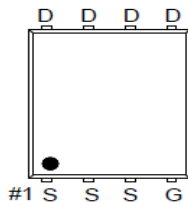


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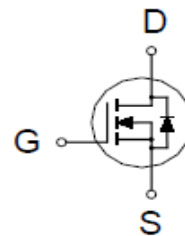
PRODUCT SUMMARY

$V_{(BR)DSS}$	$R_{DS(ON)}$	I_D
30V	3.3m Ω @ $V_{GS} = 10V$	70A



PDFN 5X6P

G. GATE
D. DRAIN
S. SOURCE



ABSOLUTE MAXIMUM RATINGS¹

PARAMETERS/TEST CONDITIONS	SYMBOL	LIMITS	UNITS
Drain-Source Voltage	V_{DS}	30	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current ³	I_D	$T_C = 25\text{ }^\circ\text{C}$	A
		$T_C = 100\text{ }^\circ\text{C}$	
Pulsed Drain Current ²	I_{DM}	100	
Continuous Drain Current	I_D	$T_A = 25\text{ }^\circ\text{C}$	
		$T_A = 70\text{ }^\circ\text{C}$	
Avalanche Current	I_{AS}	37	
Avalanche Energy	E_{AS}	68	mJ
Power Dissipation	P_D	$T_C = 25\text{ }^\circ\text{C}$	W
		$T_C = 100\text{ }^\circ\text{C}$	
Power Dissipation	P_D	$T_A = 25\text{ }^\circ\text{C}$	W
		$T_A = 70\text{ }^\circ\text{C}$	
Operating Junction & Storage Temperature Range	T_J, T_{stg}	-55 to 150	$^\circ\text{C}$

THERMAL RESISTANCE RATINGS

THERMAL RESISTANCE	SYMBOL	TYPICAL	MAXIMUM	UNITS
Junction-to-Ambient ⁴	$R_{\theta JA}$		52	$^\circ\text{C} / \text{W}$
Junction-to-Case	$R_{\theta JC}$		4	

¹ $T_A = 25\text{ }^\circ\text{C}$ Unless Otherwise Noted.

²Pulse width limited by maximum junction temperature.

³Package limitation current is 35A.

⁴The value of $R_{\theta JA}$ is measured with the device mounted on 1in² FR-4 board with 2oz. Copper, in a still air environment with $T_A = 25\text{ }^\circ\text{C}$.

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ELECTRICAL CHARACTERISTICS¹

PARAMETER	SYMBOL	TEST CONDITIONS	LIMITS			UNITS
			MIN	TYP	MAX	
STATIC						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = 250\mu A$	30			V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	1.3	1.7	2.3	
Gate-Body Leakage	I_{GSS}	$V_{DS} = 0V, V_{GS} = \pm 20V$			± 100	nA
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 24V, V_{GS} = 0V$			1	μA
		$V_{DS} = 20V, V_{GS} = 0V, T_J = 55^\circ C$			10	
Drain-Source On-State Resistance ²	$R_{DS(on)}$	$V_{GS} = 4.5V, I_D = 15A$		3.6	4.4	m Ω
		$V_{GS} = 10V, I_D = 19A$		2.7	3.3	
Forward Transconductance ²	g_{fs}	$V_{DS} = 5V, I_D = 19A$		60		S
DYNAMIC						
Input Capacitance	C_{iss}	$V_{GS} = 0V, V_{DS} = 15V, f = 1MHz$		1741		pF
Output Capacitance	C_{oss}			311		
Reverse Transfer Capacitance	C_{rss}			198		
Gate Resistance	R_g	$V_{GS} = 0V, V_{DS} = 0V, f = 1MHz$		1.23		Ω
Total Gate Charge ³	Q_g	$V_{DS} = 15V,$ $V_{GS} = 10V, I_D = 19A$	$V_{GS} = 10V$	35		nC
			$V_{GS} = 4.5V$	19		
Gate-Source Charge ³	Q_{gs}		5			
Gate-Drain Charge ³	Q_{gd}		9			
Turn-On Delay Time ³	$t_{d(on)}$	$I_D \cong 19A, V_{GS} = 10V, R_{GEN} = 6\Omega$		23		nS
Rise Time ³	t_r			10		
Turn-Off Delay Time ³	$t_{d(off)}$			40		
Fall Time ³	t_f			10		
SOURCE-DRAIN DIODE RATINGS AND CHARACTERISTICS						
Continuous Current	I_S				25.8	A
Forward Voltage ²	V_{SD}	$I_F = 19A, V_{GS} = 0V$			1.2	V
Reverse Recovery Time	t_{rr}	$I_F = 19A, di_F/dt = 100A / \mu S$		20.4		nS
Reverse Recovery Charge	Q_{rr}			8.1		nC

