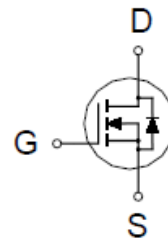
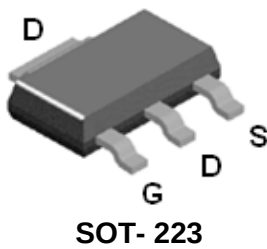


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N-Channel Enhancement Mode MOSFET

PRODUCT SUMMARY

$V_{(BR)DSS}$	$R_{DS(ON)}$	I_D
150V	$1\Omega @ V_{GS} = 10V$	0.8A



ABSOLUTE MAXIMUM RATINGS ($T_A = 25\text{ }^\circ\text{C}$ Unless Otherwise Noted)

PARAMETERS/TEST CONDITIONS		SYMBOL	LIMITS	UNITS
Gate-Source Voltage		V_{GS}	± 20	V
Continuous Drain Current	$T_A = 25\text{ }^\circ\text{C}$	I_D	0.8	A
	$T_A = 70\text{ }^\circ\text{C}$		0.6	
Pulsed Drain Current ¹		I_{DM}	4	
Power Dissipation	$T_A = 25\text{ }^\circ\text{C}$	P_D	1.5	W
	$T_A = 70\text{ }^\circ\text{C}$		1	
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 ²	$R_{\theta JA}$		80	$^\circ\text{C} / \text{W}$
Junction-to-Case	$R_{\theta JC}$		40	

¹Pulse width limited by maximum junction temperature.

²The 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 $T_A = 25^\circ\text{C}$.

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ELECTRICAL CHARACTERISTICS (T_J = 25 °C, Unless Otherwise Noted)

PARAMETER	SYMBOL	TEST CONDITIONS	LIMITS			UNITS
			MIN	TYP	MAX	
STATIC						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = 250\mu A$	150			V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	1	1.8	3	
Gate-Body Leakage	I_{GSS}	$V_{DS} = 0V, V_{GS} = \pm 20V$			± 100	nA
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 120V, V_{GS} = 0V$			1	μA
		$V_{DS} = 100V, V_{GS} = 0V, T_J = 125^\circ C$			10	
Drain-Source On-State Resistance ¹	$R_{DS(ON)}$	$V_{GS} = 5V, I_D = 0.5A$		0.75	1.1	Ω
		$V_{GS} = 10V, I_D = 0.5A$		0.67	1	
Forward Transconductance ¹	g_{fs}	$V_{DS} = 5V, I_D = 0.5A$		1.5		S
DYNAMIC						
Input Capacitance	C_{iss}	$V_{GS} = 0V, V_{DS} = 25V, f = 1MHz$		200		pF
Output Capacitance	C_{oss}			27		
Reverse Transfer Capacitance	C_{rss}			12		
Total Gate Charge ²	Q_g	$V_{DS} = 75V,$ $V_{GS} = 10V, I_D = 0.5A$		6.8		nC
Gate-Source Charge ²	Q_{gs}			1.2		
Gate-Drain Charge ²	Q_{gd}			3.1		
Turn-On Delay Time ²	$t_{d(on)}$	$V_{DS} = 75V, I_D \cong 0.5A$ $V_{GS} = 10V, R_{GS} = 25\Omega$		15		nS
Rise Time ²	t_r			13		
Turn-Off Delay Time ²	$t_{d(off)}$			104		
Fall Time ²	t_f			50		
SOURCE-DRAIN DIODE RATINGS AND CHARACTERISTICS ($T_J = 25^\circ C$)						
Continuous Current	I_S				0.8	A
Forward Voltage ¹	V_{SD}	$I_F = 0.5A, V_{GS} = 0V$			1.3	V
Reverse Recovery Time	t_{rr}	$I_F = 0.5A, dl/dt = 100A / \mu S$		36		nS
Reverse Recovery Charge	Q_{rr}			39		nC

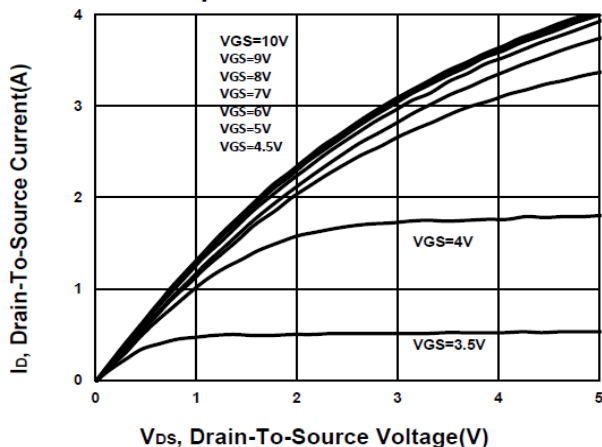
¹Pulse test : Pulse Width ≤ 300 μsec, Duty Cycle ≤ 2%.

