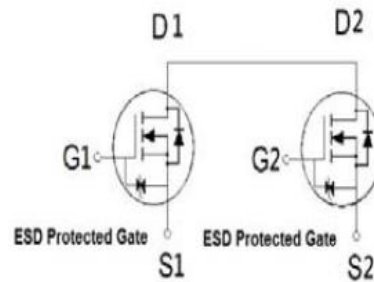
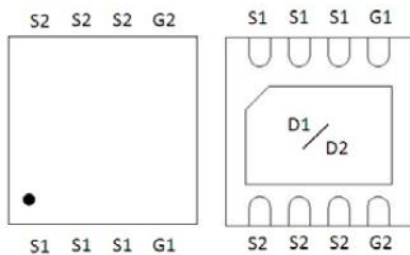


PE5C6JZ

Dual N-Channel Enhancement Mode MOSFET

PRODUCT SUMMARY

$V_{(BR)DSS}$	$R_{DS(ON)}$	I_D
24V	5.5mΩ @ $V_{GS} = 4.5V$	54A



PDFN 3X3S

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

PARAMETERS/TEST CONDITIONS		SYMBOL	LIMITS	UNITS
Drain-Source Voltage		V_{DS}	24	V
Gate-Source Voltage		V_{GS}	±12	V
Continuous Drain Current ²	$T_C = 25\text{ }^{\circ}\text{C}$	I_D	54	A
	$T_C = 100\text{ }^{\circ}\text{C}$		34	
	$T_A = 25\text{ }^{\circ}\text{C}$		16	
	$T_A = 70\text{ }^{\circ}\text{C}$		13	
Pulsed Drain Current ¹		I_{DM}	90	
Avalanche Current		I_{AS}	28	
Avalanche Energy	$L = 0.1\text{mH}$	E_{AS}	39	mJ
Power Dissipation	$T_C = 25\text{ }^{\circ}\text{C}$	P_D	27	W
	$T_C = 100\text{ }^{\circ}\text{C}$		11	
	$T_A = 25\text{ }^{\circ}\text{C}$		2.5	
	$T_A = 70\text{ }^{\circ}\text{C}$		1.6	
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 ³	$R_{\theta JA}$		50	$^{\circ}\text{C} / \text{W}$
Junction-to-Case	$R_{\theta JC}$		4.5	

¹Pulse width limited by maximum junction temperature.

²Package limitation current is 13A.

³The 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 = 250μA	24			V
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = 250μA	0.6	0.9	1.2	
Gate-Body Leakage	I _{GSS}	V _{DS} = 0V, V _{GS} = ±10V			±10	uA
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = 20V, V _{GS} = 0V			1	μA
		V _{DS} = 20V, V _{GS} = 0V, T _J = 125 °C			10	
Drain-Source On-State Resistance ¹	R _{DS(ON)}	V _{GS} = 4.5V, I _D = 3A	3.6	4.6	5.5	mΩ
		V _{GS} = 3.8V, I _D = 3A	3.9	4.9	6	
		V _{GS} = 3.1V, I _D = 3A	4.3	5.3	6.9	
		V _{GS} = 2.5V, I _D = 3A	5	6	8.5	
Forward Transconductance ¹	g _{fs}	V _{DS} = 5V, I _D = 3A		24		S
DYNAMIC						
Input Capacitance	C _{iss}	V _{GS} = 0V, V _{DS} = 12V, f = 1MHz		1774		pF
Output Capacitance	C _{oss}			327		
Reverse Transfer Capacitance	C _{rss}			267		
Gate Resistance	R _g	V _{GS} = 0V, V _{DS} = 0V, f = 1MHz		1.8		Ω
Total Gate Charge ²	Q _g (V _{GS} =4.5V)	V _{DS} = 12V , I _D = 3A		24		nC
	Q _g (V _{GS} =3.9V)			21.4		
Gate-Source Charge ²	Q _{gs}			2.2		
Gate-Drain Charge ²	Q _{gd}			9		
Turn-On Delay Time ²	t _{d(on)}	V _{DD} = 12V, I _D ≅ 3A, V _{GEN} = 4.5V, R _G = 6Ω		20		nS
Rise Time ²	t _r			38		
Turn-Off Delay Time ²	t _{d(off)}			70		
Fall Time ²	t _f			18		
SOURCE-DRAIN DIODE RATINGS AND CHARACTERISTICS (T _J = 25 °C)						
Continuous Current ³	I _S				22	A
Forward Voltage ¹	V _{SD}	I _F = 3A, V _{GS} = 0V			1.2	V
Reverse Recovery Time	t _{rr}	I _F = 3A, dI _F /dt = 100A / μS		28		nS
Reverse Recovery Charge	Q _{rr}			13		nC