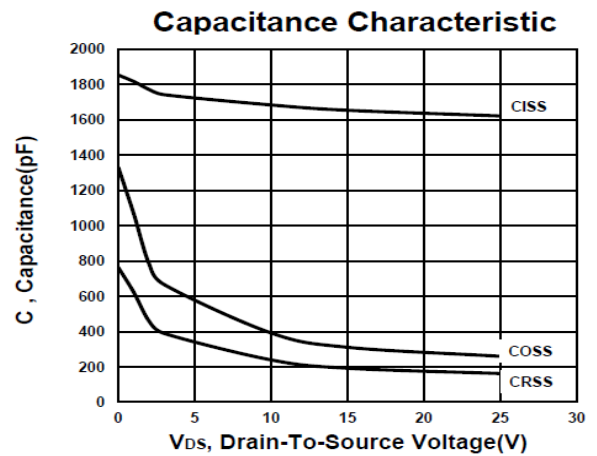
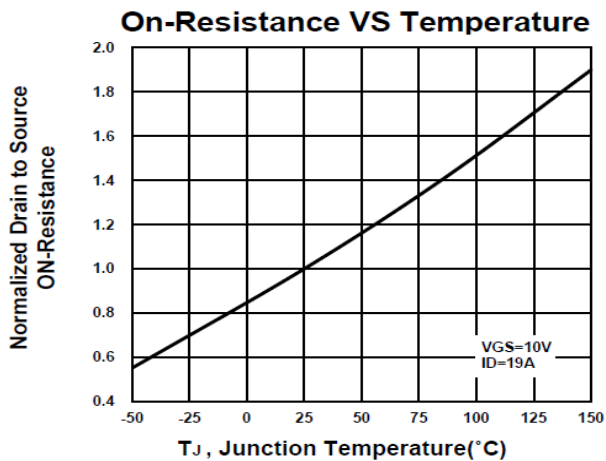
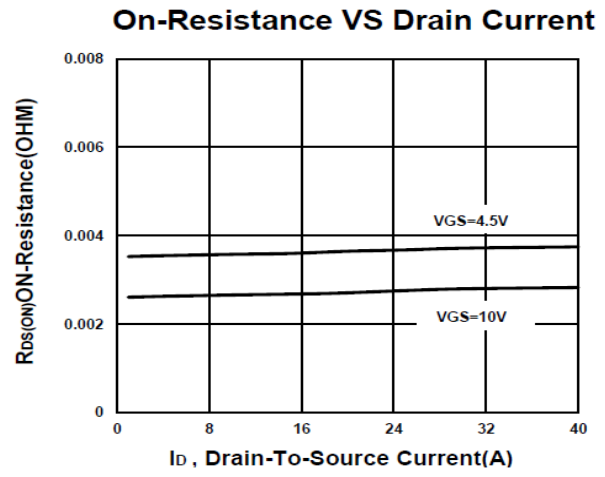
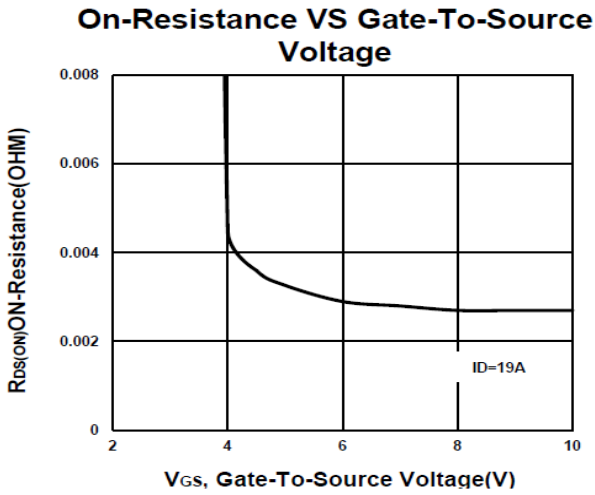
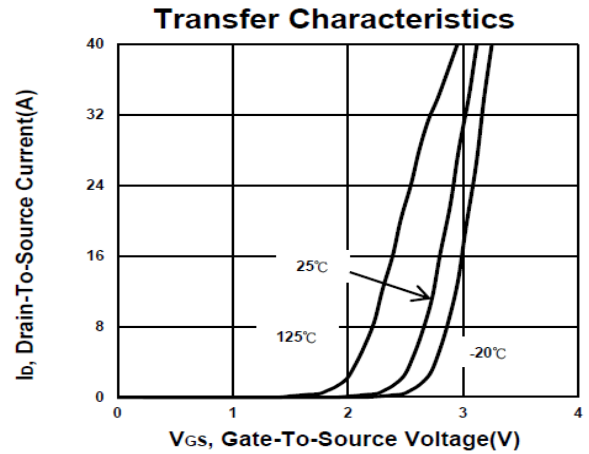
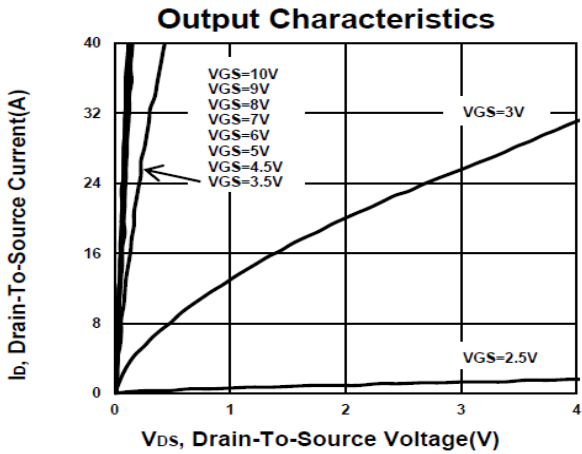
¹ $T_J = 25^\circ C$, Unless Otherwise Noted.

