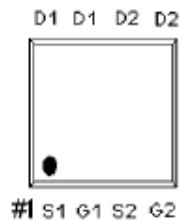


PE532DY

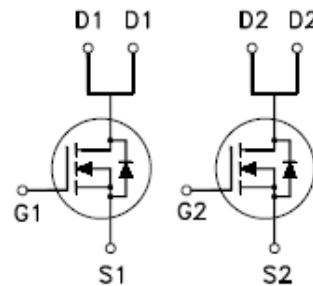
Dual N-Channel Enhancement Mode MOSFET

PRODUCT SUMMARY

$V_{(BR)DSS}$	$R_{DS(ON)}$	I_D^3
30V	19mΩ @ $V_{GS} = 10V$	21A



G : GATE
D : DRAIN
S : SOURCE



PDFN 3X3S

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

PARAMETERS/TEST CONDITIONS		SYMBOL	LIMITS	UNITS
Drain-Source Voltage		V_{DS}	30	V
Gate-Source Voltage		V_{GS}	±20	V
Continuous Drain Current ³	$T_C = 25\text{ °C}$	I_D	21	A
	$T_C = 100\text{ °C}$		13	
	$T_A = 25\text{ °C}$		7.5	
	$T_A = 70\text{ °C}$		6	
Pulsed Drain Current ¹		I_{DM}	25	
Avalanche Current		I_{AS}	17	
Avalanche Energy	$L = 0.1\text{mH}$	E_{AS}	15	mJ
Power Dissipation	$T_C = 25\text{ °C}$	P_D	14	W
	$T_C = 100\text{ °C}$		5	
	$T_A = 25\text{ °C}$		1.7	
	$T_A = 70\text{ °C}$		1.1	
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 ²	$R_{\theta JA}$		70	°C / W
Junction-to-Case	$R_{\theta JC}$		8.5	

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 $T_A = 25\text{ °C}$.

³Package limitation current is 9A.

PE532DY

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	30			V
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = 250μA	1	1.5	2.5	
Gate-Body Leakage	I _{GSS}	V _{DS} = 0V, V _{GS} = ±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 °C			10	
On-State Drain Current ¹	I _{D(ON)}	V _{DS} = 5V, V _{GS} = 10V	25			A
Drain-Source On-State Resistance ¹	R _{DS(ON)}	V _{GS} = 4.5V, I _D = 6.8A		20	25	mΩ
		V _{GS} = 10V , I _D =7.5A		17	19	
Forward Transconductance ¹	g _{fs}	V _{DS} = 10V, I _D = 7.5A		22		S
DYNAMIC						
Input Capacitance	C _{iss}	V _{GS} = 0V, V _{DS} = 15V, f = 1MHz		526		pF
Output Capacitance	C _{oss}			76		
Reverse Transfer Capacitance	C _{rss}			62		
Gate Resistance	R _g	V _{GS} = 0V, V _{DS} = 0V, f = 1MHz		2.2		Ω
Total Gate Charge ²	Q _g (V _{GS} =10V)	V _{DS} = 15V , I _D = 7.5A		14.4		nC
	Q _g (V _{GS} =4.5V)			7.8		
Gate-Source Charge ²	Q _{gs}			2		
Gate-Drain Charge ²	Q _{gd}			3.8		
Turn-On Delay Time ²	t _{d(on)}	V _{DD} = 15V, I _D ≅ 7.5A, V _{GEN} = 10V, R _G = 6Ω		14		nS
Rise Time ²	t _r			10		
Turn-Off Delay Time ²	t _{d(off)}			30		
Fall Time ²	t _f			10		
SOURCE-DRAIN DIODE RATINGS AND CHARACTERISTICS (T _J = 25 °C)						
Continuous Current ³	I _S				21	A
Forward Voltage ¹	V _{SD}	I _F =7.5A, V _{GS} = 0V			1	V
Reverse Recovery Time	t _{rr}	I _F = 7.5A, dI _F /dt = 100A / μS		12		nS
Reverse Recovery Charge	Q _{rr}			3		nC

