



#### Product Summary

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	$I_D$
-20V	450mΩ@-4.5V	-0.66A
	650mΩ@-2.5V	
30V	320mΩ@4.5V	0.75A
	400mΩ@2.5V	

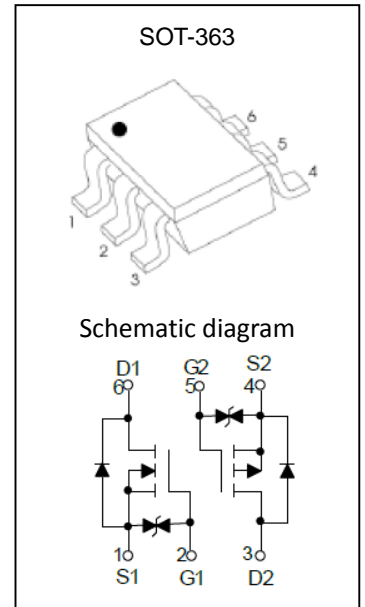
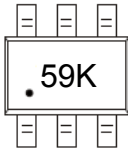
#### Feature

- Surface Mount Package
- Low  $R_{DS(on)}$
- Low leakage current
- ESD Protected

#### Application

- Low voltage applications
- Load/Power Switching
- Battery Management for Ultra Small Portable Electronics

#### MARKING:



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

Parameter	Symbol	Value	Unit
<b>P-MOSFET</b>			
Drain-Source Voltage	$V_{DS}$	-20	V
Gate-Source Voltage	$V_{GS}$	$\pm 12$	V
Continuous Drain Current <sup>(1)</sup>	$I_D$	-0.66	A
Pulsed Drain Current	$I_{DM}$	-1.9	A
Power Dissipation	$P_D$	1.4	W
<b>N-MOSFET</b>			
Drain-Source Voltage	$V_{DS}$	30	V
Gate-Source Voltage	$V_{GS}$	$\pm 12$	V
Continuous Drain Current	$I_D$	0.75	A
Pulsed Drain Current <sup>(1)</sup>	$I_{DM}$	2.2	A
Power Dissipation	$P_D$	1.4	W
<b>Temperature and Thermal Resistance</b>			
Thermal Resistance from Junction to Ambient <sup>(2)</sup>	$R_{\theta JA}$	89	$^\circ\text{C/W}$
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature	$T_{STG}$	-55~ +150	$^\circ\text{C}$

**P-channel MOSFET ELECTRICAL CHARACTERISTICS(T<sub>a</sub>=25°C unless otherwise noted)**

Parameter	Symbol	Test Condition	Min	Type	Max	Unit
<b>Static Characteristics</b>						
Drain-source breakdown voltage	V <sub>(BR)DSS</sub>	V <sub>GS</sub> = 0V, I <sub>D</sub> = -250μA	-20			V
Zero gate voltage drain current	I <sub>DSS</sub>	V <sub>DS</sub> = -20V, V <sub>GS</sub> = 0V			-1	μA
Gate-body leakage current	I <sub>GSS</sub>	V <sub>GS</sub> = ±10V, V <sub>DS</sub> = 0V			±20	μA
Gate threshold voltage	V <sub>GS(th)</sub>	V <sub>DS</sub> = V <sub>GS</sub> , I <sub>D</sub> = -250μA	-0.35	-0.61	-1.1	V
Drain-source on-resistance <sup>(3)</sup>	R <sub>DS(on)</sub>	V <sub>GS</sub> = -4.5V, I <sub>D</sub> = -0.65A		450	580	mΩ
		V <sub>GS</sub> = -2.5V, I <sub>D</sub> = -0.54A		650	840	
Forward tranconductance	g <sub>FS</sub>	V <sub>DS</sub> = -10V, I <sub>D</sub> = -0.54A		1.2		S
<b>Dynamic characteristics<sup>(4)</sup></b>						
Input Capacitance	C <sub>iSS</sub>	V <sub>DS</sub> = -10V, V <sub>GS</sub> = 0V, F = 1.0MHz		113		pF
Output Capacitance	C <sub>oSS</sub>			15		
Reverse Transfer Capacitance	C <sub>rSS</sub>			9		
<b>Switching Characteristics<sup>(4)</sup></b>						
Turn-on delay time	t <sub>d(on)</sub>	V <sub>DS</sub> = -10V, I <sub>D</sub> = -200mA, V <sub>GS</sub> = -4.5V, R <sub>G</sub> = 10Ω		9		nS
Turn-on rise time	t <sub>r</sub>			5.7		
Turn-off delay time	t <sub>d(off)</sub>			32.6		
Turn-off fall time	t <sub>f</sub>			20.3		
<b>Source-Drain Diode characteristics</b>						
Diode forward voltage	V <sub>DS</sub>	I <sub>S</sub> = -0.6A, V <sub>GS</sub> = 0V			-1.2	V

