



#### Product Summary

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	$I_D$
-20V	33mΩ@-4.5V	-4.0A
	46mΩ@-2.5V	
	63mΩ@-1.8V	

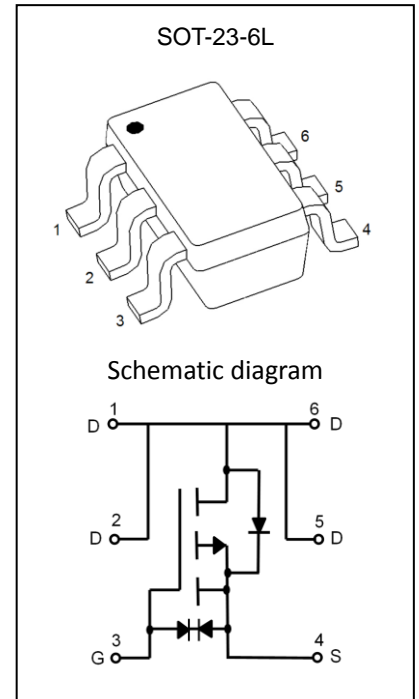
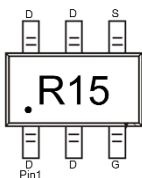
#### Feature

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

#### Application

- Load switch and in PWM applications

#### MARKING:



#### ABSOLUTE MAXIMUM RATINGS ( $T_a=25^{\circ}C$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	$V_{DS}$	-20	V
Gate-Source Voltage	$V_{GS}$	$\pm 8$	V
Continuous Drain Current ( $t \leq 10s$ )	$I_D$	-4.0	A
Maximum Power Dissipation ( $t \leq 10s$ )	$P_D$	0.35	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	357	$^{\circ}C/W$
Operating Junction Temperature	$T_J$	150	$^{\circ}C$
Storage Temperature	$T_{STG}$	-55~ +150	$^{\circ}C$