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

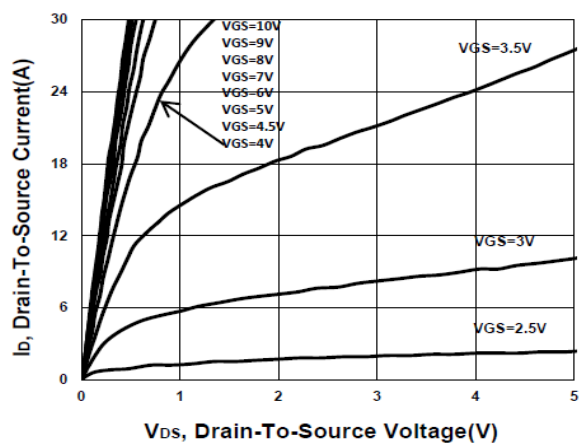
²Independent of operating temperature.

³Package limitation current is 9A.

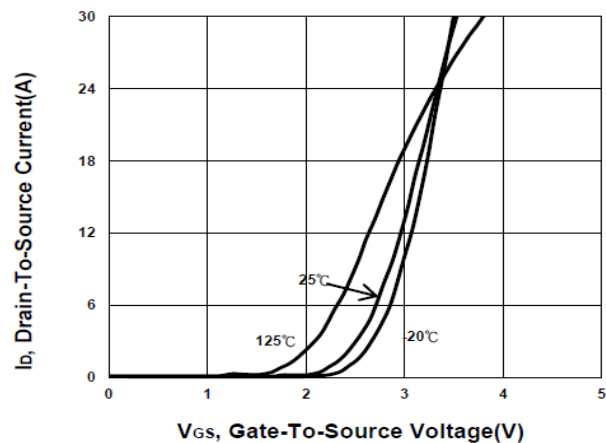
PE532DY

Dual N-Channel Enhancement Mode MOSFET

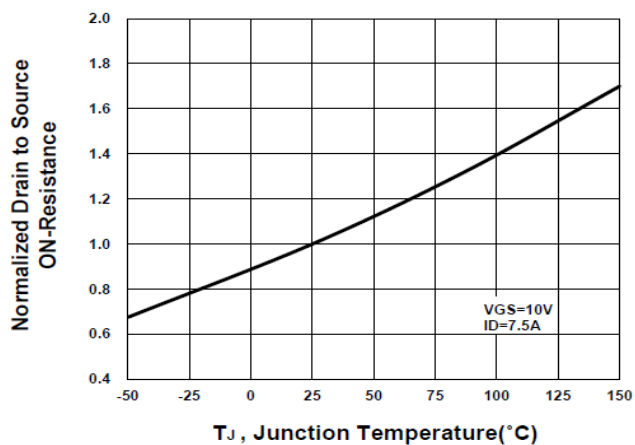