²Pulse test : Pulse Width $\leq 300 \mu sec$, Duty Cycle $\leq 2\%$.

³Independent of operating temperature.

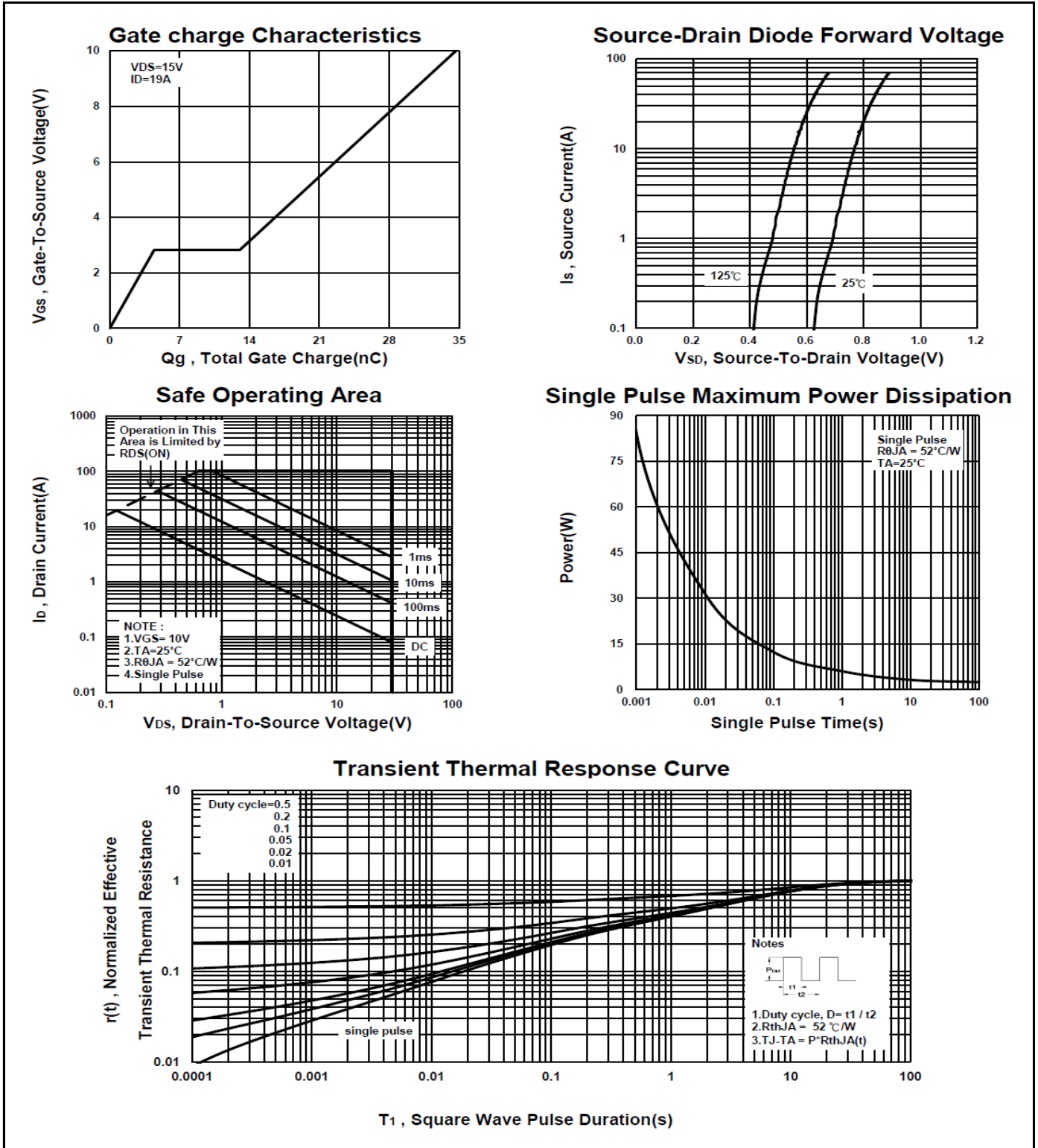
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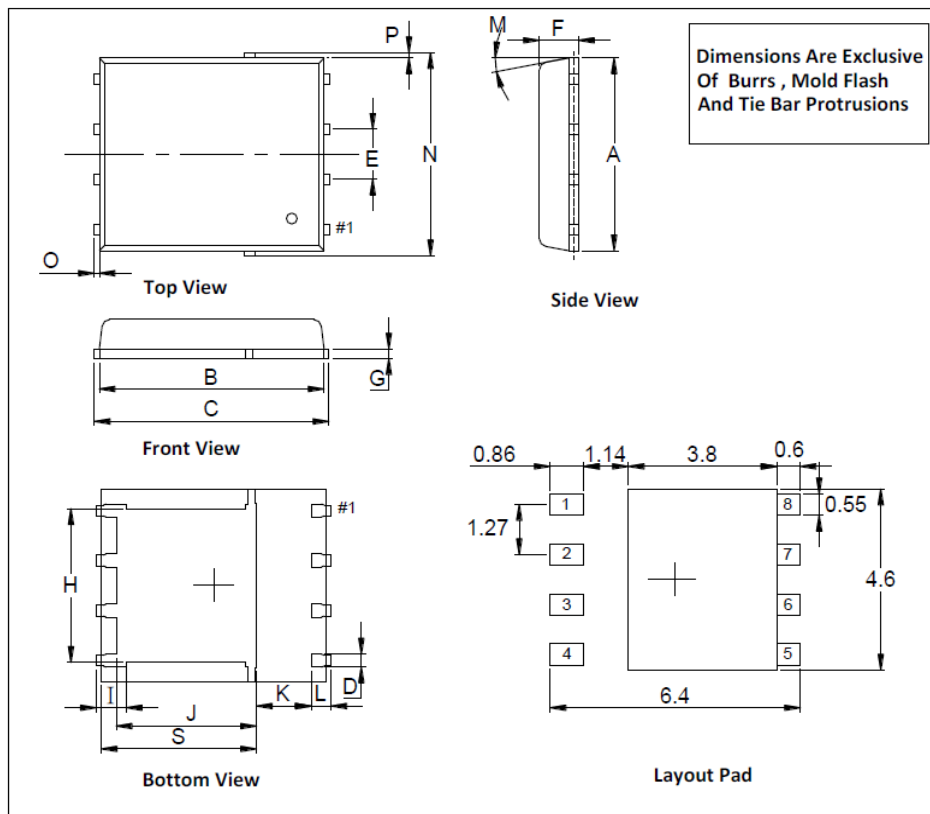