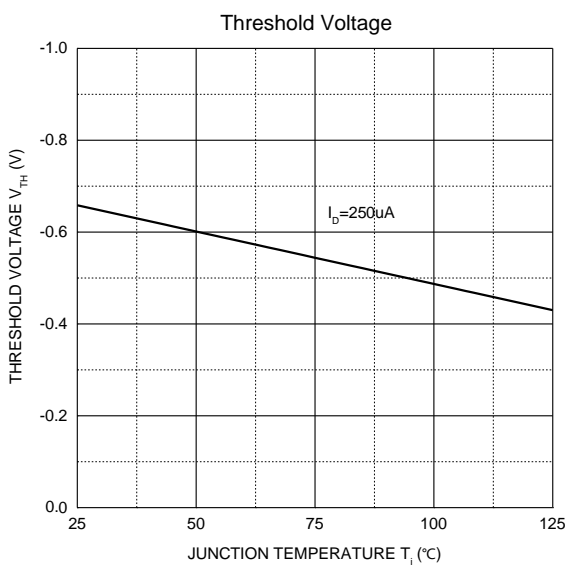
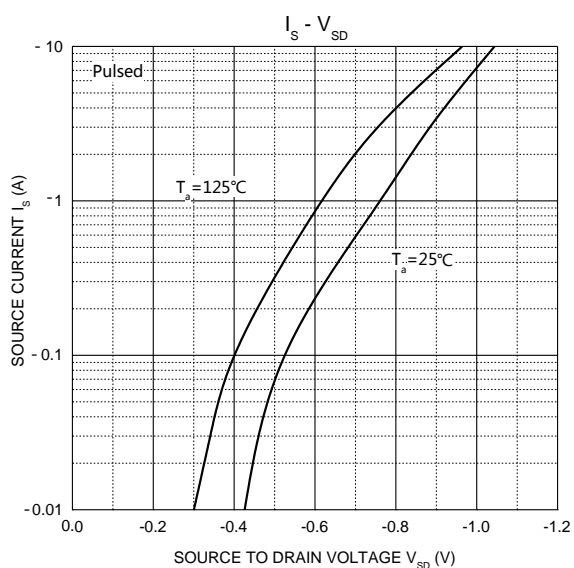
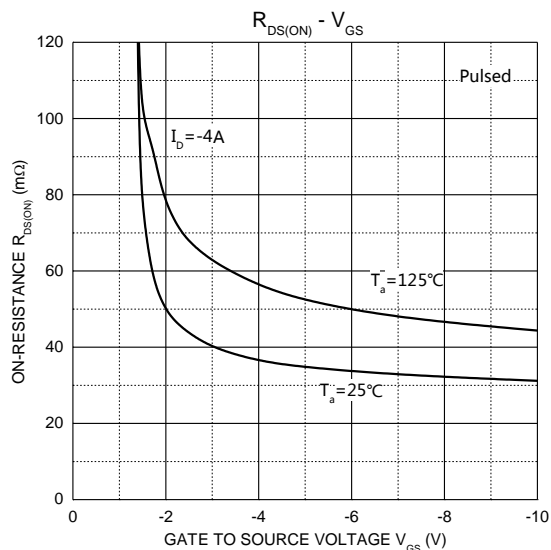
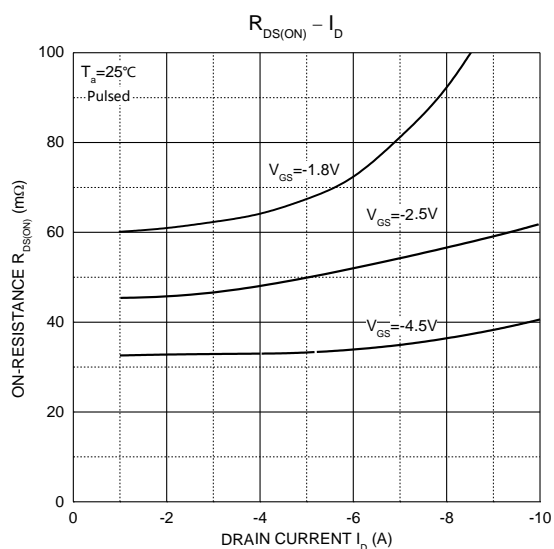
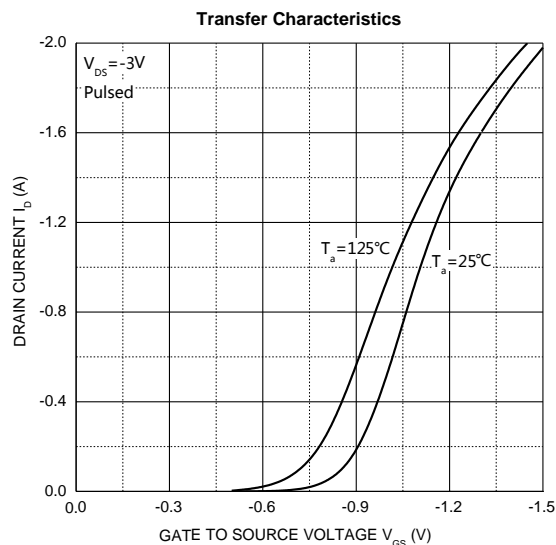
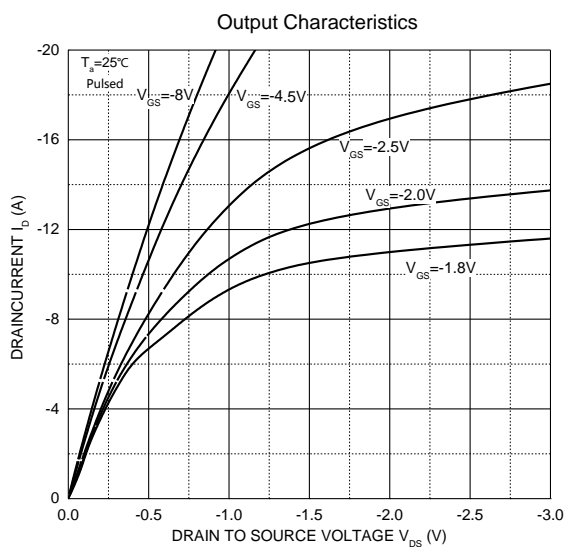
**MOSFET ELECTRICAL CHARACTERISTICS ( $T_a=25^{\circ}\text{C}$  unless otherwise noted)**

