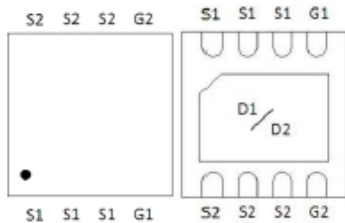


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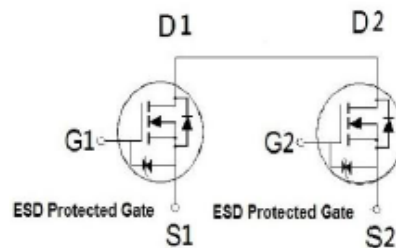
Dual N-Channel Enhancement Mode MOSFET

PRODUCT SUMMARY

$V_{(BR)DSS}$	$R_{DS(ON)}$	I_D
20V	6mΩ @ $V_{GS} = 4.5V$	55A



PDFN 3X3S



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

PARAMETERS/TEST CONDITIONS		SYMBOL	LIMITS	UNITS
Drain-Source Voltage		V_{DS}	20	V
Gate-Source Voltage		V_{GS}	±8	
Continuous Drain Current ²	$T_C = 25\text{ °C}$	I_D	55	A
	$T_C = 100\text{ °C}$		35	
	$T_A = 25\text{ °C}$		19	
	$T_A = 70\text{ °C}$		15	
Pulsed Drain Current ¹		I_{DM}	100	
Avalanche Current		I_{AS}	32	
Avalanche Energy	$L = 0.1mH$	E_{AS}	51	mJ
Power Dissipation	$T_C = 25\text{ °C}$	P_D	31	W
	$T_C = 100\text{ °C}$		12.5	
	$T_A = 25\text{ °C}$		3.6	
	$T_A = 70\text{ °C}$		2.3	
Operating Junction & Storage Temperature Range		T_J, T_{stg}	-55 to 150	°C

THERMAL RESISTANCE RATINGS

THERMAL RESISTANCE	SYMBOL	TYPICAL	MAXIMUM	UNITS
Junction-to-Ambient ³	$R_{\theta JA}$		35	°C / W
Junction-to-case	$R_{\theta JC}$		4	

¹Pulse width limited by maximum junction temperature.

²Package limitation current is 18A.

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 $T_A = 25\text{ °C}$.

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Dual N-Channel Enhancement Mode MOSFET

ELECTRICAL CHARACTERISTICS ($T_J = 25^\circ\text{C}$, 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	20			V
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = 250μA	0.4	0.7	1	
Gate-Body Leakage	I _{GSS}	V _{DS} = 0V, V _{GS} = ±8V			±30	μA
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = 16V, V _{GS} = 0V			1	μA
		V _{DS} = 10V, V _{GS} = 0V, T _J = 125 °C			10	
Drain-Source On-State Resistance ¹	R _{DS(ON)}	V _{GS} = 4.5V, I _D = 3A	4	5	6	mΩ
		V _{GS} = 3.9V, I _D = 3A	4.2	5.2	6.8	
		V _{GS} = 2.5V, I _D = 3A	4.8	5.8	8	
		V _{GS} = 1.8V, I _D = 3A	7.2	8.7	12	
Forward Transconductance ¹	g _{fs}	V _{DS} = 5V, I _D = 3A		43		S
DYNAMIC						
Input Capacitance	C _{iss}	V _{GS} = 0V, V _{DS} = 10V, f = 1MHz		2111		pF
Output Capacitance	C _{oss}			320		
Reverse Transfer Capacitance	C _{rss}			282		
Gate Resistance	R _g	V _{GS} = 0V, V _{DS} = 0V, f = 1MHz		1.7		Ω
Total Gate Charge ²	Q _{g(VGS=4.5V)}	V _{DS} = 10V, I _D = 3A		29		nC
	Q _{g(VGS=3.9V)}			25.5		
Gate-Source Charge ²	Q _{gs}			2.5		
Gate-Drain Charge ²	Q _{gd}			7.3		
Turn-On Delay Time ²	t _{d(on)}	V _{DD} = 15V I _D ≅ 3A, V _{GEN} = 4.5V, R _G = 6Ω		20		nS
Rise Time ²	t _r			40		
Turn-Off Delay Time ²	t _{d(off)}			72		
Fall Time ²	t _f			18		
SOURCE-DRAIN DIODE RATINGS AND CHARACTERISTICS (T _J = 25 °C)						
Continuous Current ³	I _S				25.8	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		21		nS
Reverse Recovery Charge	Q _{rr}			8		nC

¹Pulse test : Pulse Width $\leq 300 \mu\text{sec}$, Duty Cycle $\leq 2\%$.