²Independent of operating temperature.

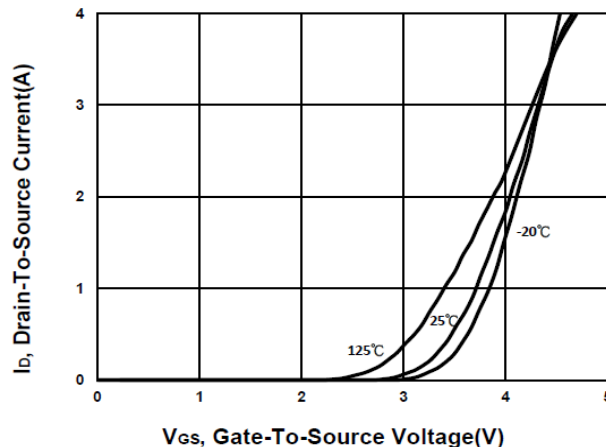
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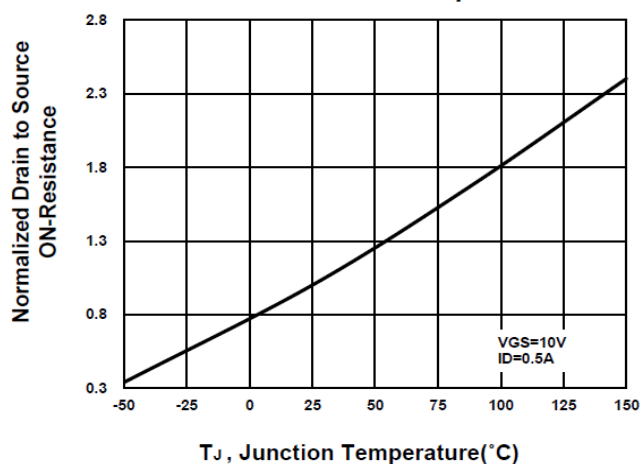
Output Characteristics



