

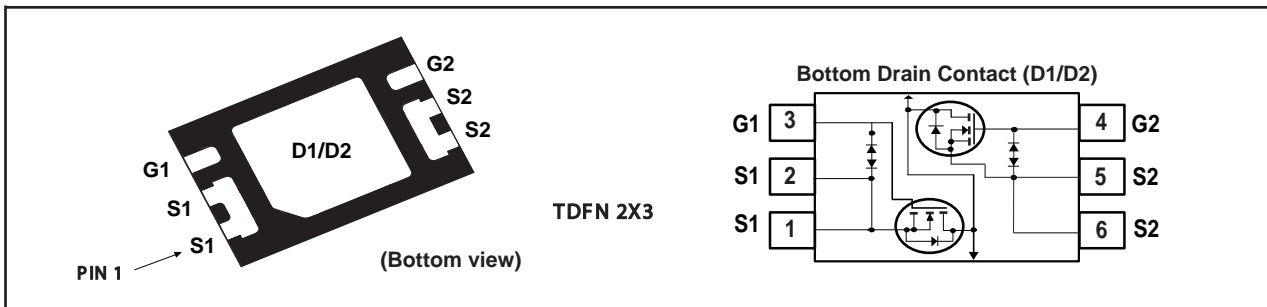


## Dual N-Channel Enhancement Mode Field Effect Transistor

PRODUCT SUMMARY		
V <sub>DSS</sub>	I <sub>D</sub>	R <sub>DS(ON)</sub> (mΩ) Max
20V	9.5A	9.0 @ V <sub>GS</sub> =4.5V
		9.5 @ V <sub>GS</sub> =4.0V
		10.0 @ V <sub>GS</sub> =3.7V
		11.2 @ V <sub>GS</sub> =3.1V
		13.5 @ V <sub>GS</sub> =2.5V

### FEATURES

- Super high dense cell design for low R<sub>DS(ON)</sub>.
- Rugged and reliable.
- Surface Mount Package.
- ESD Protected.



### ABSOLUTE MAXIMUM RATINGS (T<sub>A</sub>=25°C unless otherwise noted)

Symbol	Parameter	Limit	Units
V <sub>DS</sub>	Drain-Source Voltage	20	V
V <sub>GS</sub>	Gate-Source Voltage	±12	V
I <sub>D</sub>	Drain Current-Continuous <sup>c</sup>	T <sub>A</sub> =25°C	9.5
		T <sub>A</sub> =70°C	7.6
I <sub>DM</sub>	-Pulsed <sup>a c</sup>	60	A
P <sub>D</sub>	Maximum Power Dissipation	T <sub>A</sub> =25°C	1.56
		T <sub>A</sub> =70°C	1.00
T <sub>J</sub> , T <sub>STG</sub>	Operating Junction and Storage Temperature Range	-55 to 150	°C