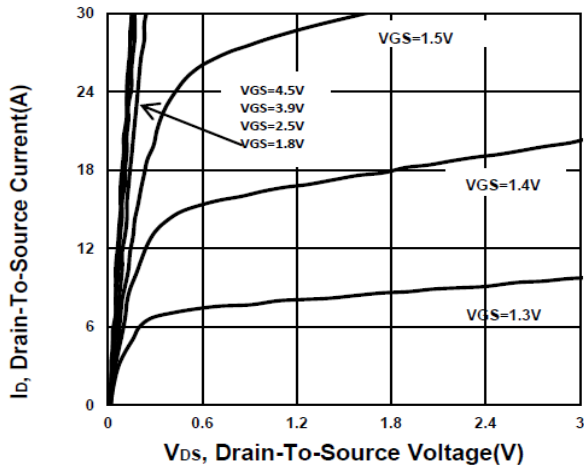
²Independent of operating temperature.

³Package limitation current is 18A.

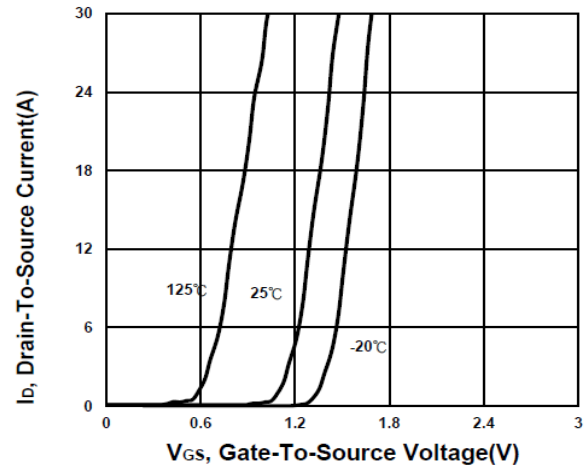
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Dual N-Channel Enhancement Mode MOSFET

