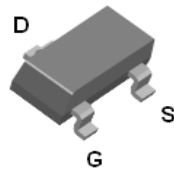


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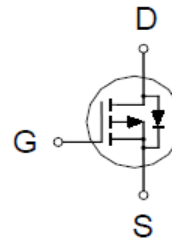
P-Channel Enhancement Mode MOSFET

PRODUCT SUMMARY

$V_{(BR)DSS}$	$R_{DS(ON)}$	I_D
-40V	70mΩ @ $V_{GS} = -10V$	-2.5A



SOT-23(S)



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

PARAMETERS/TEST CONDITIONS	SYMBOL	LIMITS	UNITS
Gate-Source Voltage	V_{GS}	±20	V
Continuous Drain Current	I_D	$T_A = 25\text{ °C}$	-2.5
		$T_A = 70\text{ °C}$	-2
Pulsed Drain Current ¹	I_{DM}	-8	A
Power Dissipation ³	P_D	$T_A = 25\text{ °C}$	0.7
		$T_A = 70\text{ °C}$	0.4
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	$R_{\theta JA}$		173	°C / W

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.

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P-Channel Enhancement Mode MOSFET

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

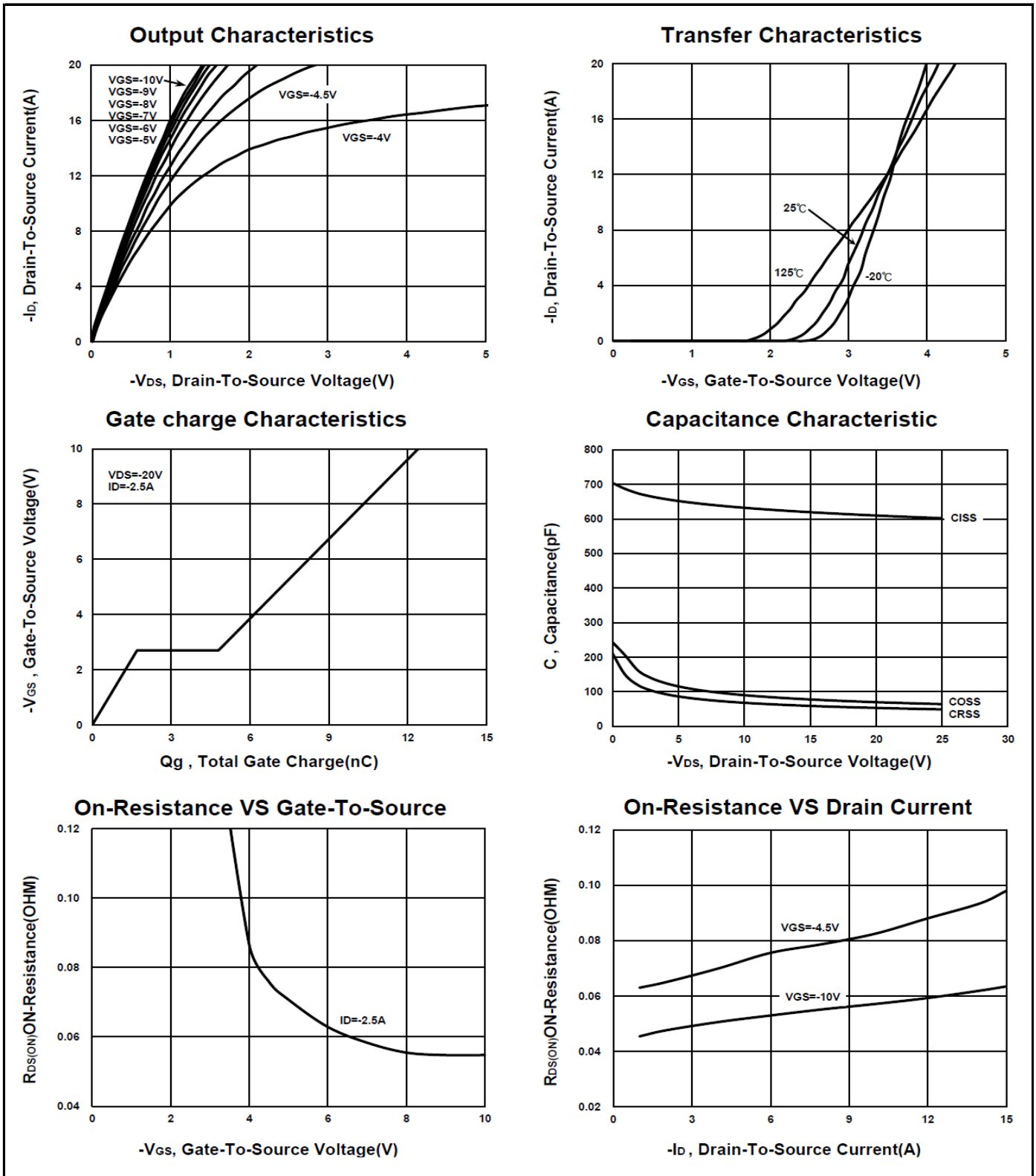
PARAMETER	SYMBOL	TEST CONDITIONS	LIMITS			UNITS
			MIN	TYP	MAX	
STATIC						
Drain-Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D = -250μA	-40			V
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = -250μA	-1.3	-1.95	-2.3	
Gate-Body Leakage	I _{GSS}	V _{DS} = 0V, V _{GS} = ±20V			±100	nA
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = -32V, V _{GS} = 0V			-1	μA
		V _{DS} = -30V, V _{GS} = 0V, T _J = 55 °C			-10	
Drain-Source On-State Resistance ¹	R _{DS(ON)}	V _{GS} = -10V, I _D = -2.5A		56	70	mΩ
		V _{GS} = -4.5V, I _D = -2.5A		75	105	
Forward Transconductance ¹	g _{fs}	V _{DS} = -5V, I _D = -2.5A		10		S
DYNAMIC						
Input Capacitance	C _{iss}	V _{GS} = 0V, V _{DS} = -20V, f = 1MHz		613		pF
Output Capacitance	C _{oss}			69		
Reverse Transfer Capacitance	C _{rss}			53		
Total Gate Charge ²	Q _g (V _{GS} =-10V)	V _{DS} = -20V, V _{GS} = -10V, I _D = -2.5A		12.4		nC
	Q _g (V _{GS} =-4.5V)			6.7		
Gate-Source Charge ²	Q _{gs}			1.7		
Gate-Drain Charge ²	Q _{gd}			3.1		
Turn-On Delay Time ²	t _{d(on)}		V _{DD} = -20V, V _{GS} = -10V I _D ≅ -2.5A, R _G = 6Ω		13	
Rise Time ²	t _r			21		
Turn-Off Delay Time ²	t _{d(off)}			70		
Fall Time ²	t _f			40		
SOURCE-DRAIN DIODE RATINGS AND CHARACTERISTIC (T_J = 25 °C)						
Continuous Current	I _S				-0.7	A
Forward Voltage ¹	V _{SD}	I _F = -2.5A, V _{GS} = 0V			-1	V
Reverse Recovery Time	t _{rr}	I _F = -2.5A, dI _F /dt = 100A / μS		13		nS
Reverse Recovery Charge	Q _{rr}			7		nC