Output Characteristics



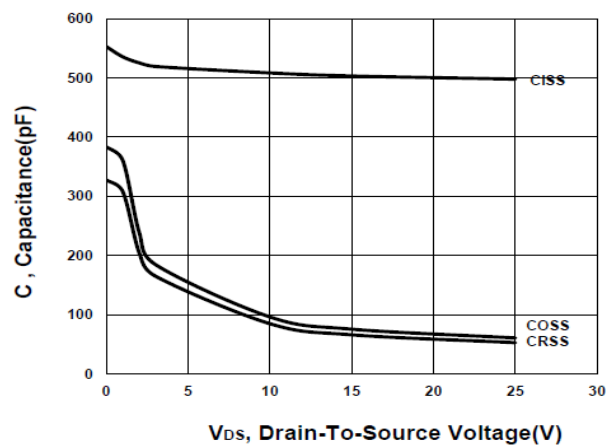
Transfer Characteristics



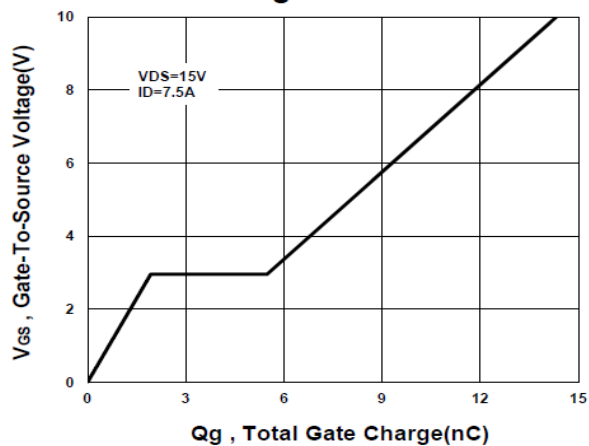
On-Resistance VS Temperature



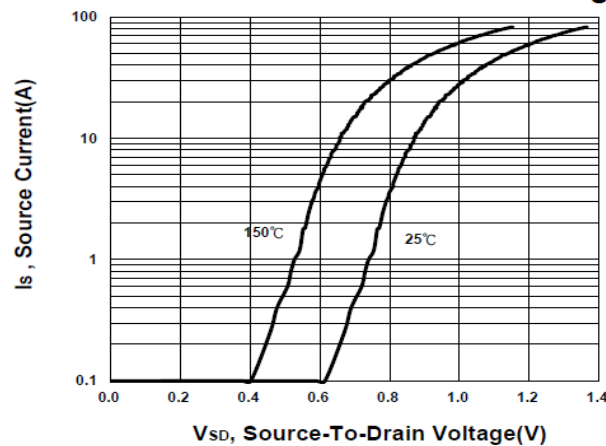
Capacitance Characteristic



Gate charge Characteristics



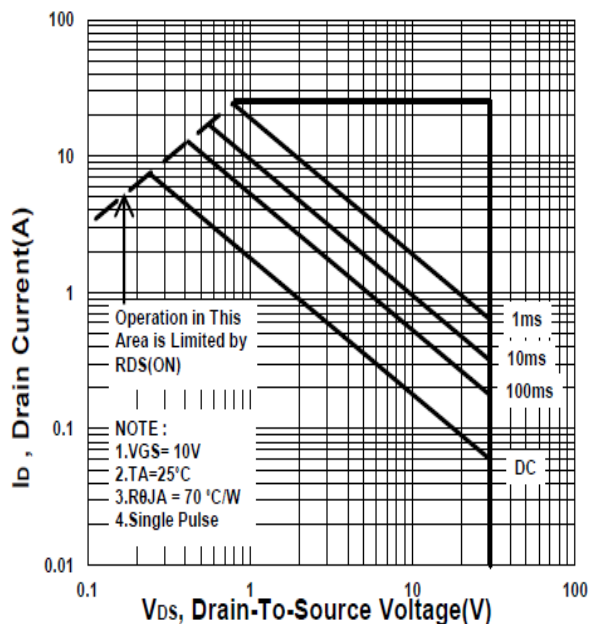