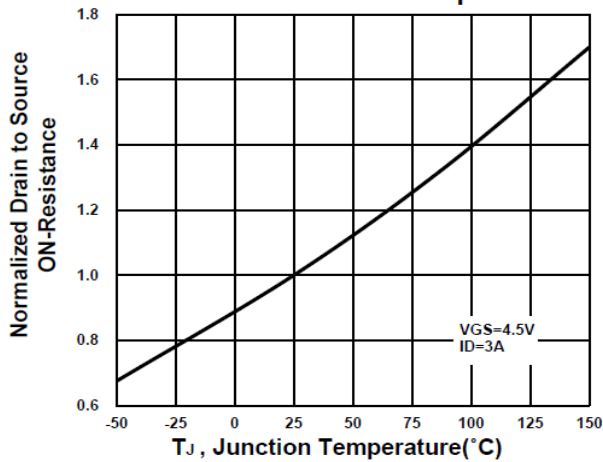
Output Characteristics



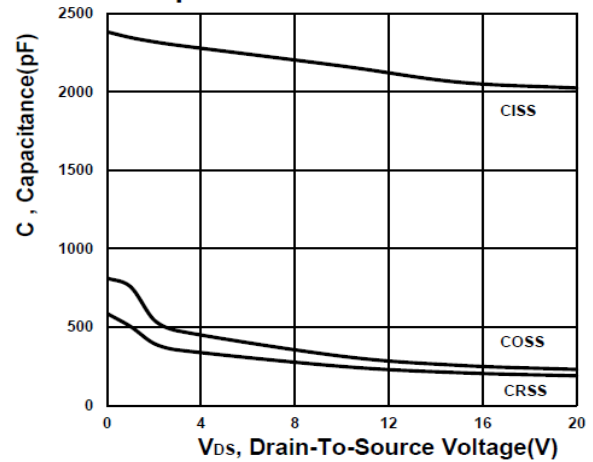
Transfer Characteristics



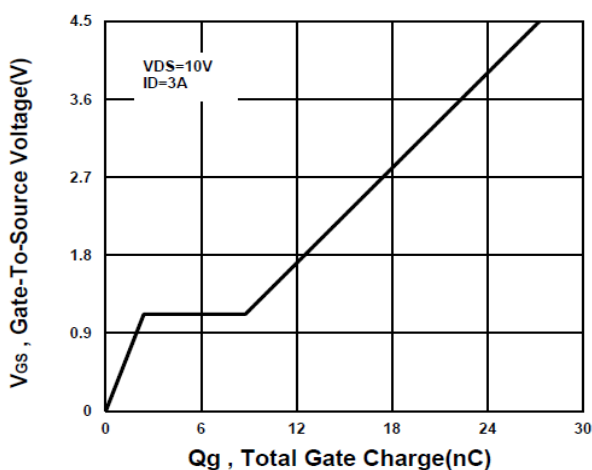
On-Resistance VS Temperature



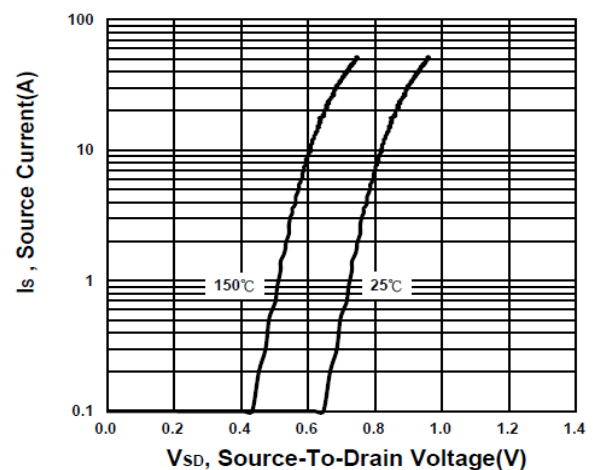
Capacitance Characteristic



Gate charge Characteristics



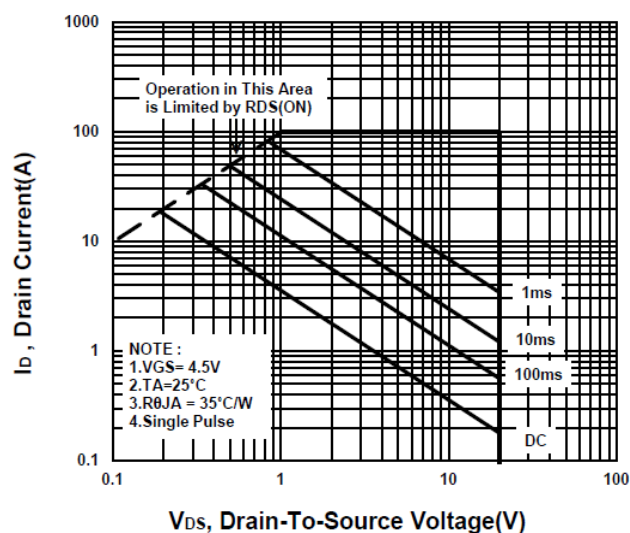
Source-Drain Diode Forward Voltage



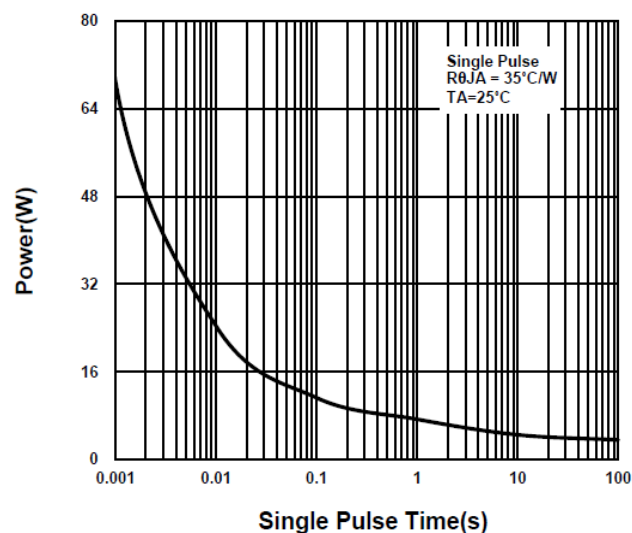
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Dual N-Channel Enhancement Mode MOSFET