## N-channel MOSFET ELECTRICAL CHARACTERISTICS(T<sub>a</sub>=25°C unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Type	Max	Unit
<b>Static Characteristics</b>						
Drain-source breakdown voltage	V <sub>(BR)DSS</sub>	V <sub>GS</sub> = 0V, I <sub>D</sub> =250μA	30			V
Zero gate voltage drain current	I <sub>DSS</sub>	V <sub>DS</sub> =30V, V <sub>GS</sub> = 0V			1	μA
Gate-body leakage current	I <sub>GSS</sub>	V <sub>GS</sub> =±10V, V <sub>DS</sub> = 0V			±3	μA
Gate threshold voltage	V <sub>GS(th)</sub>	V <sub>DS</sub> =V <sub>GS</sub> , I <sub>D</sub> =250μA	0.5	1.0	1.5	V
Drain-source on-resistance <sup>(3)</sup>	R <sub>DS(on)</sub>	V <sub>GS</sub> =4.5V, I <sub>D</sub> =0.6A		320	420	mΩ
		V <sub>GS</sub> =2.5V, I <sub>D</sub> =0.5A		400	520	
Forward tranconductance	g <sub>FS</sub>	V <sub>DS</sub> =5V, I <sub>D</sub> =0.5A		0.9		S
<b>Dynamic characteristics<sup>(4)</sup></b>						
Input Capacitance	C <sub>iss</sub>	V <sub>DS</sub> =10V, V <sub>GS</sub> =0V, F=1.0MHz		44		pF
Output Capacitance	C <sub>oss</sub>			15		
Reverse Transfer Capacitance	C <sub>rss</sub>			8		
<b>Switching Characteristics<sup>(4)</sup></b>						
Turn-on delay time	t <sub>d(on)</sub>	V <sub>DD</sub> =15V, I <sub>D</sub> =0.7A V <sub>GS</sub> =4.5V, R <sub>GEN</sub> =51Ω		5.0		ns
Turn-on rise time	t <sub>r</sub>			8.2		
Turn-off delay time	t <sub>d(off)</sub>			23		
Turn-off fall time	t <sub>f</sub>			41		
<b>Source-Drain Diode characteristics</b>						
Diode forward voltage	V <sub>DS</sub>	I <sub>S</sub> =0.6A, V <sub>GS</sub> = 0V		0.87	1.2	V

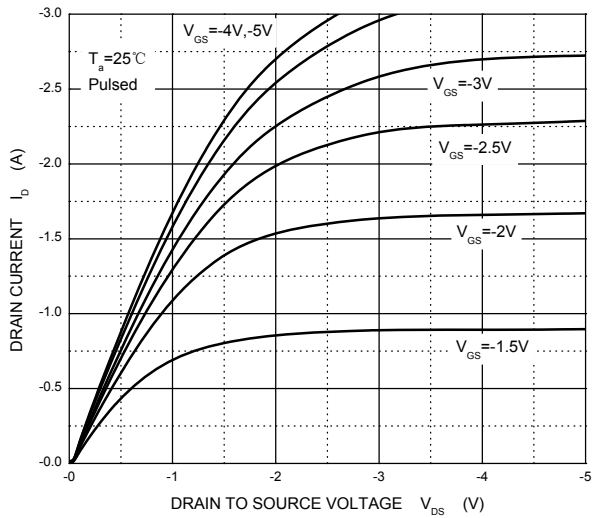
### Notes:

1. Repetitive Rating : Pulse width limited by maximum junction temperature.
2. Surface Mounted on FR4 Board, t < 5 sec.
3. Pulse Test : Pulse Width≤300μs, Duty Cycle ≤ 2%.
4. Guaranteed by design, not subject to production testing.