### THERMAL CHARACTERISTICS

R <sub>θJA</sub>	Thermal Resistance, Junction-to-Ambient	80	°C/W
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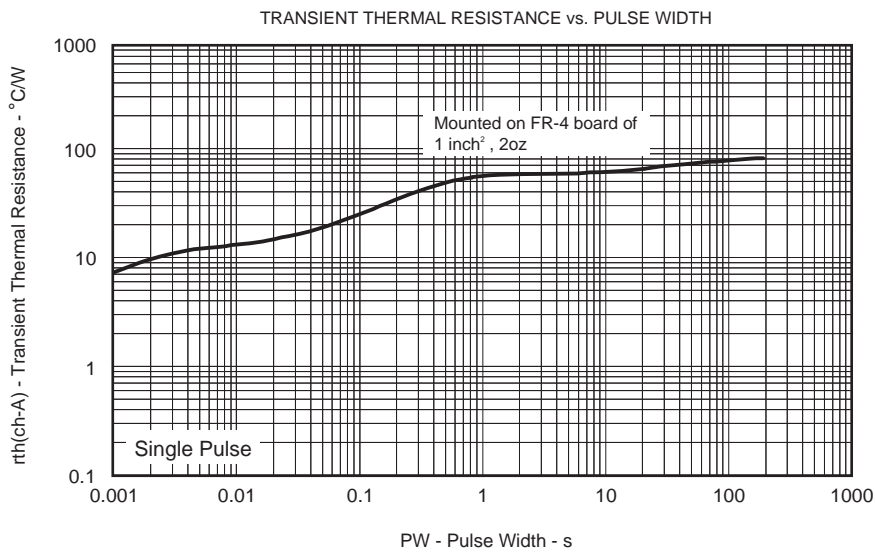
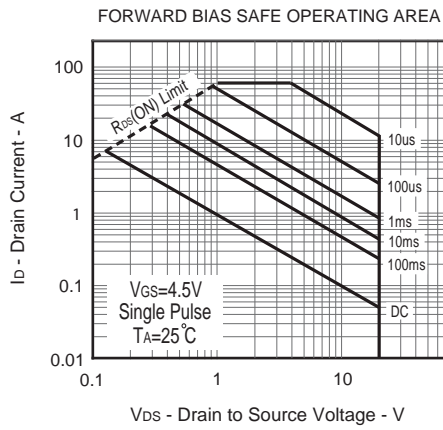
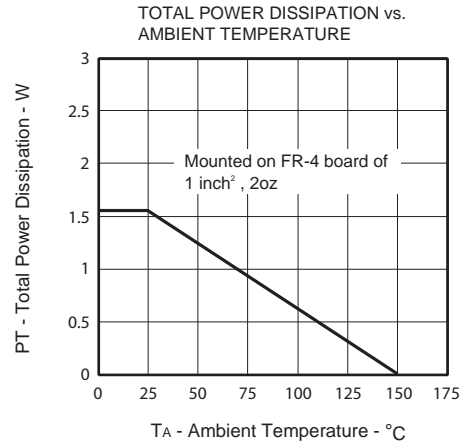
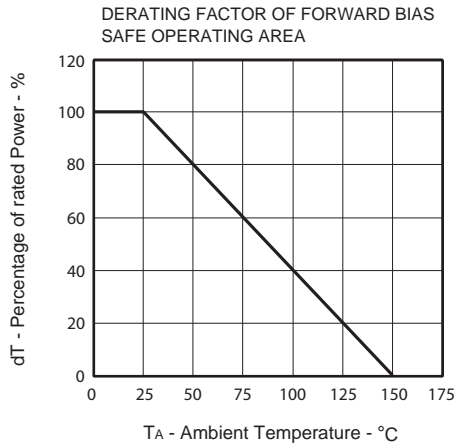
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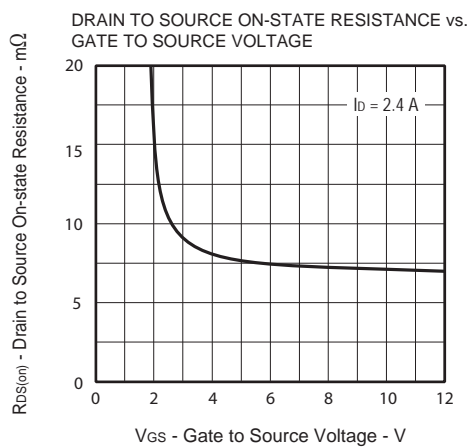
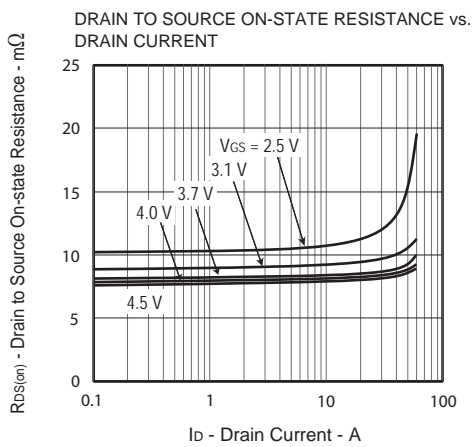
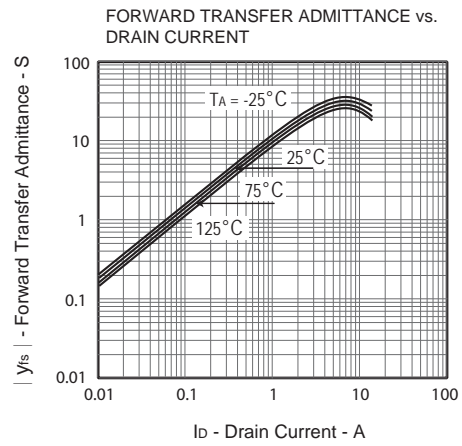