Source-Drain Diode Forward Voltage



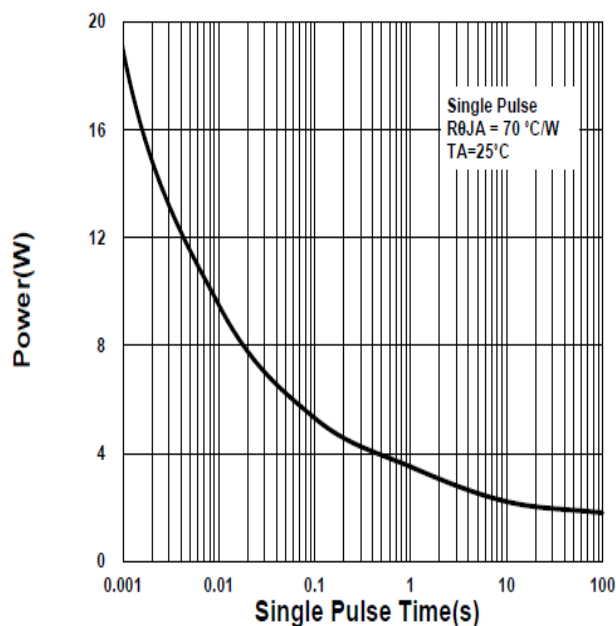
PE532DY

Dual N-Channel Enhancement Mode MOSFET

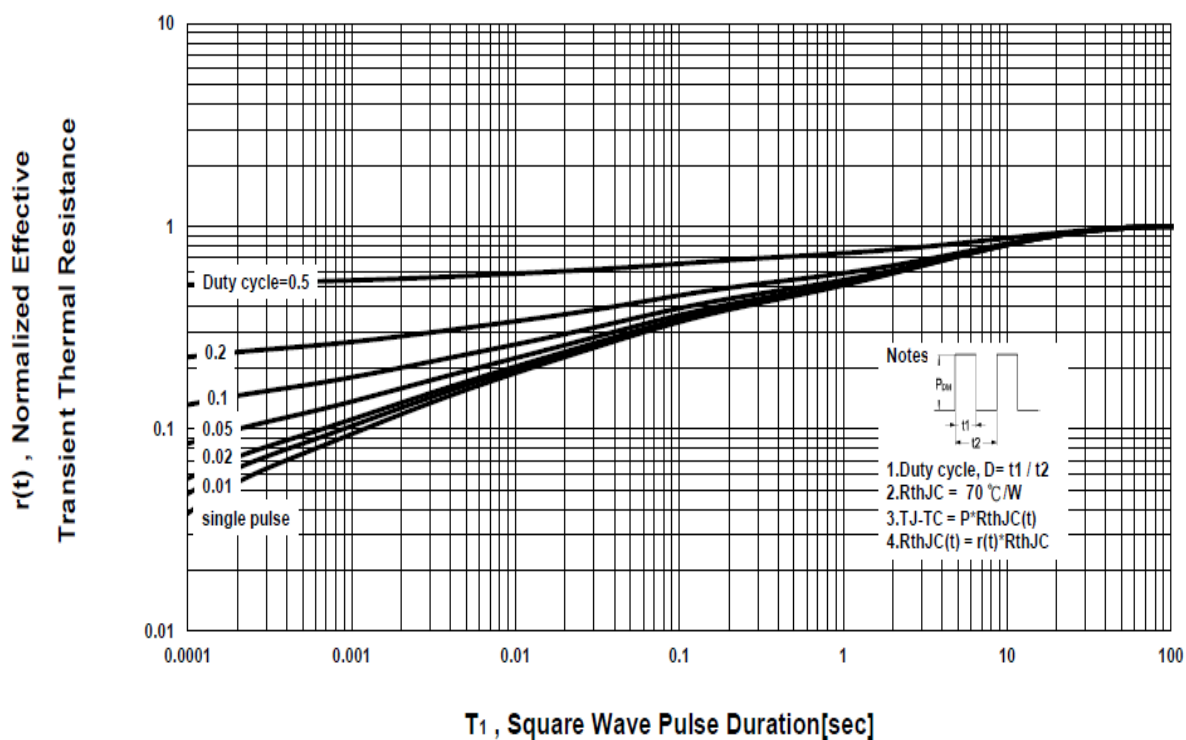
Safe Operating Area



Single Pulse Maximum Power Dissipation



Transient Thermal Response Curve



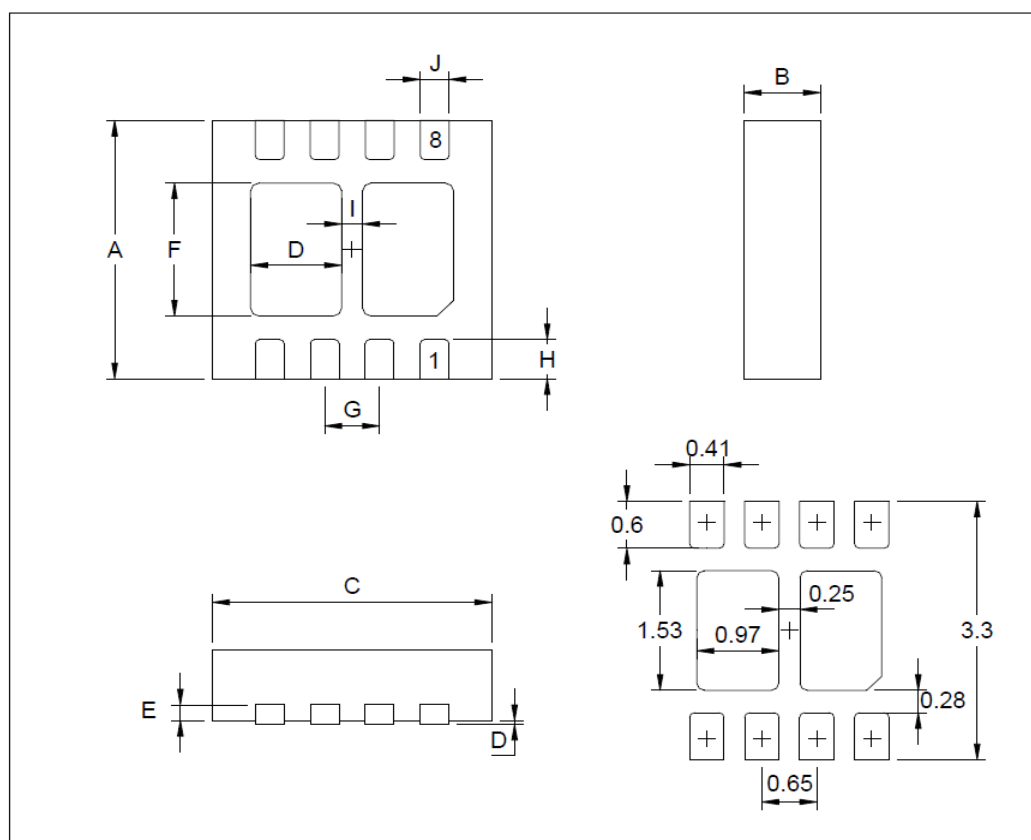
PE532DY