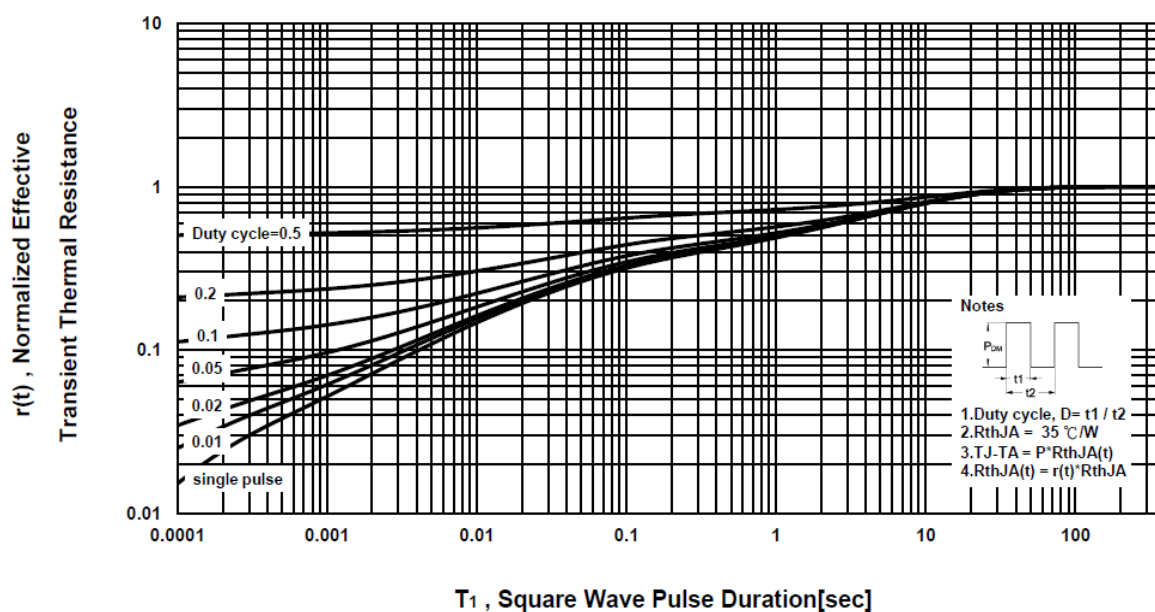
Safe Operating Area



Single Pulse Maximum Power Dissipation



Transient Thermal Response Curve



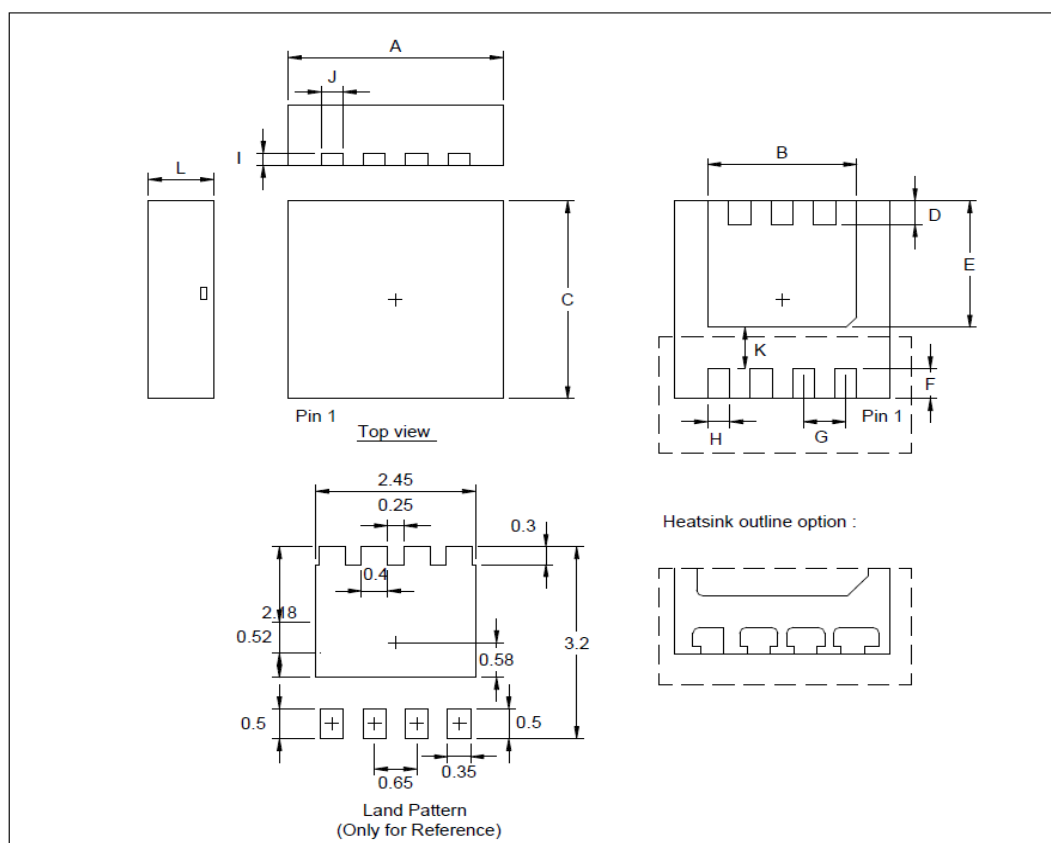
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Dual N-Channel Enhancement Mode MOSFET