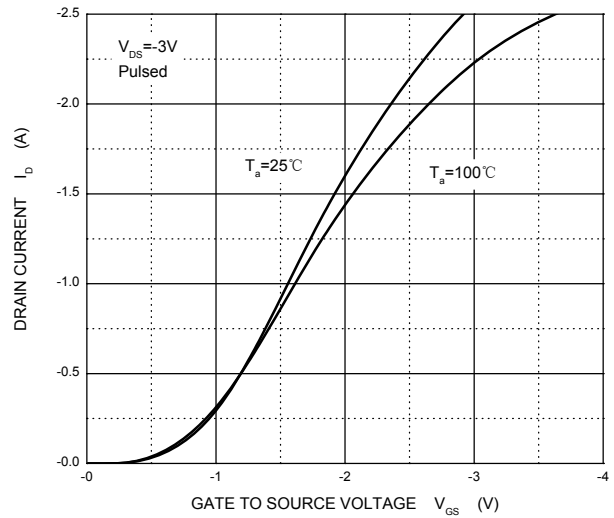
**Typical Electrical and Thermal Characteristics**

**P-Channel MOS**

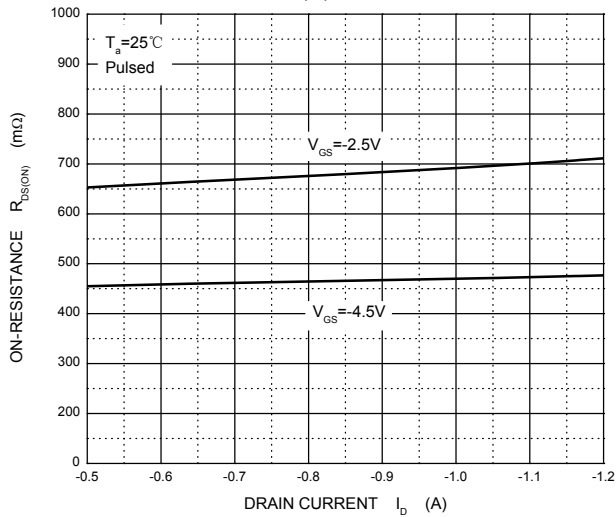
**Output Characteristics**



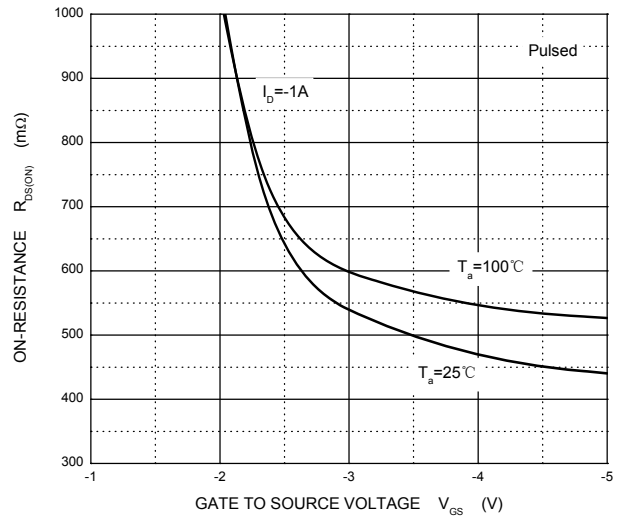
**Transfer Characteristics**



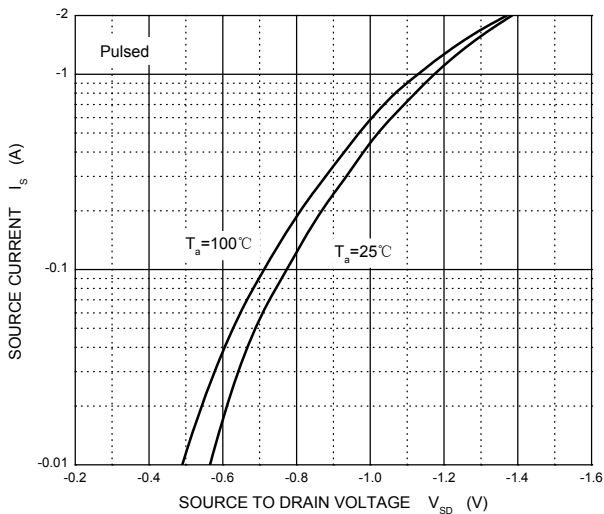
**$R_{DS(ON)}$  —  $I_D$**



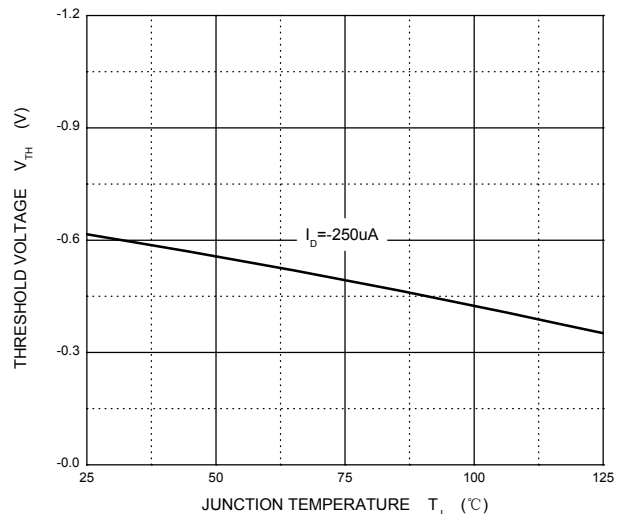
**$R_{DS(ON)}$  —  $V_{GS}$**



**$I_S$  —  $V_{SD}$**

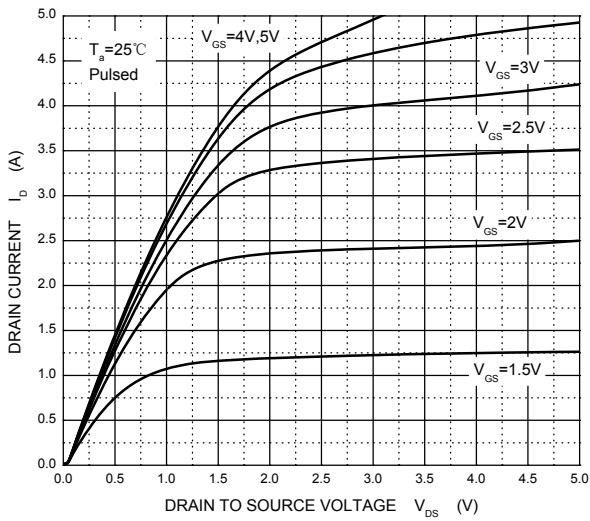