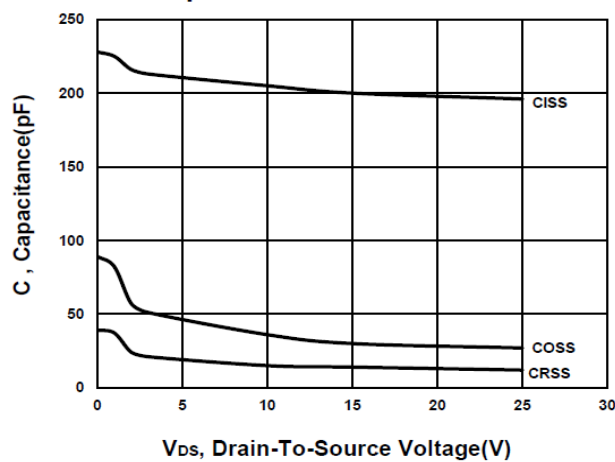
Transfer Characteristics



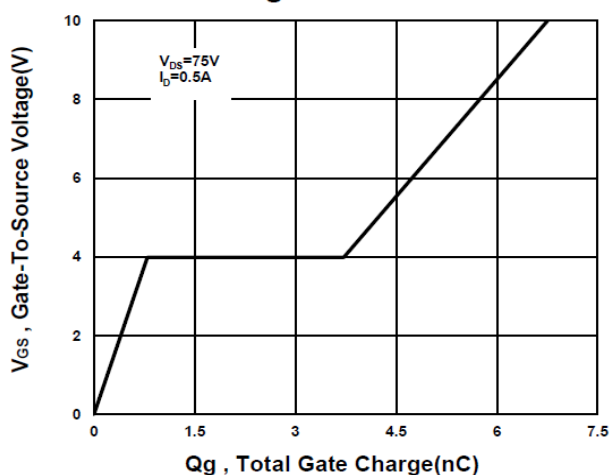
On-Resistance VS Temperature



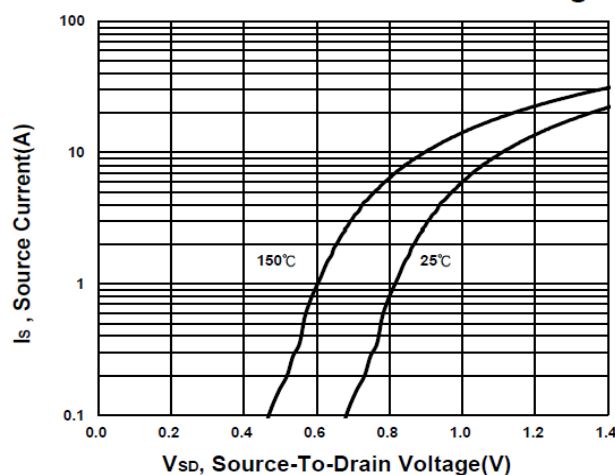
Capacitance Characteristic



Gate charge Characteristics



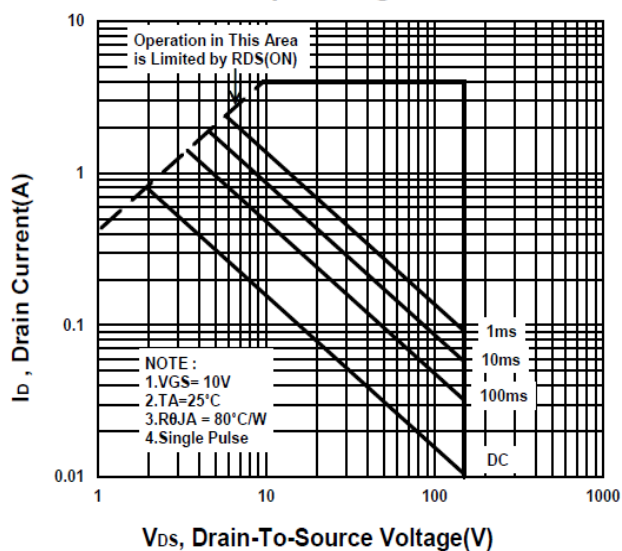
Source-Drain Diode Forward Voltage



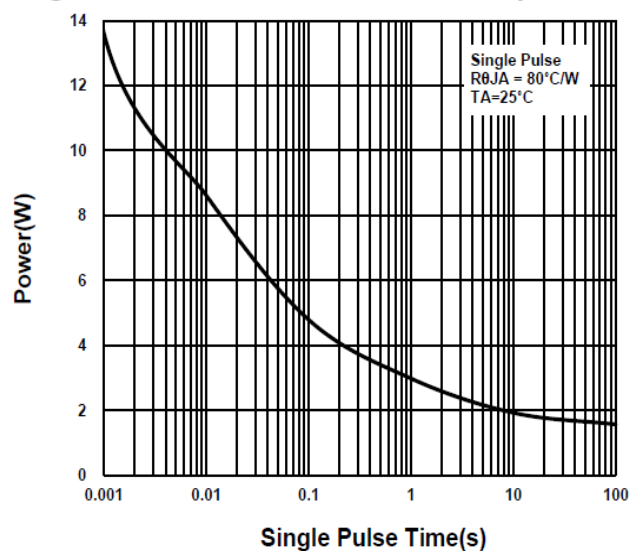
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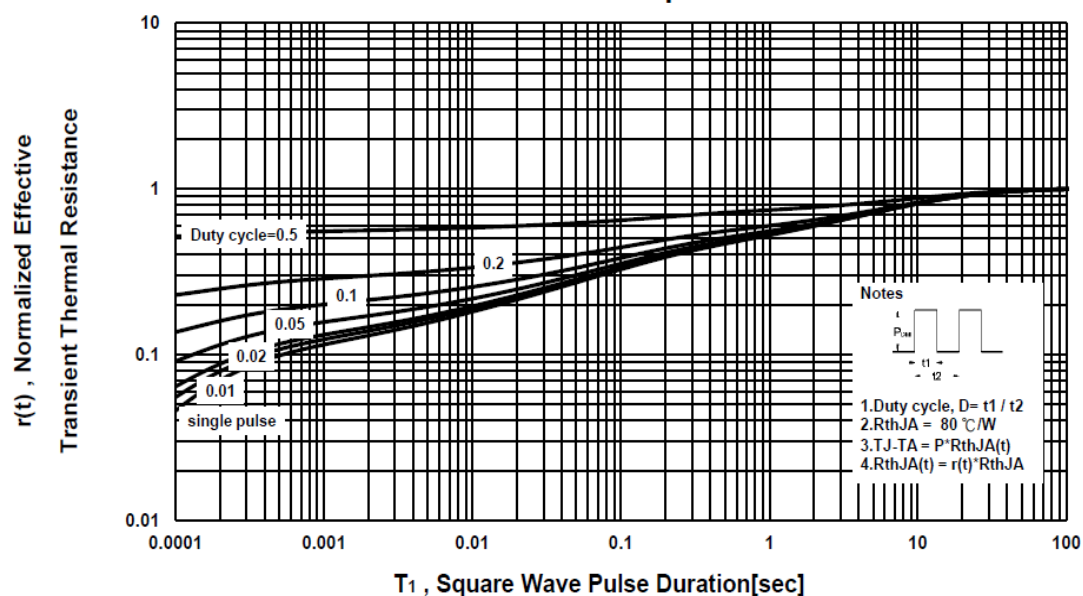
Safe Operating Area