Parameter	Symbol	Test Condition	Min	Type	Max	Unit
<b>Static Characteristics</b>						
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = -250\mu A$	-20			V
Zero gate voltage drain current	$I_{DSS}$	$V_{DS} = -16V, V_{GS} = 0V$			-1	$\mu A$
Gate-body leakage current	$I_{GSS}$	$V_{GS} = \pm 8V, V_{DS} = 0V$			$\pm 10$	$\mu A$
Gate threshold voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = -250\mu A$	-0.3	-0.65	-1.0	V
Drain-source on-resistance <sup>(1)</sup>	$R_{DS(on)}$	$V_{GS} = -4.5V, I_D = -4A$		33	50	m $\Omega$
		$V_{GS} = -2.5V, I_D = -4A$		46	60	
		$V_{GS} = -1.8V, I_D = -2A$		63	100	
Forward transconductance <sup>(2)</sup>	$g_{FS}$	$V_{DS} = -5V, I_D = -4A$	8			S
<b>Dynamic characteristics<sup>(3)</sup></b>						
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	$R_g$	$V_{DS} = 0V, V_{GS} = 0V, f = 1MHz$		6.5		$\Omega$
<b>Switching Characteristics</b>						
Turn-on delay time <sup>(3)</sup>	$t_{d(on)}$	$V_{DS} = -10V, V_{GS} = -4.5V$ $R_{GEN} = 3\Omega, R_L = 2.5\Omega,$		9.5		ns
Turn-on rise time <sup>(1)</sup>	$t_r$			17		
Turn-off delay time <sup>(1)</sup>	$t_{d(off)}$			94		
Turn-off fall time <sup>(1)</sup>	$t_f$			35		
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		
<b>Source-Drain Diode characteristics</b>						
Diode Forward voltage <sup>(2)</sup>	$V_{DS}$	$V_{GS} = 0V, I_S = -1A$			-1	V

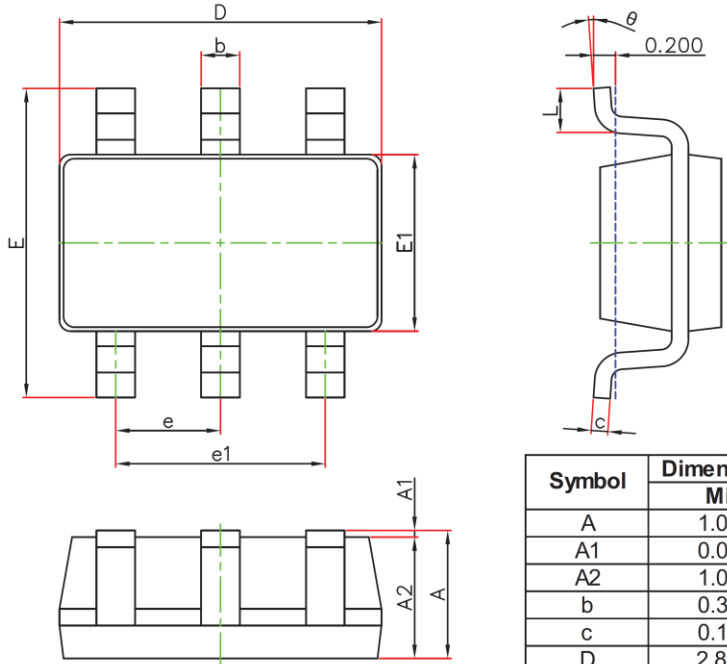
**Notes:**

1. Repetitive rating, pulse width limited by junction temperature.
2. Pulse Test : Pulse width  $\leq 300\mu s$ , duty cycle  $\leq 2\%$ .
3. These parameters have no way to verify.