**Threshold Voltage**

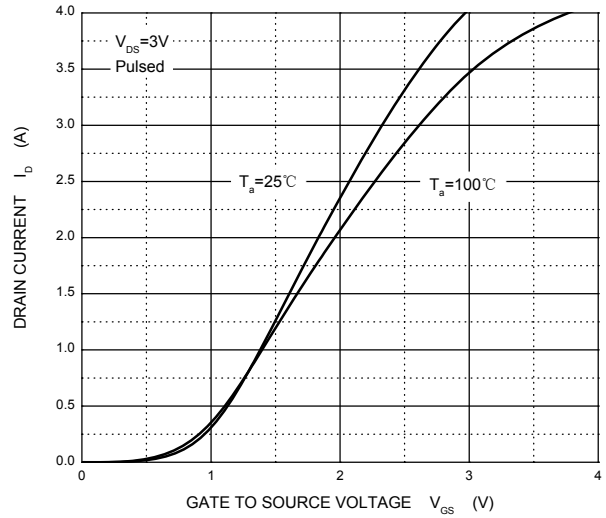


N-Channel MOS

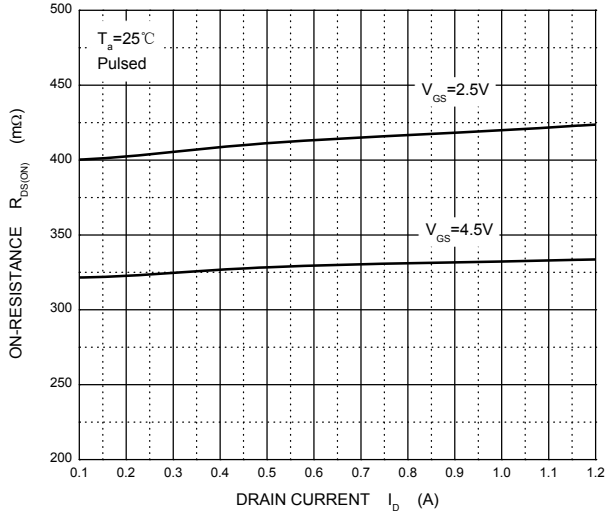
**Output Characteristics**



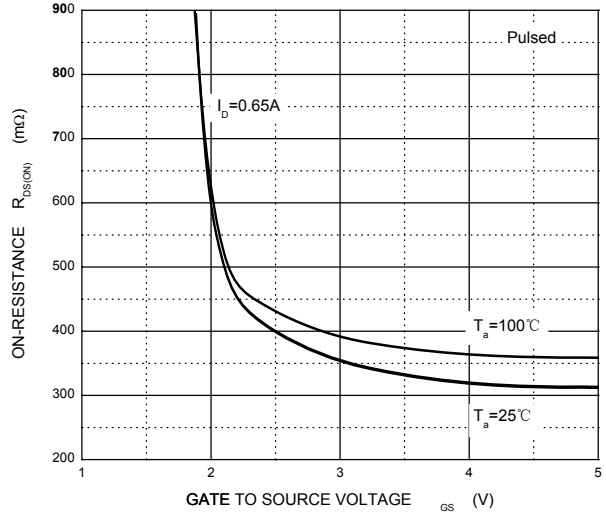
**Transfer Characteristics**



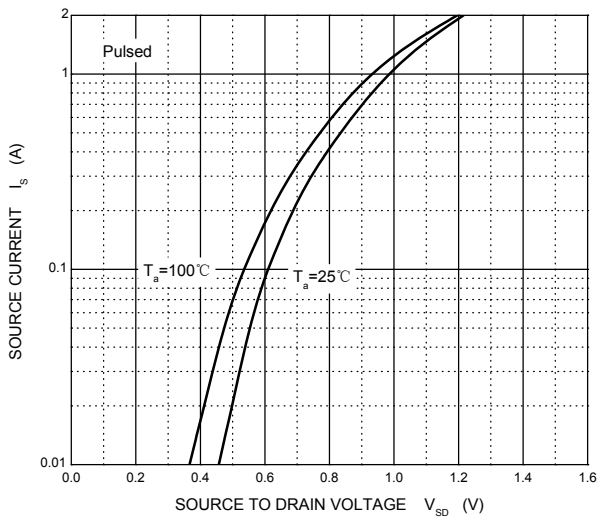
$R_{DS(ON)}$  —  $I_D$



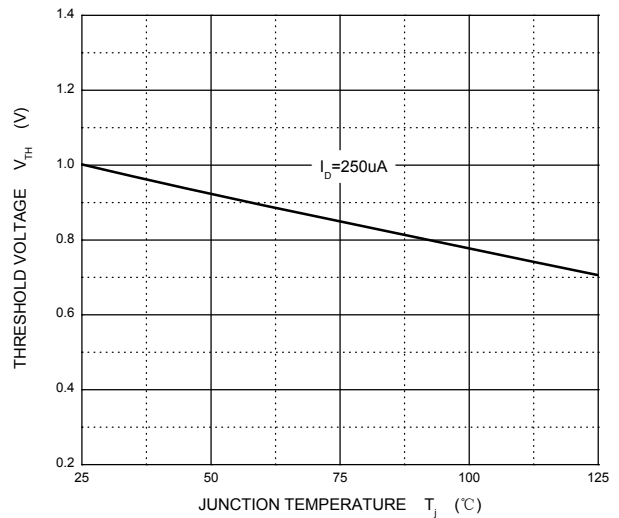
$R_{DS(ON)}$  —  $V_{GS}$



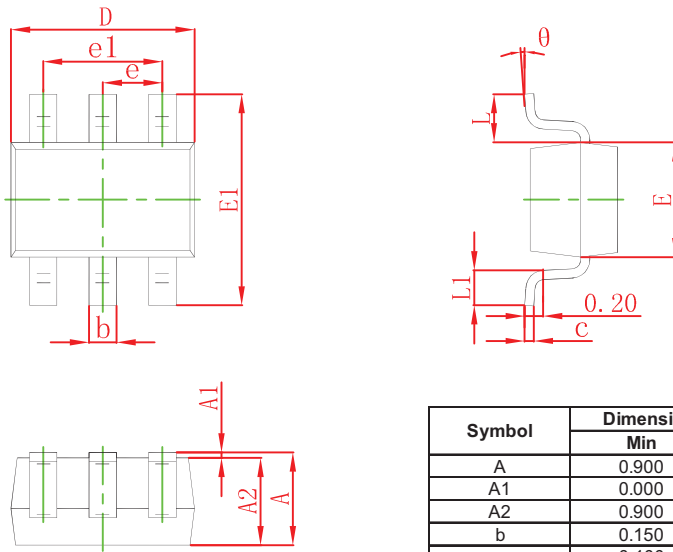
$I_S$  —  $V_{SD}$