Single Pulse Maximum Power Dissipation



Transient Thermal Response Curve

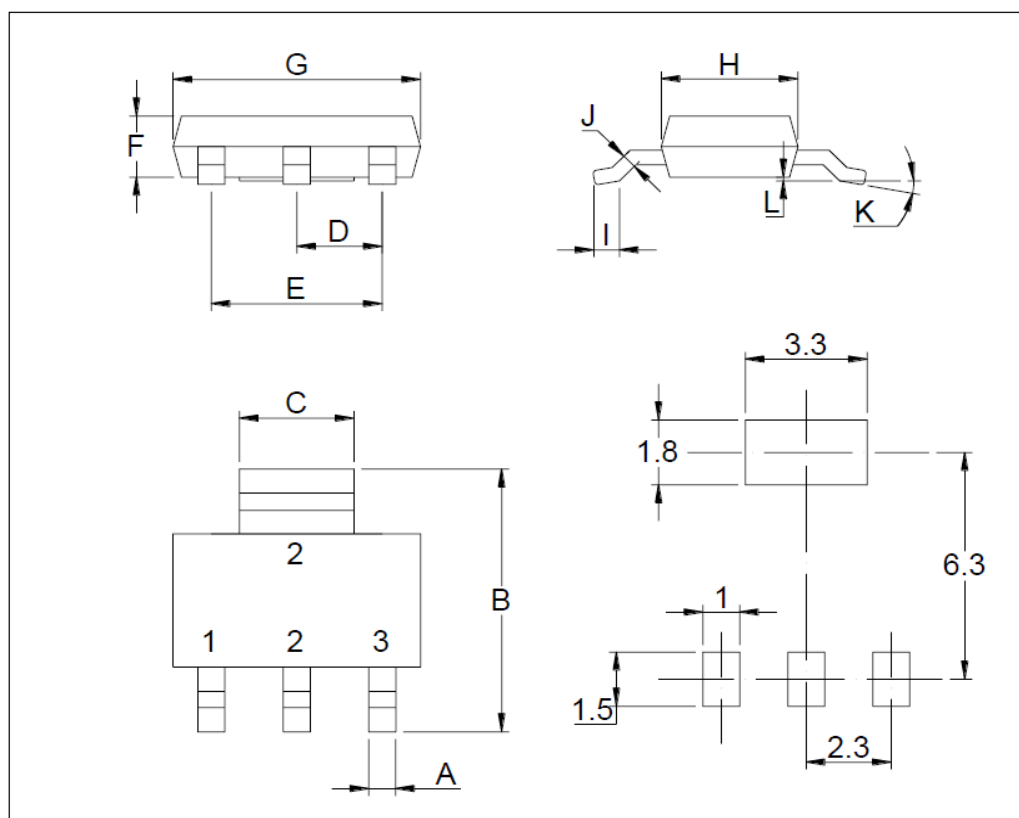


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SOT-223 MECHANICAL DATA

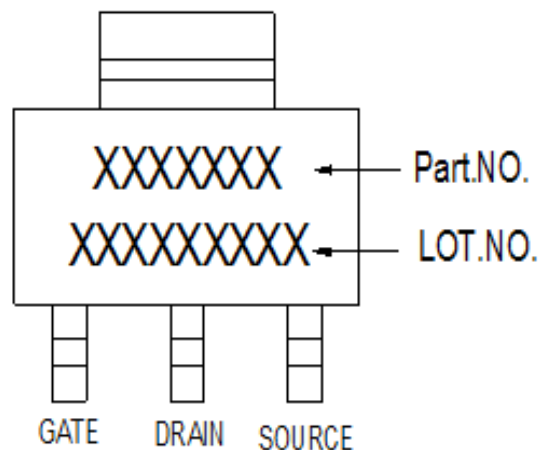
Dimension	mm			Dimension	mm		
	Min.	Typ.	Max.		Min.	Typ.	Max.