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PDFN 5x6P MECHANICAL DATA

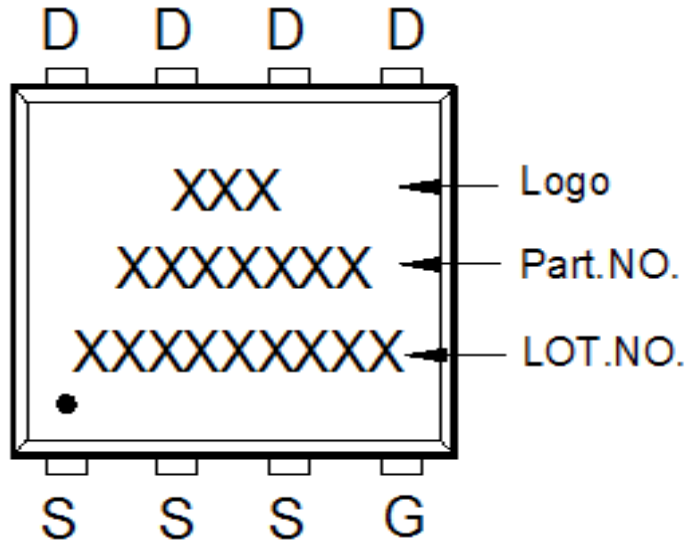
Dimension	mm			Dimension	mm		
	Min.	Typ.	Max.		Min.	Typ.	Max.
A	4.8		5.15	J	3.34		3.9
B	5.42		5.9	K	0.9		
C	5.9		6.35	L	0.38		0.711
D	0.3		0.51	M	0°		12°
E	1.17	1.27	1.37	N	4.8		5.4
F	0.8	1	1.2	O	0.05		0.36
G	0.15		0.35	P	0.05		0.25
H	3.67		4.31	S	3.73		4.19
I	0.38		0.71				



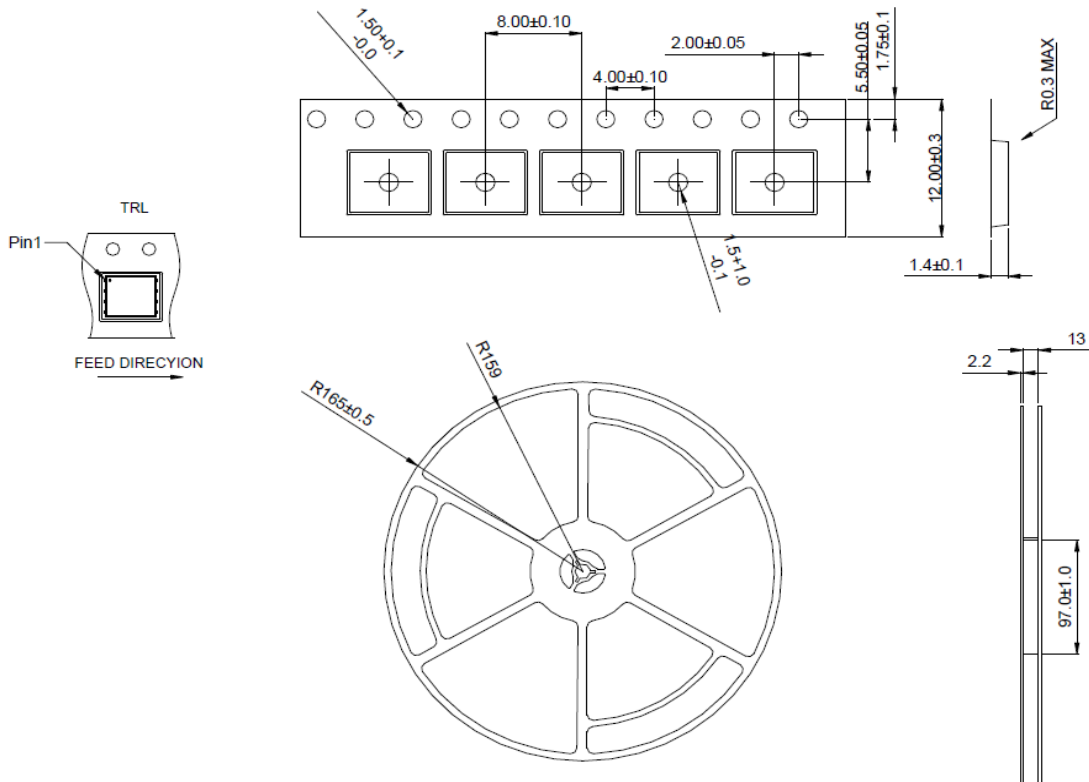
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A. Marking Information