Typical Electrical and Thermal Characteristics



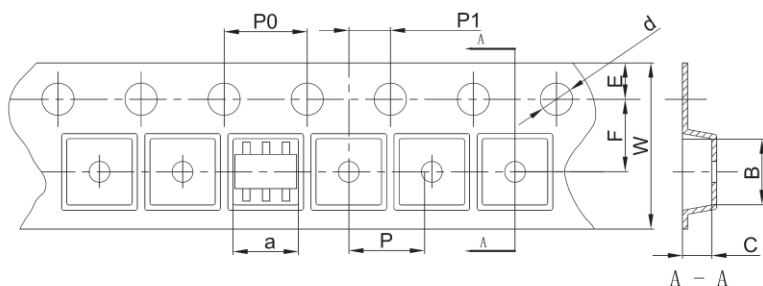
## SOT-23-6L Package Information



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°

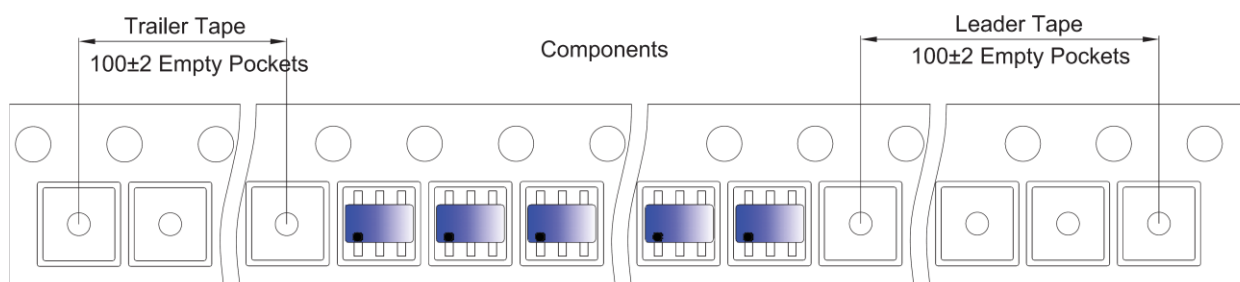
## SOT-23-6L Tape and Reel

### SOT-23-6L Embossed Carrier Tape

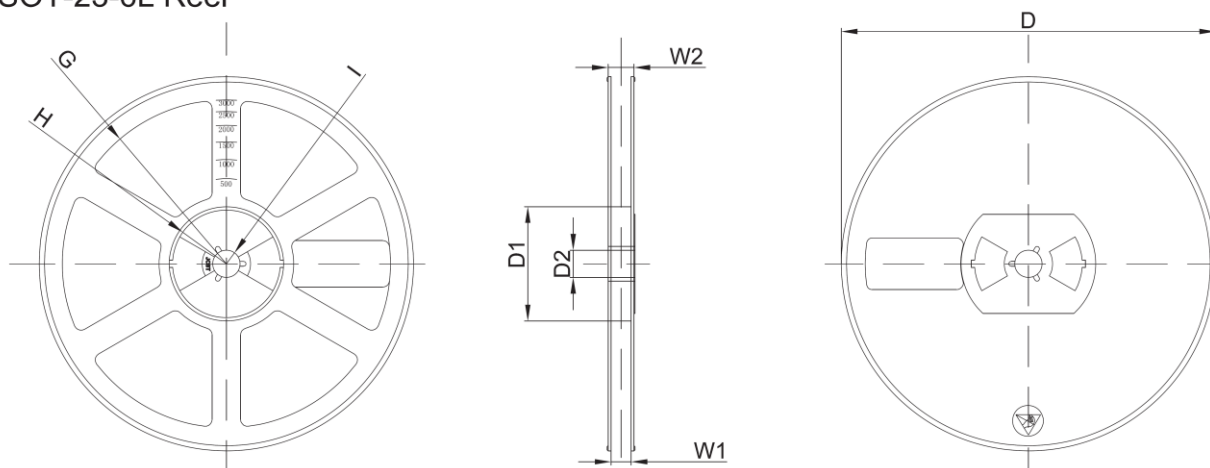


Dimensions are in millimeter										
Pkg type	a	B	C	d	E	F	P0	P	P1	W
SOT-23-6L	3.17	3.23	1.37	Ø1.55	1.75	3.50	4.00	4.00	2.00	8.00

### 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	

单击下面可查看定价，库存，交付和生命周期等信息

[>>GP\(格瑞宝\)](#)