A	0.60	0.76	0.84	H	3.30	3.50	3.70
B	6.70	7.00	7.30	I	0.50	1.00	1.20
C	2.85	3.00	3.10	J	0.23	0.3	0.4
D	2.25	2.30	2.35	K	0°		10°
E	4.35	4.60	4.85	L	0	0.1	0.2
F	1.40	1.60	1.80	M			
G	6.30	6.50	6.80	N			



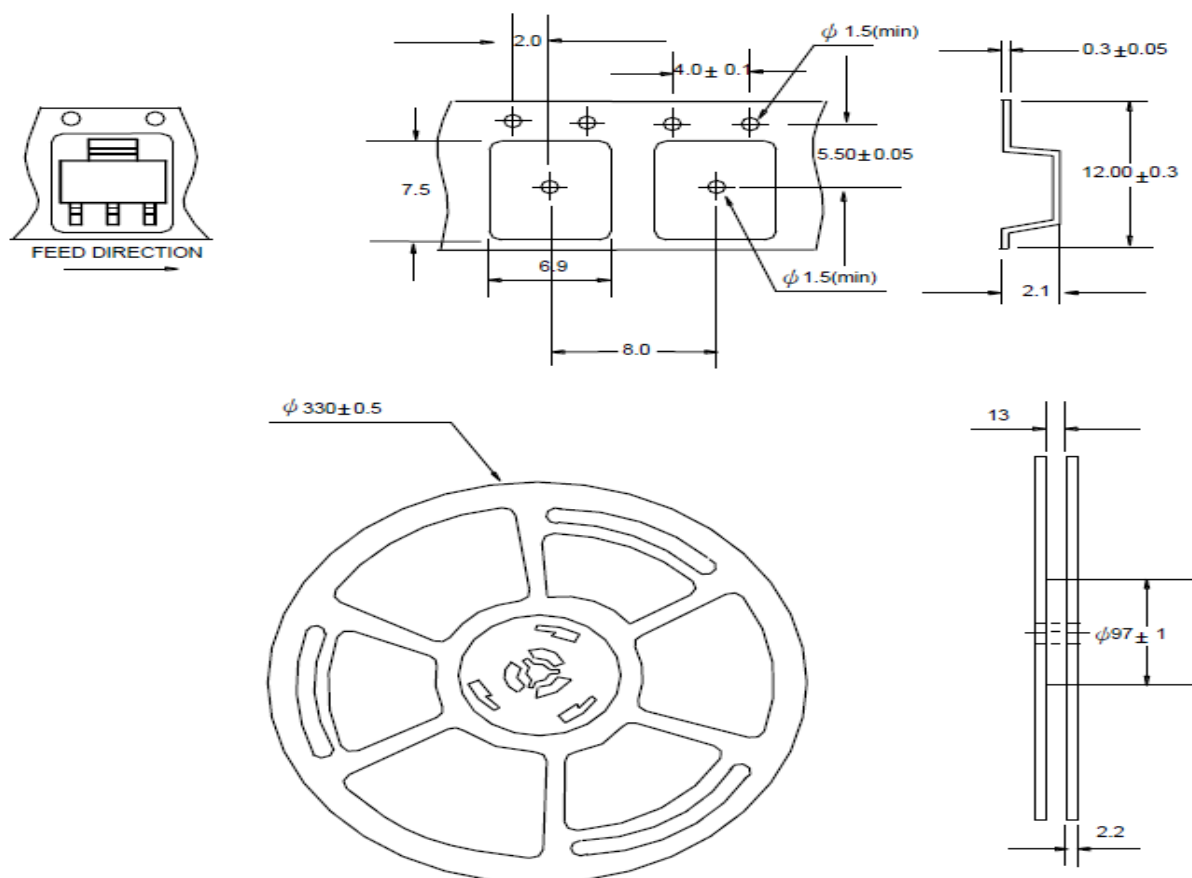
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A. Marking Information