**Threshold Voltage**



## SOT-363 Package Information

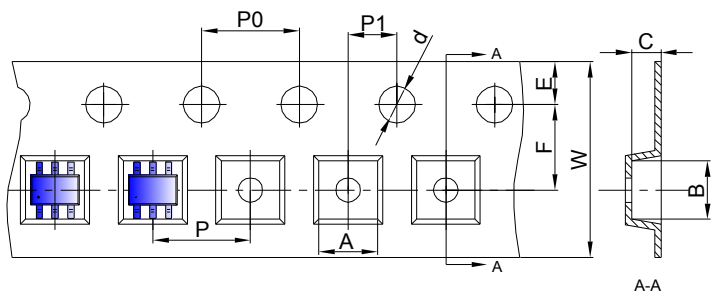


Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.150	0.350	0.006	0.014
c	0.100	0.150	0.004	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.400	0.085	0.094
e	0.650 TYP		0.026 TYP	
e1	1.200	1.400	0.047	0.055
L	0.525 REF		0.021 REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°

**SOT-363 Tape and Reel**

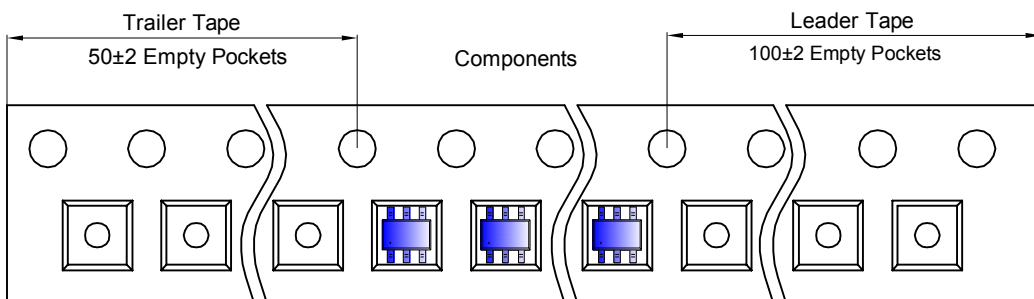