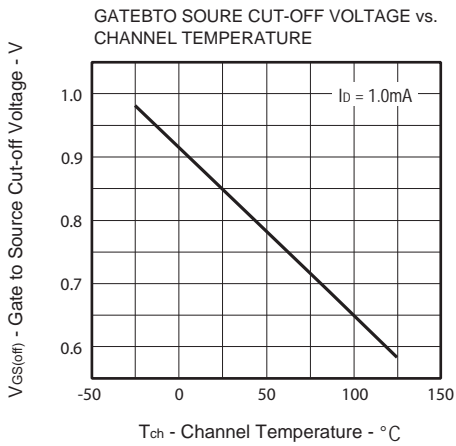
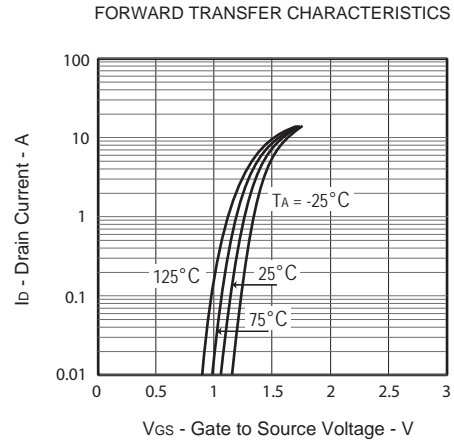
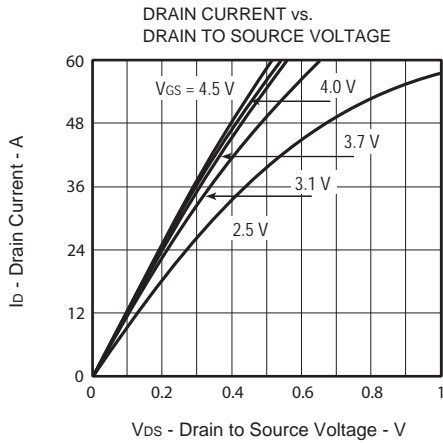
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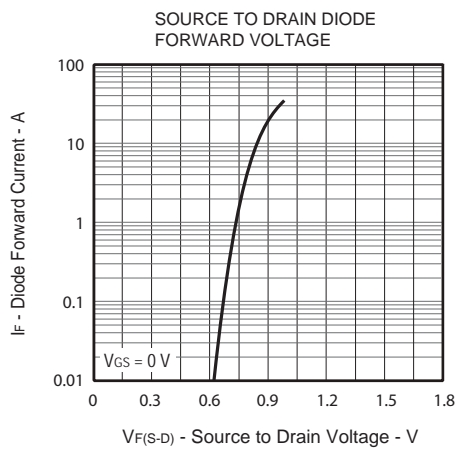
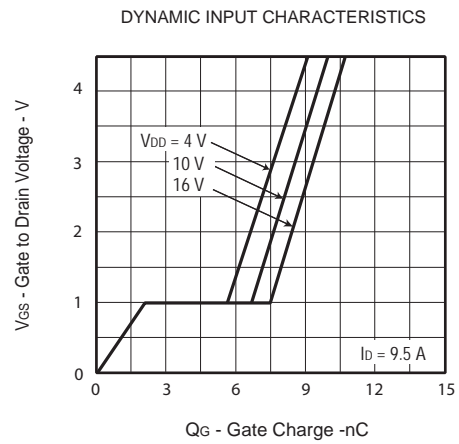
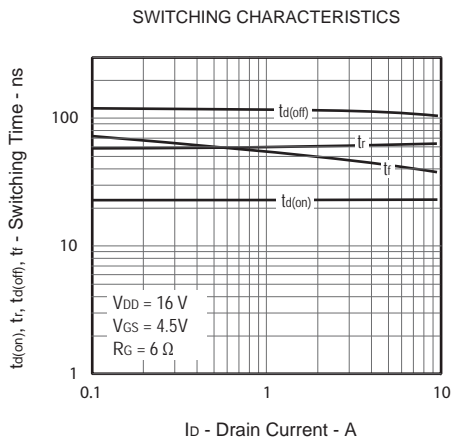
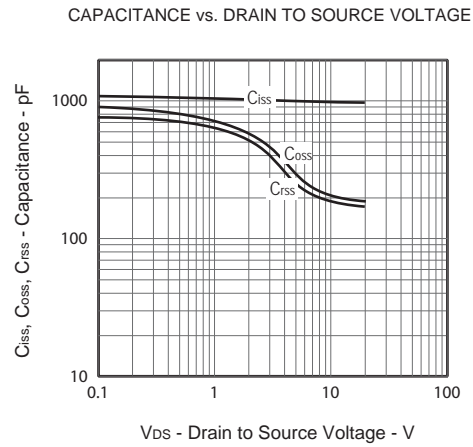
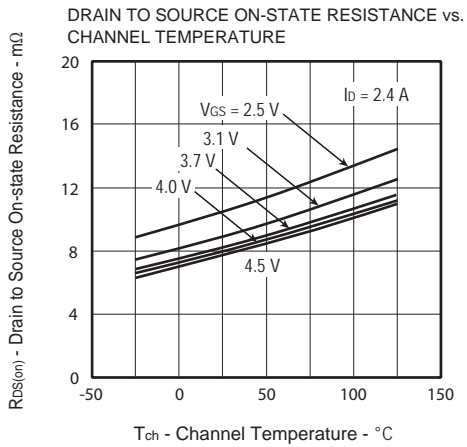
## ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C unless otherwise noted)