Dual N-Channel Enhancement Mode MOSFET

Package Dimension

PDFN 3x3S(Dual) MECHANICAL DATA

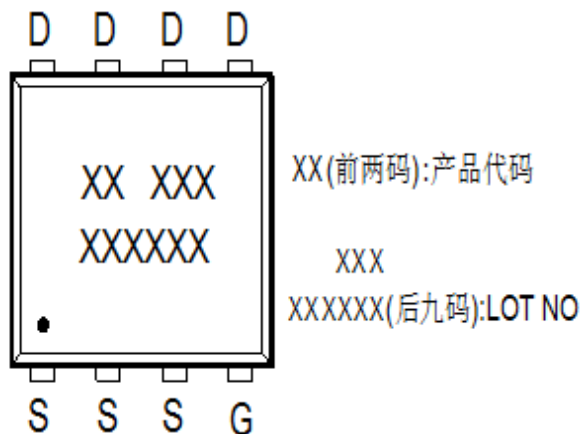
Dimension	mm			Dimension	mm		
	Min.	Typ.	Max.		Min.	Typ.	Max.
A	2.9		3.1	G		0.65	
B	0.8		0.9	H	0.37		0.47
C	2.9		3.1	I		0.25	
D	0		0.05				
E	0.195		0.211				
F	1.65		1.75				