**SOT-363 Tape and reel**

SOT-363 Embossed Carrier Tape

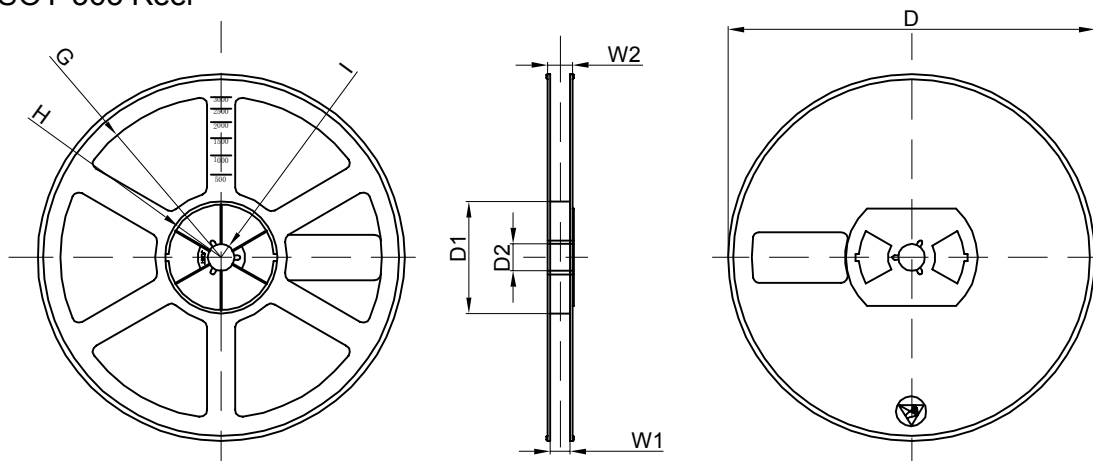


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-363	2.25	2.55	1.20	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

**SOT-363 Tape Leader and Trailer**



**SOT-363 Reel**



Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
7" Dia	Ø178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30

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\(格瑞宝\)](#)