Symbol	Parameter	Conditions	Min	Typ	Max	Units
<b>OFF CHARACTERISTICS</b>						
BV <sub>DSS</sub>	Drain-Source Breakdown Voltage	V <sub>GS</sub> =0V , I <sub>D</sub> =250uA	20			V
I <sub>DSS</sub>	Zero Gate Voltage Drain Current	V <sub>DS</sub> =18V , V <sub>GS</sub> =0V			1	uA
I <sub>GSS</sub>	Gate-Body Leakage Current	V <sub>GS</sub> = ±8V , V <sub>DS</sub> =0V			±1	uA
<b>ON CHARACTERISTICS</b>						
V <sub>GS(th)</sub>	Gate Threshold Voltage	V <sub>DS</sub> =V <sub>GS</sub> , I <sub>D</sub> =1.0mA	0.5	0.85	1.5	V
R <sub>DS(ON)</sub>	Drain-Source On-State Resistance	V <sub>GS</sub> =4.5V , I <sub>D</sub> =2.4A	6.3	7.8	9.0	m ohm
		V <sub>GS</sub> =4.0V , I <sub>D</sub> =2.4A	6.5	8.0	9.5	m ohm
		V <sub>GS</sub> =3.7V , I <sub>D</sub> =2.4A	6.7	8.2	10.0	m ohm
		V <sub>GS</sub> =3.1V , I <sub>D</sub> =2.4A	7.0	9.0	11.2	m ohm
		V <sub>GS</sub> =2.5V , I <sub>D</sub> =2.4A	8.0	10.5	13.5	m ohm
g <sub>FS</sub>	Forward Transconductance	V <sub>DS</sub> =5V , I <sub>D</sub> =4.75A		28		S
<b>DYNAMIC CHARACTERISTICS<sup>b</sup></b>						
C <sub>ISS</sub>	Input Capacitance	V <sub>DS</sub> =10V, V <sub>GS</sub> =0V f=1.0MHz		980		pF
C <sub>OSS</sub>	Output Capacitance			213		pF
C <sub>RSS</sub>	Reverse Transfer Capacitance			189		pF
<b>SWITCHING CHARACTERISTICS<sup>b</sup></b>						
t <sub>D(ON)</sub>	Turn-On Delay Time	V <sub>DD</sub> =16V I <sub>D</sub> =4.75A		24		ns
t <sub>r</sub>	Rise Time			66		ns
t <sub>D(OFF)</sub>	Turn-Off Delay Time	V <sub>GS</sub> =4.5V R <sub>GEN</sub> = 6 ohm		116		ns
t <sub>f</sub>	Fall Time			46		ns
Q <sub>g</sub>	Total Gate Charge	V <sub>DS</sub> =16V, I <sub>D</sub> =9.5A, V <sub>GS</sub> =4.5V		10.7		nC
Q <sub>gs</sub>	Gate-Source Charge			2.1		nC
Q <sub>gd</sub>	Gate-Drain Charge			5.4		nC
<b>DRAIN-SOURCE DIODE CHARACTERISTICS AND MAXIMUM RATINGS</b>						
V <sub>SD</sub>	Diode Forward Voltage	V <sub>GS</sub> =0V, I <sub>S</sub> =9.5A		0.84	1.2	V
<b>Notes</b>						
a. Pulse Test: Pulse Width < 10us, Duty Cycle < 1%.						
b. Guaranteed by design, not subject to production testing.						
c. Drain current limited by maximum junction temperature.						
d. Mounted on FR4 Board of 1 inch <sup>2</sup> , 2oz.						