B. Tape&Reel Information:2500pcs/Reel

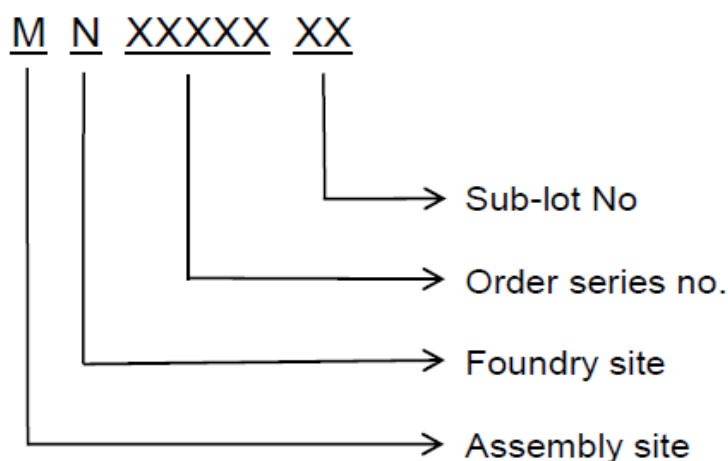


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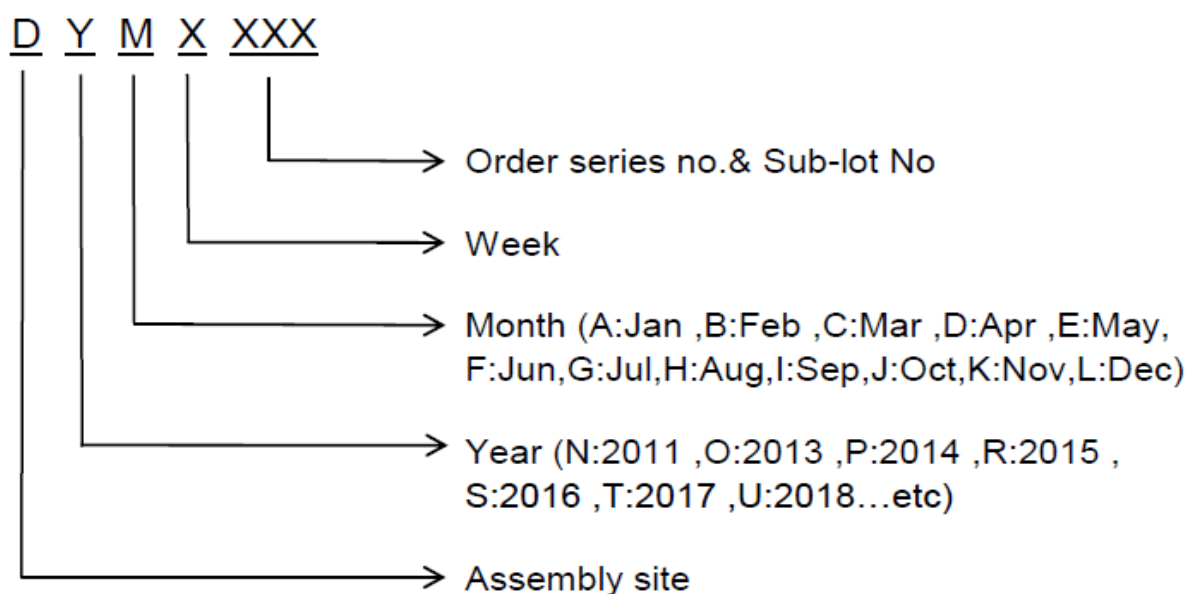
N-Channel Enhancement Mode MOSFET

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