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

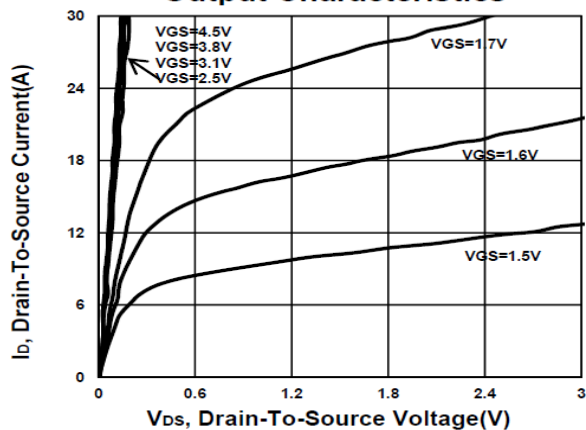
²Independent of operating temperature.

³Package limitation current is 13A.

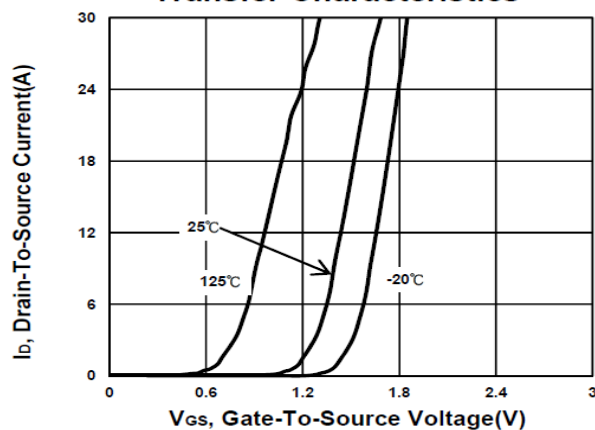
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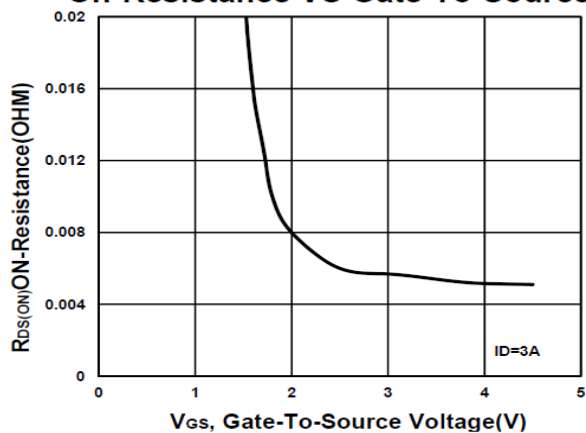
Output Characteristics