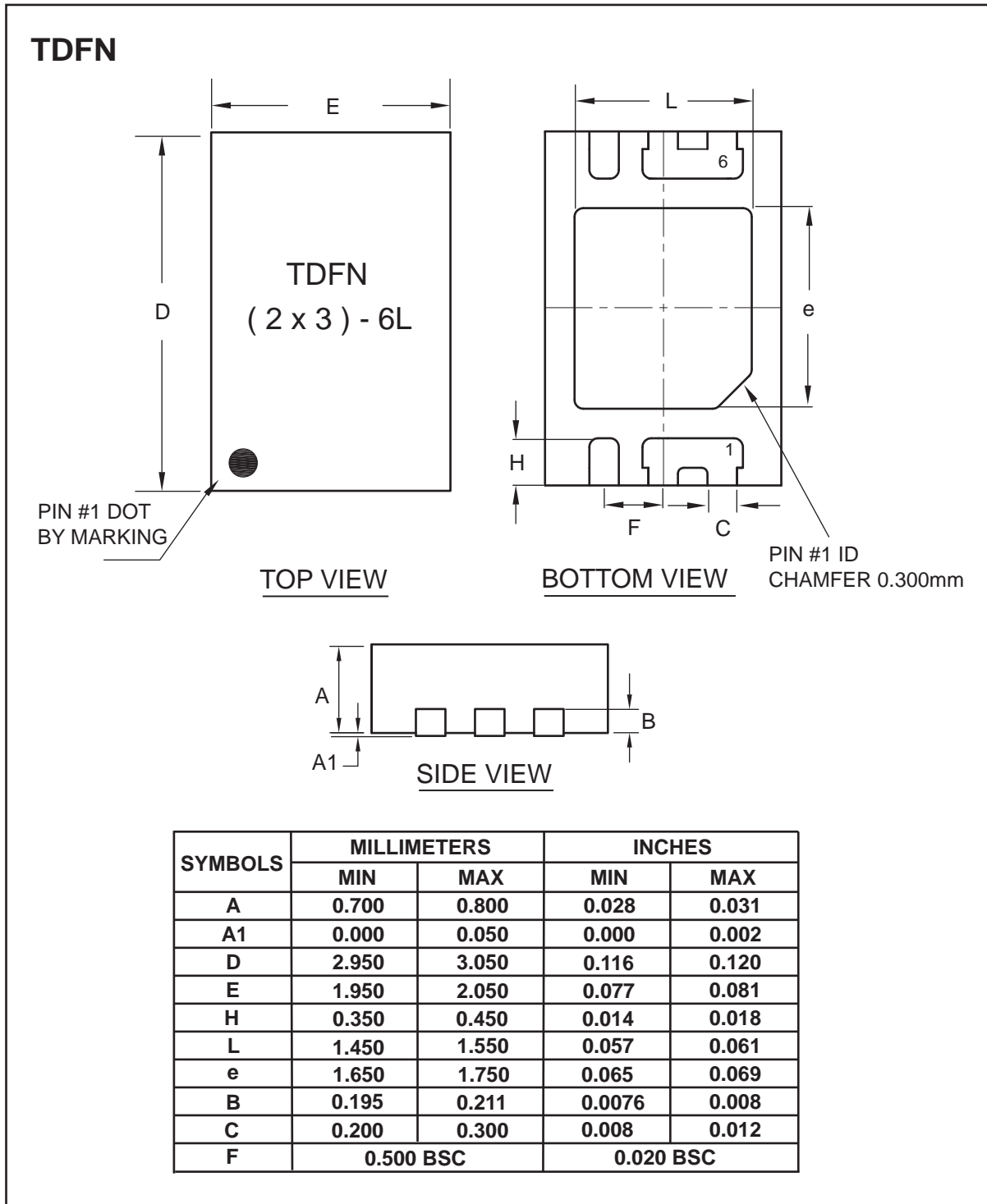
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## PACKAGE OUTLINE DIMENSIONS