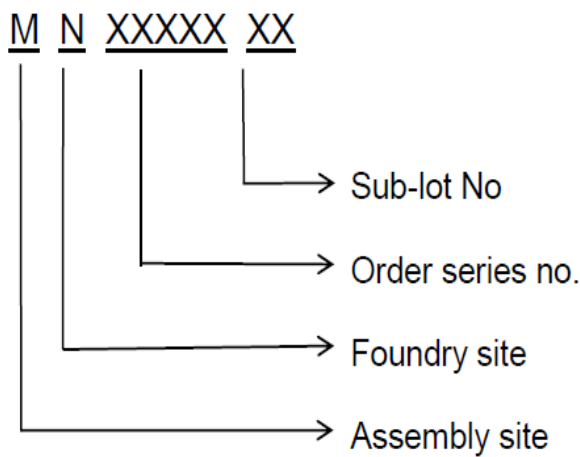
B. Tape&Reel Information:3000pcs/Reel



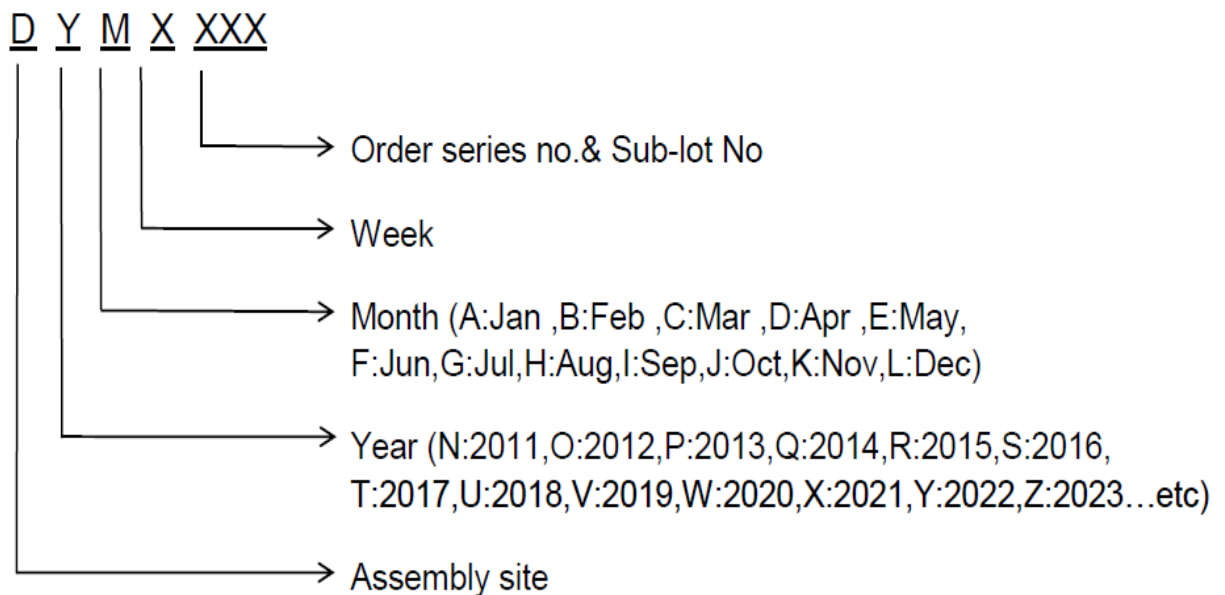
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C. Lot No.&Date Code rule

1.Lot No.



2.Date Code





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D.Label rule

标签内容(Label content)



1	Label Size	30 * 90 mm
2	Font style	Times New Roman or Arial (或可区分英文” 0” 和数字” 0” , ” G 和” Q” 的字型即可)
3	U-NIKC	Height: 4 mm
4	Package	Height: 2 mm
5	Date	Height: 2 mm Shipping date: YYYY/MM/DD, ex. 2008/09/12
6	Device	Height: 3 mm (Max: 16 Digit)
7	Lot	Height: 3 mm (Max: 9 Digit) Sub lot
8	D/C	Height: 3 mm (Max: 7 Digit)
9	QTY	Height: 3 mm (Max: 6 Digit) Thousand mark is no needed
10	RoHS label	 long axis: 12 mm minor axis:6 mm bottom color: White Font color: Black Font style: Arial
11	Halogen Free label	 Diameter: 10 mm bottom color: Green Font color: Black Font style: Arial
12	Scan information	Device / Lot / D/C / QTY , Insert “ / “ between every parts. for example: P3055LDG/G12345601/GGG2301/2000 DPI (Dots per inch): Over 300 dpi Code : Code 128 Height: 6 mm at least