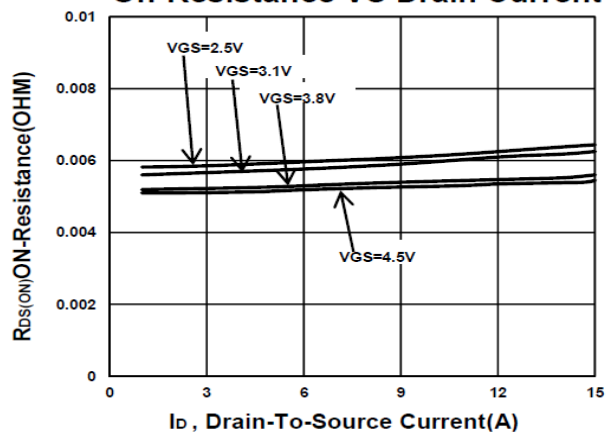
Transfer Characteristics



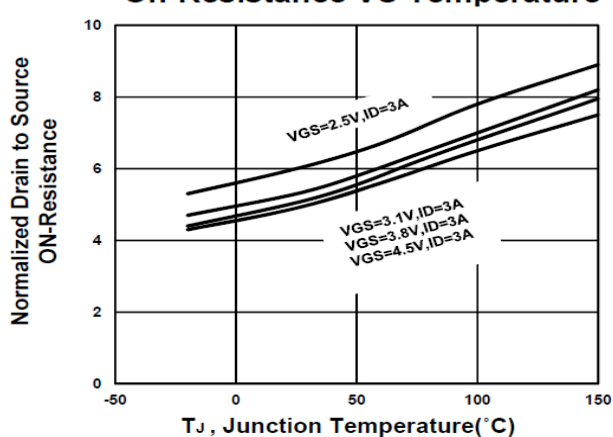
On-Resistance VS Gate-To-Source



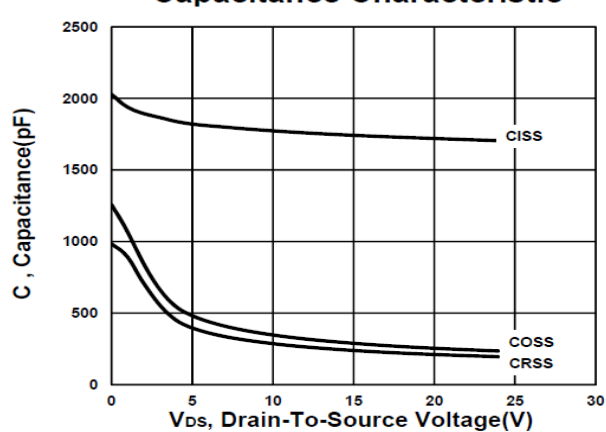
On-Resistance VS Drain Current



On-Resistance VS Temperature



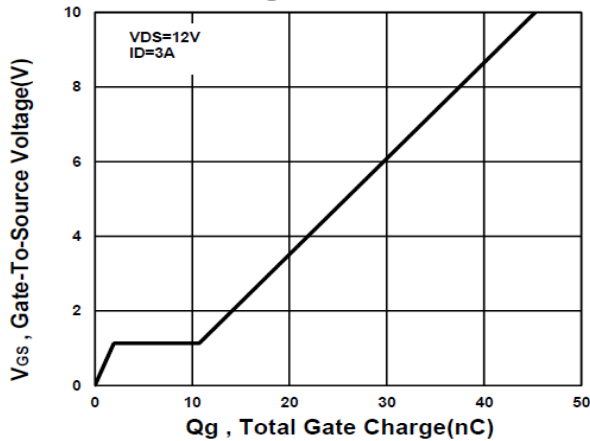
Capacitance Characteristic



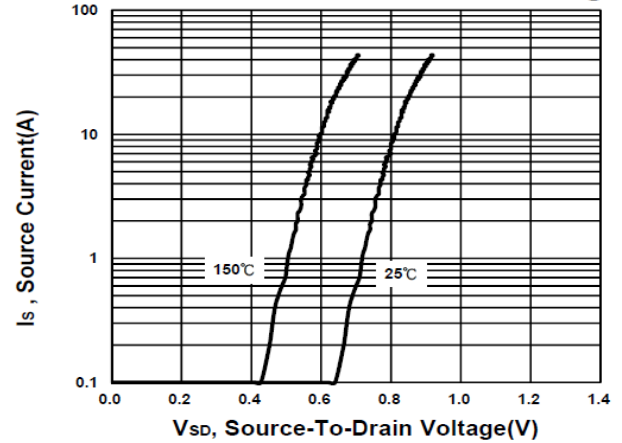
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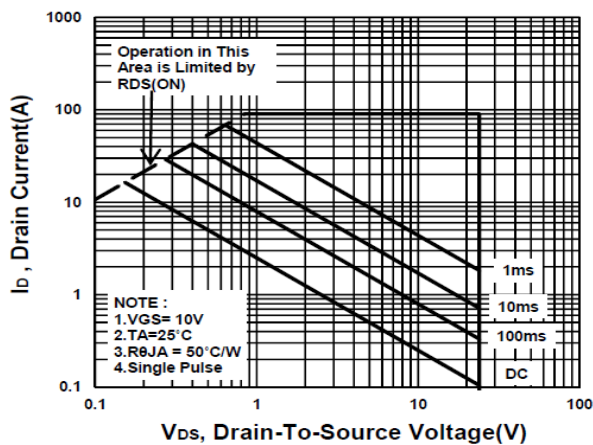
Gate charge Characteristics