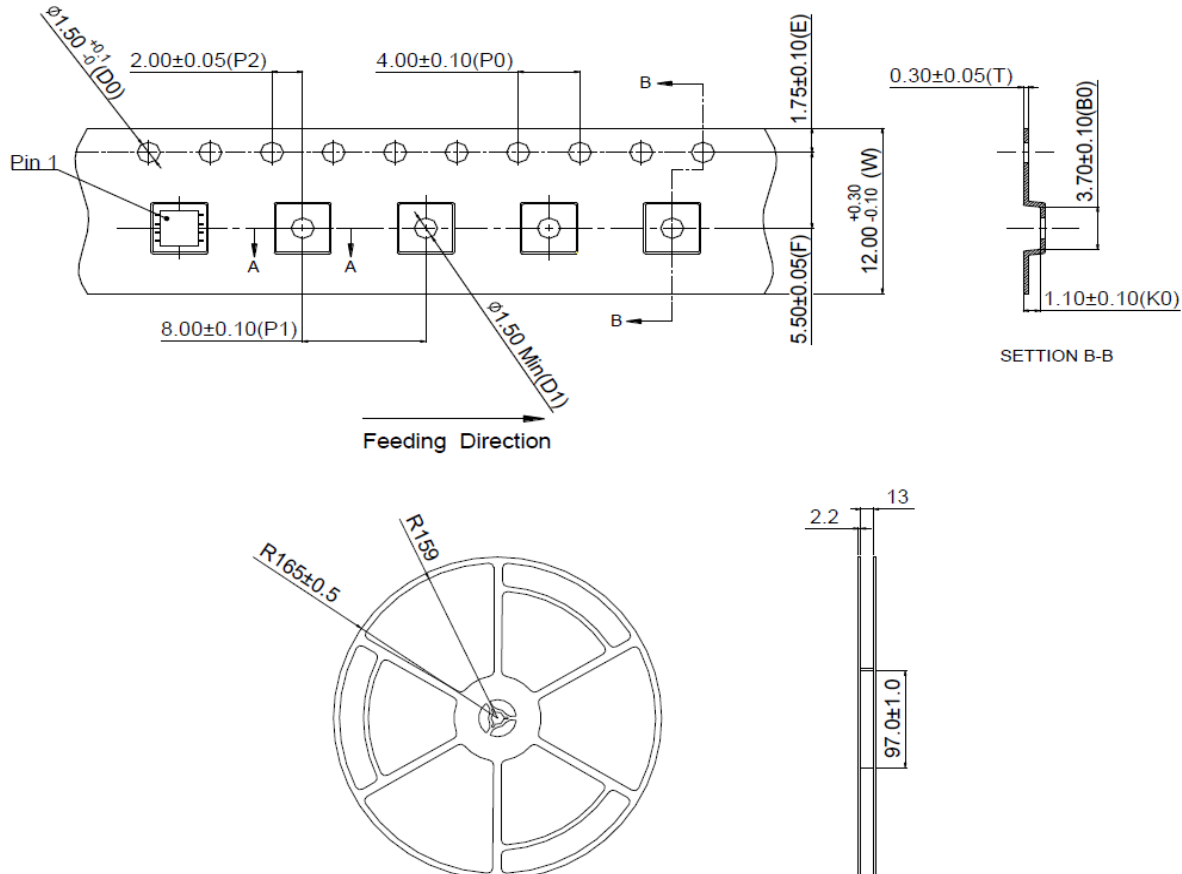
PE532DY

Dual N-Channel Enhancement Mode MOSFET

A. Marking Information(此产品代码为: E7)



B. Tape&Reel Information:5000pcs/Reel



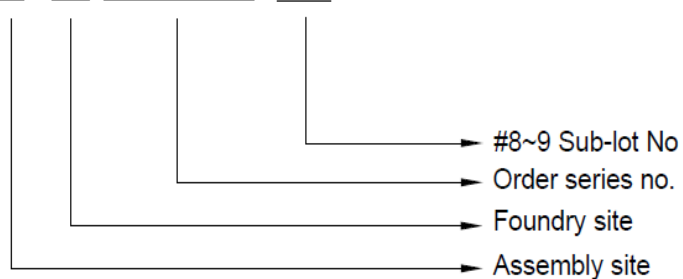
PE532DY

Dual N-Channel Enhancement Mode MOSFET

C. Lot.No. & Date Code rule

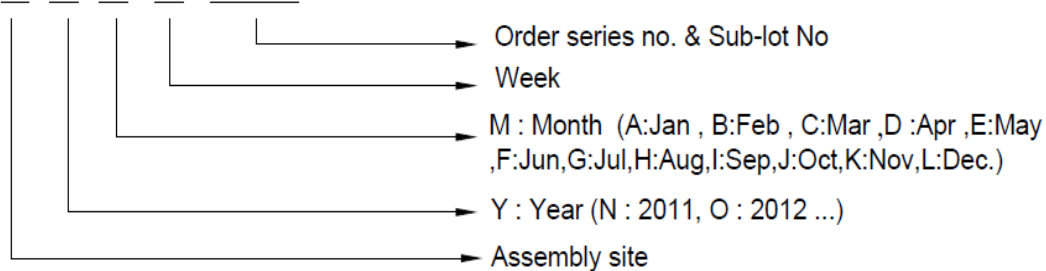
1.LOT.NO.

M N 15M21 03



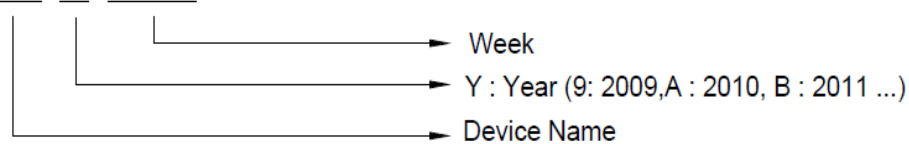
2.Date Code

D Y M X XXX



3.Date Code (for Small package)

XX Y WW



PE532DY

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