## TDFN 2x3-6L Tape and Reel Data

TDFN 2x3-6L Tape

UNIT : mm

PACKAGE	D	D1	E	E1	E2	H	H1	K	P	P1	P2	T
TDFN 2x3-6L	$\phi 1.00$ +0.25 -0.00	$\phi 1.50$ +0.10 -0.00	8.00 +0.30 -0.10	1.75 $\pm 0.10$	3.50 $\pm 0.05$	2.31 $\pm 0.10$	3.29 $\pm 0.10$	1.10 $\pm 0.10$	4.00 $\pm 0.10$	4.00 $\pm 0.10$	2.00 $\pm 0.05$	0.254 $\pm 0.02$

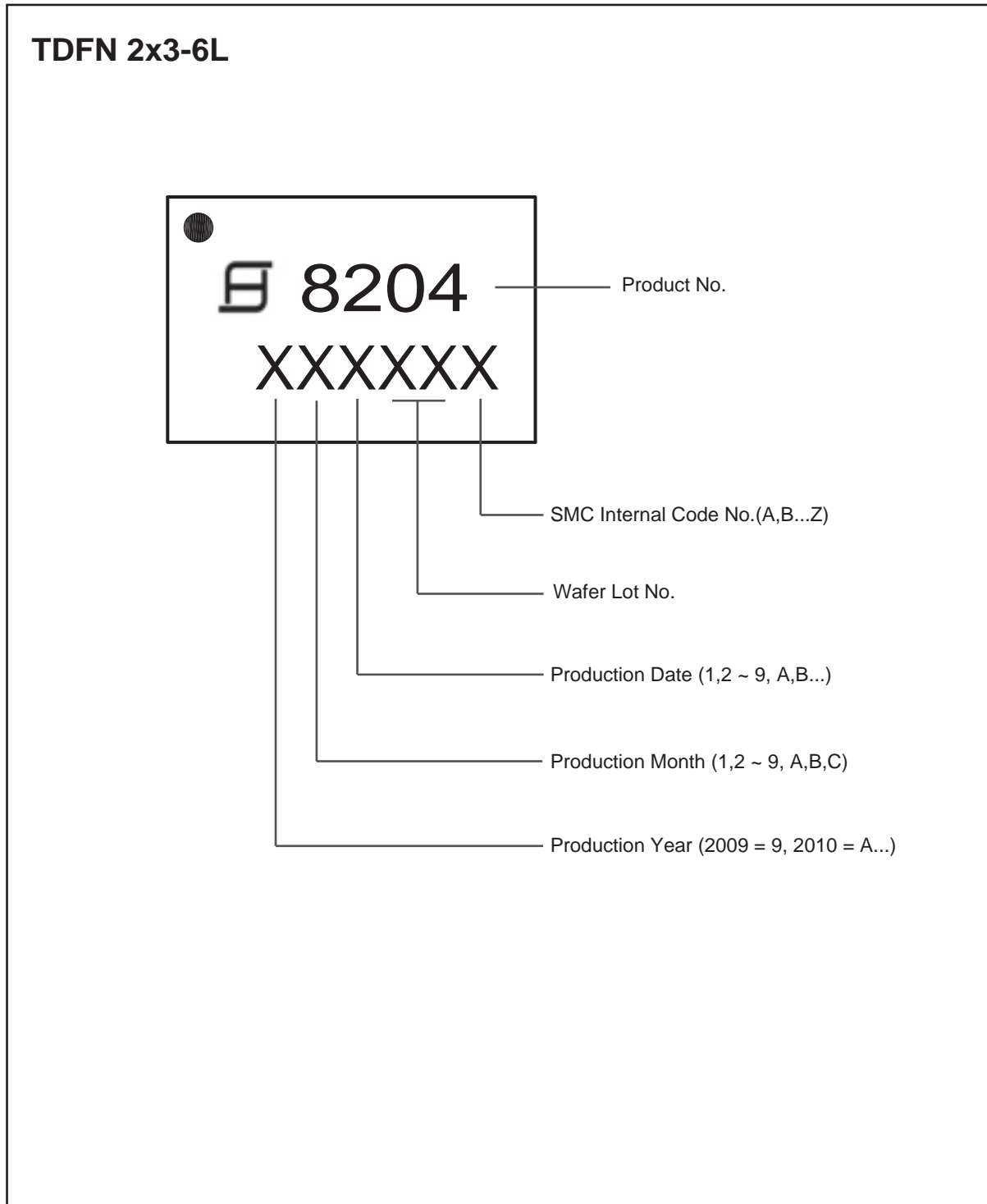
  

### S mini 8 Reel

UNIT : mm

TAPE SIZE	REEL SIZE	M	N	W	V	Z	L
8 mm	7 INCH	1.5 (min)	1.28 ~ 13.5	8.4 ~ 9.9	54.5 ~ 55.5	14.4 (max)	178.5 ~ 179.5

## TOP MARKING DEFINITION





单击下面可查看定价，库存，交付和生命周期等信息

[>>SAMHOP](#)