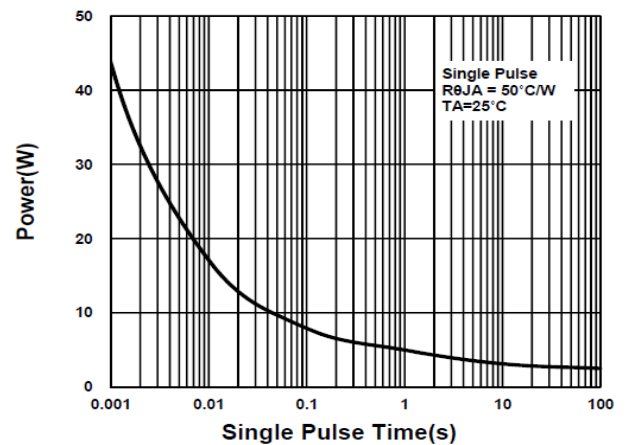
Source-Drain Diode Forward Voltage



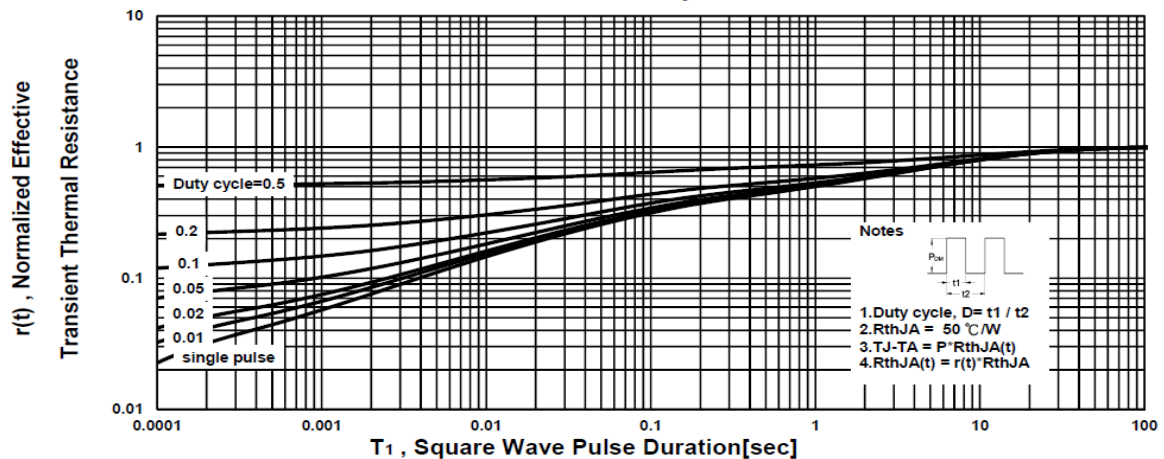
Safe Operating Area



Single Pulse Maximum Power Dissipation



Transient Thermal Response Curve



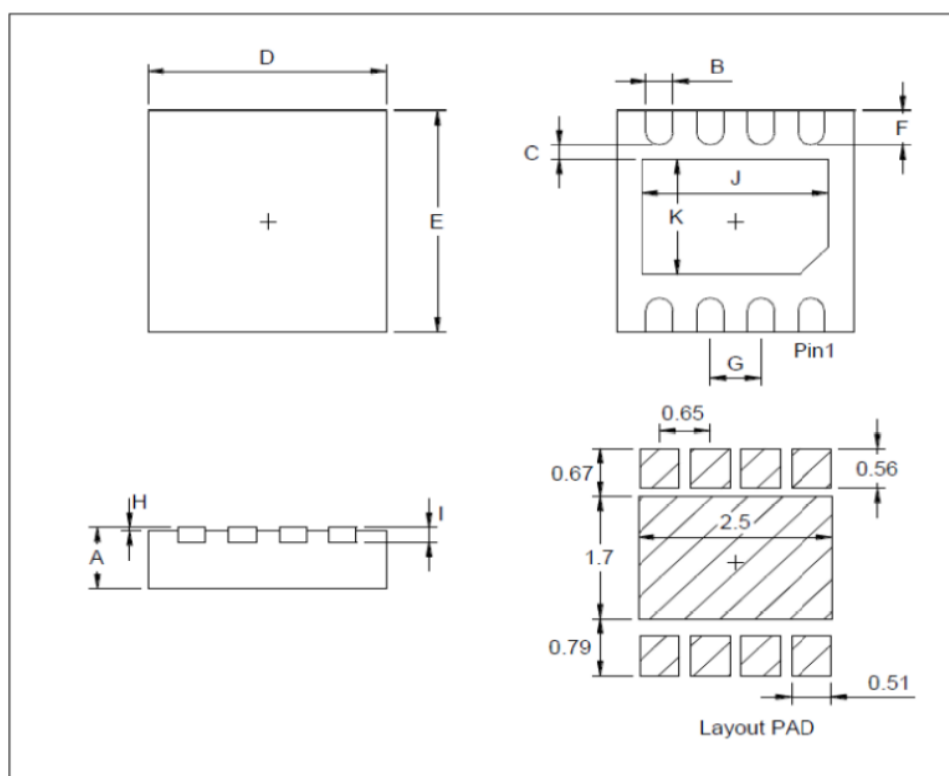
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Dual N-Channel Enhancement Mode MOSFET

