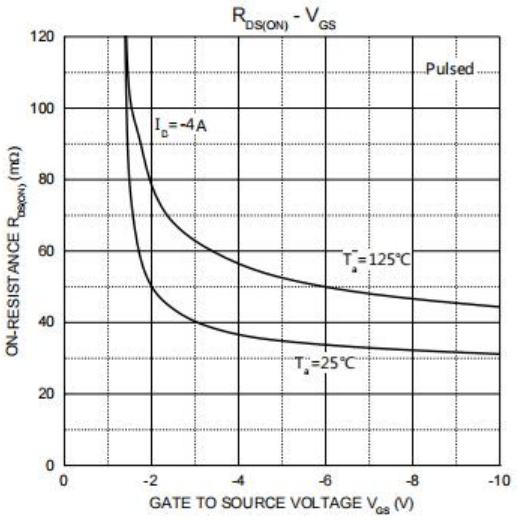
1. Repetitive rating,pulse width limited by junction temperature.
2. Pulse Test : Pulse width≦300μs, duty cycle≦2%.
3. These parameters have no way to verify.

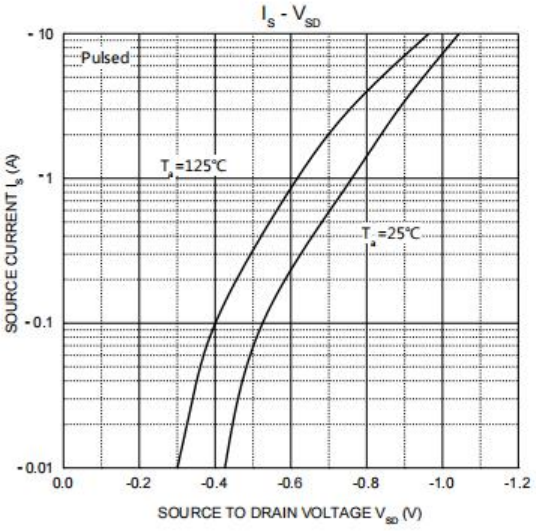
Typical Electrical and Thermal Characteristics

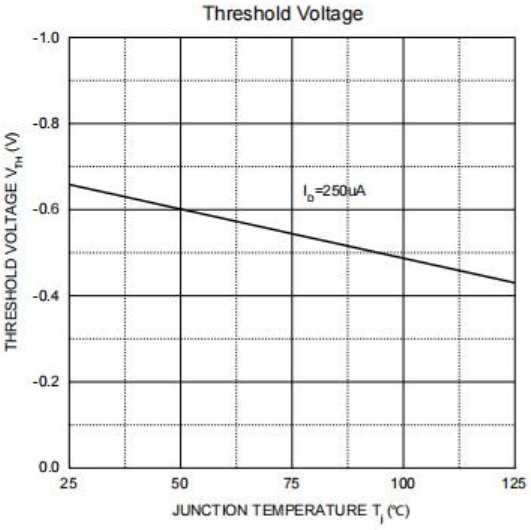




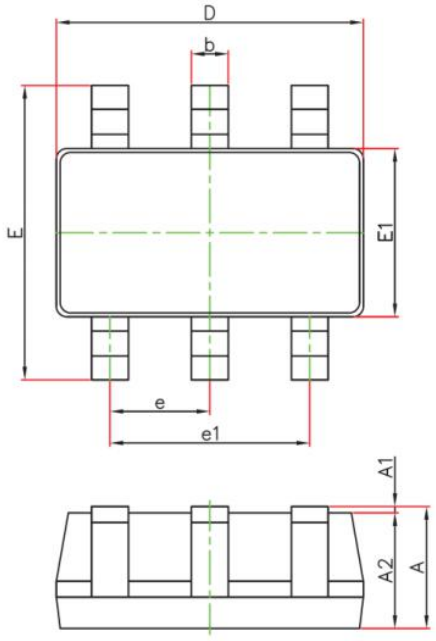


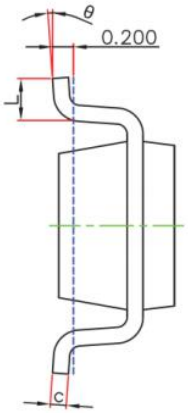






SOT-23-6L Package Information

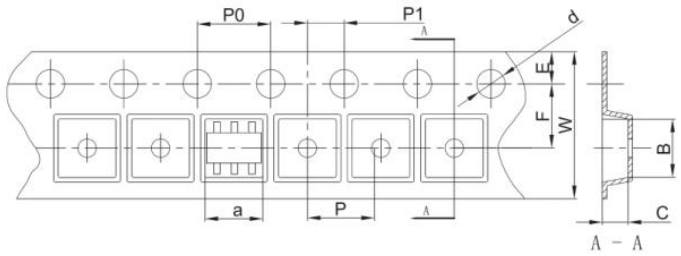




Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E1	1.500	1.700	0.059	0.067
E	2.650	2.950	0.104	0.116
e	0.950(BSC)		0.037(BSC)	
e1	1.800	2.000	0.071	0.079
L	0.300	0.600	0.012	0.024
θ	0°	8°	0°	8°

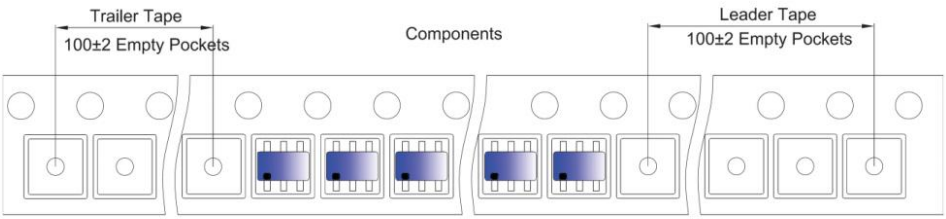
SOT-23-6L Tape and Reel

SOT-23-6L Embossed Carrier Tape

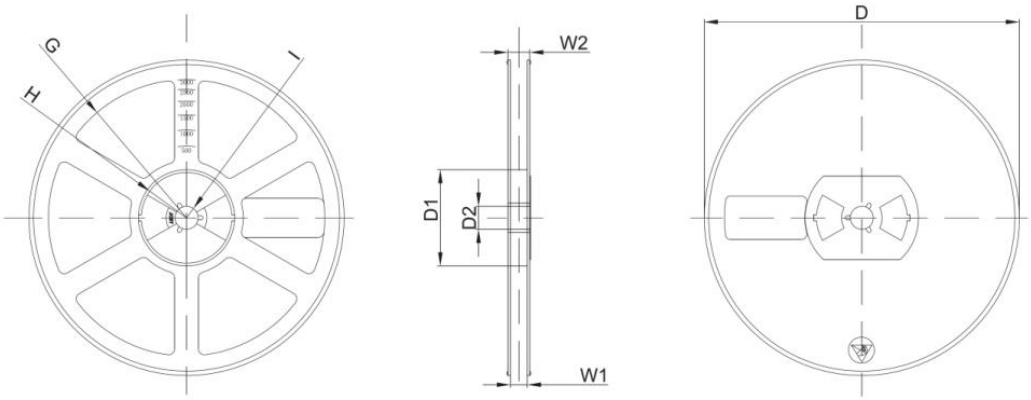


Dimensions are in millimeter										
Pkg type	a	B	C	d	E	F	P0	P	P1	W
SOT-23-6L	3.17	3.23	1.37	Ø1.55	1.75	3.50	4.00	4.00	2.00	8.00

SOT-23-6L Tape Leader and Trailer



SOT-23-6L 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	