Package Dimension

PDFN 3x3S MECHANICAL DATA

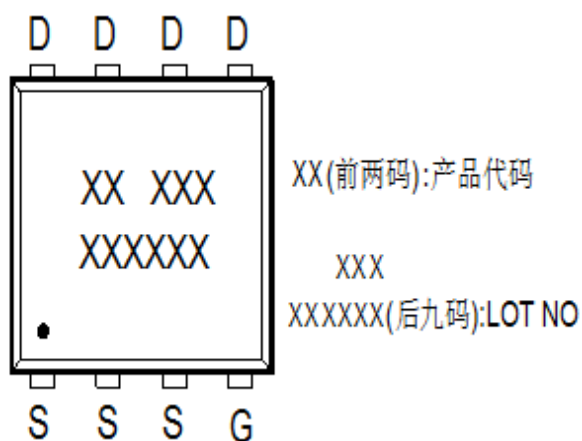
Dimension	mm			Dimension	mm		
	Min.	Typ.	Max.		Min.	Typ.	Max.
A	2.9	3.0	3.1	I		0.20	
B	2.35	2.4	2.55	J	0.27	0.35	0.4
C	2.9	3.0	3.1	K		0.45	
D	0.32	0.4	0.45	L	0.7	0.8	0.9
E	2.0	2.1	2.2				
F	0.32	0.42	0.47				
G		0.65					
H	0.27	0.35	0.525				