Package Dimension

PDFN 3x3S MECHANICAL DATA

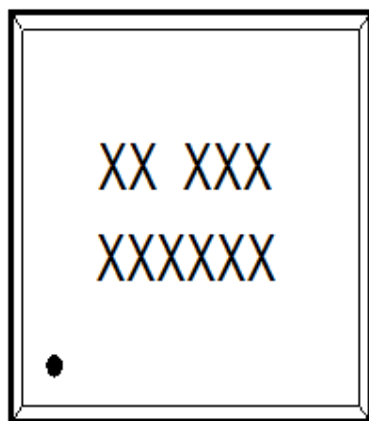
Dimension	mm			Dimension	mm		
	Min.	Typ.	Max.		Min.	Typ.	Max.
A	0.70		0.90	I	0.195		0.211
B	0.25		0.35	J	2.20		2.40
C	0.25		0.45	K	1.40		1.60
D	2.90		3.10				
E	2.90		3.10				
F	0.324		0.476				
G	0.55	0.65	0.75				
H	0		0.05				



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A. Marking Information(此产品代码为: K2)

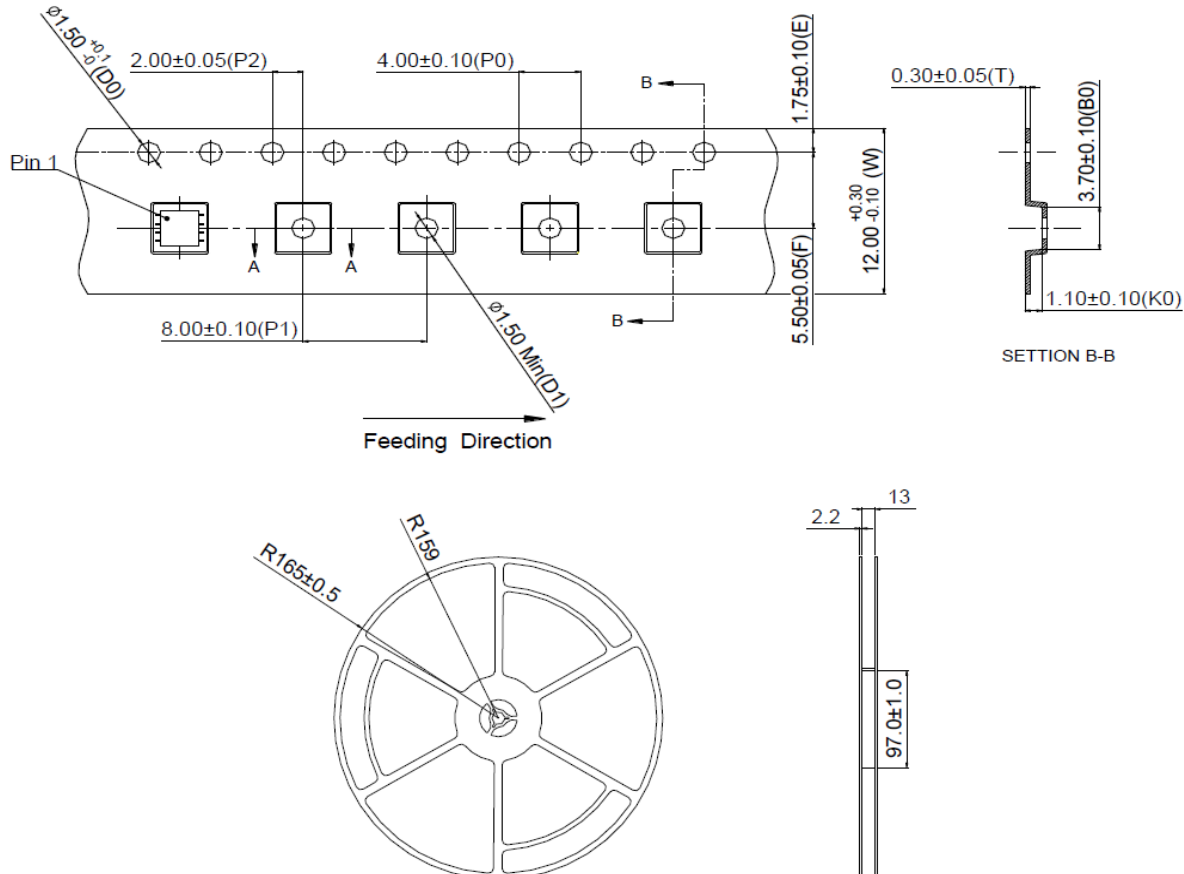


XX(前两码):产品代码

XXX

XXXXXX(后九码):LOT.NO

B. Tape & Reel Information: 5000pcs/Reel

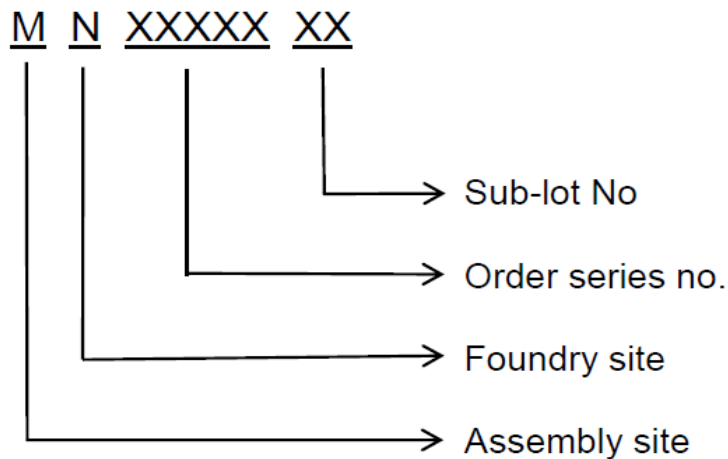


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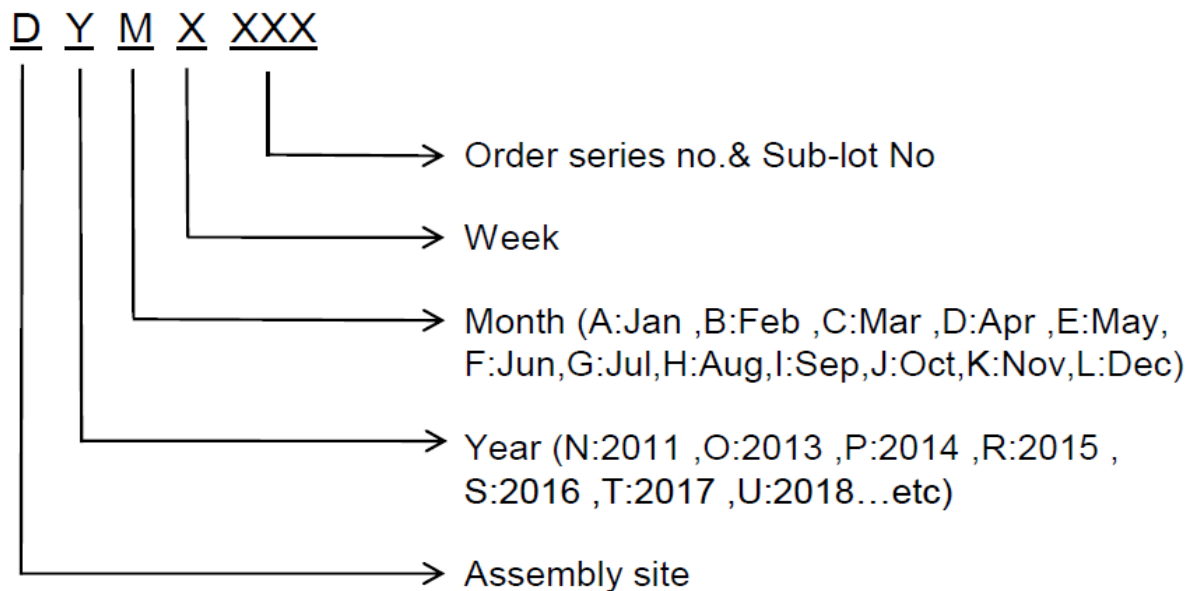
Dual N-Channel Enhancement Mode MOSFET

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