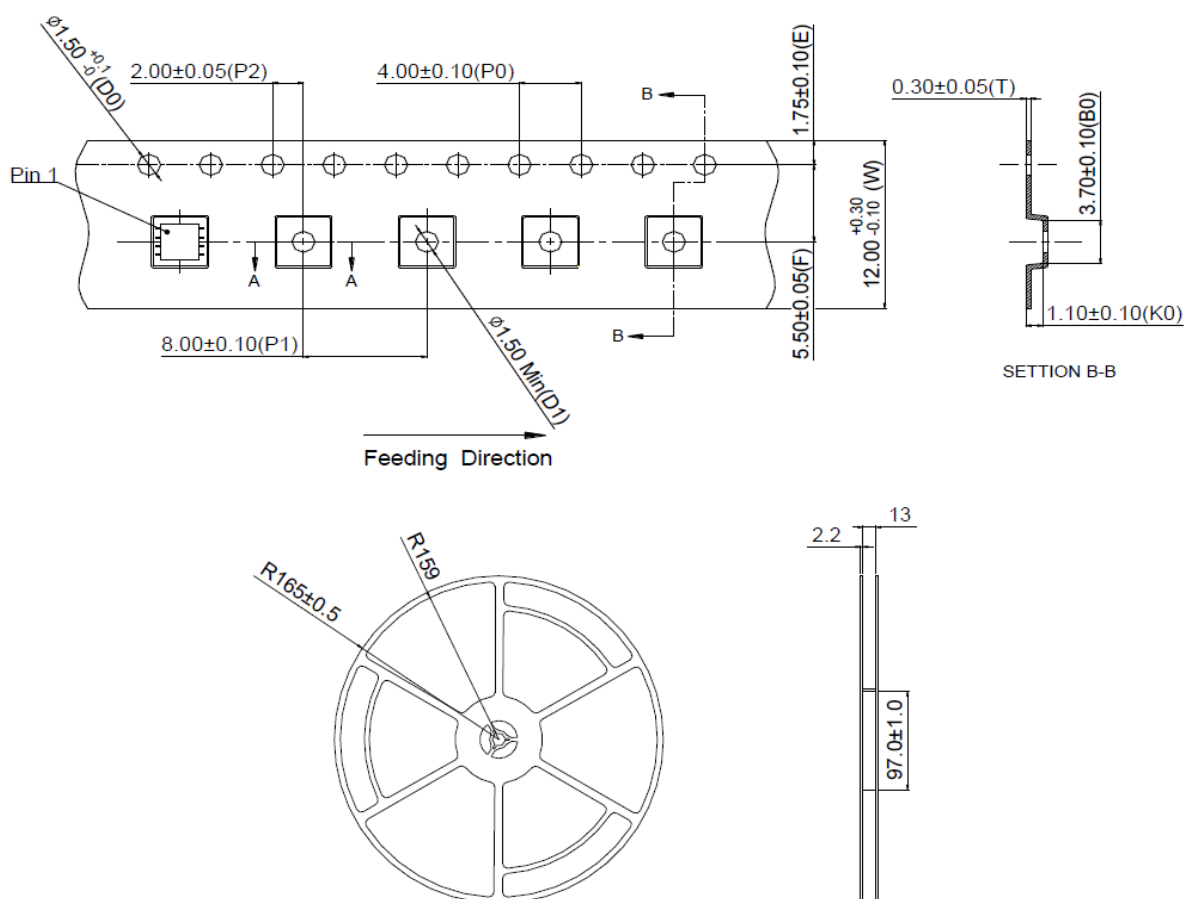
PE5A0DZ

Dual N-Channel Enhancement Mode MOSFET

A. Marking Information(此产品代码为: H2)



B. Tape&Reel Information:5000pcs/Reel



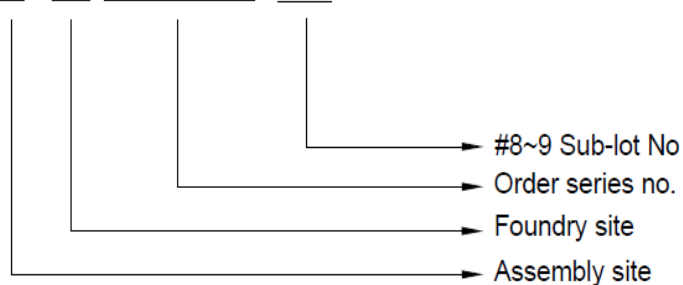
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Dual N-Channel Enhancement Mode MOSFET

C. Lot.No. & Date Code rule

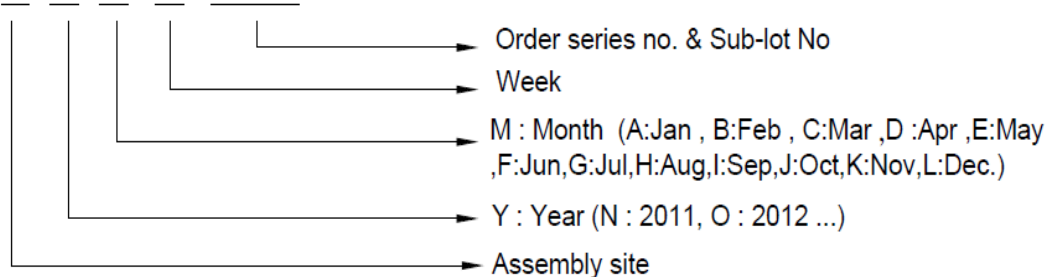
1.LOT.NO.

M N 15M21 03



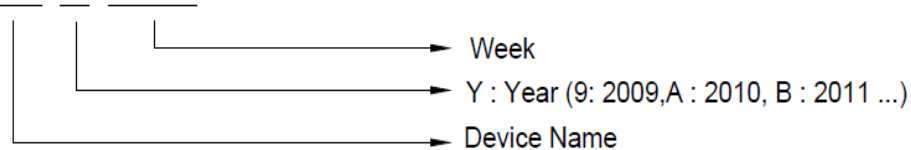
2.Date Code

D Y M X XXX



3.Date Code (for Small package)

XX Y WW



PE5A0DZ

Dual N-Channel Enhancement Mode MOSFET

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	Great Power	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	Pb Free label	 Diameter: 1 cm bottom color: Green Font color: Black Font style: Arial
11	Halogen Free label	 Diameter: 1 cm bottom color: Green Font color: Black Font style: Arial
12	Scan info	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