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

²Independent of operating temperature.

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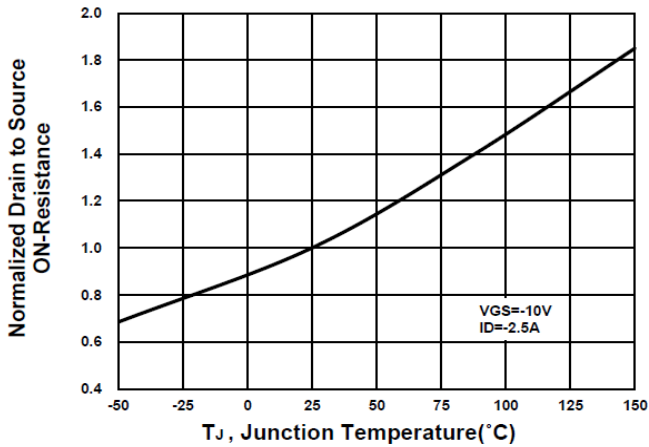
P-Channel Enhancement Mode MOSFET



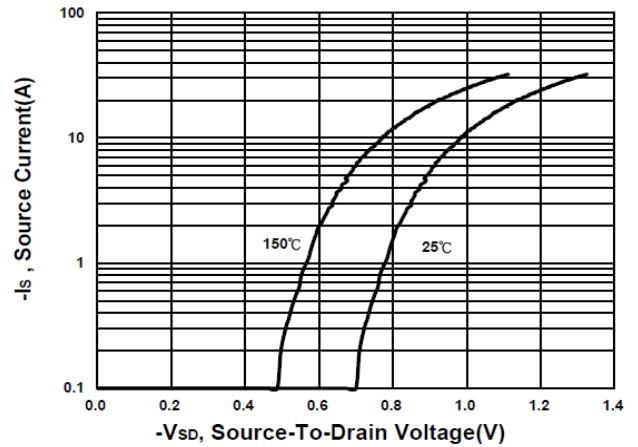
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P-Channel Enhancement Mode MOSFET

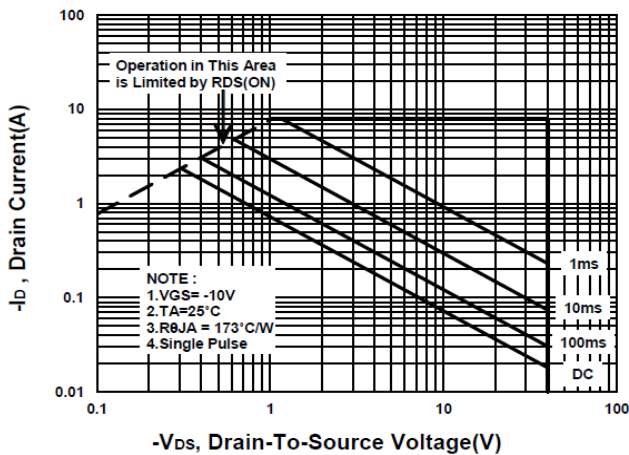
On-Resistance VS Temperature



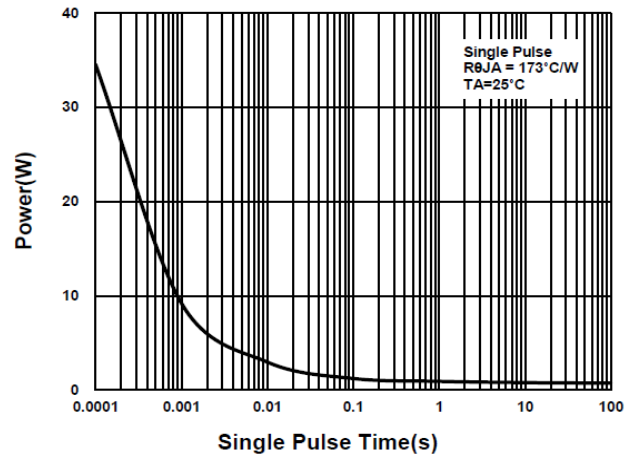
Source-Drain Diode Forward Voltage



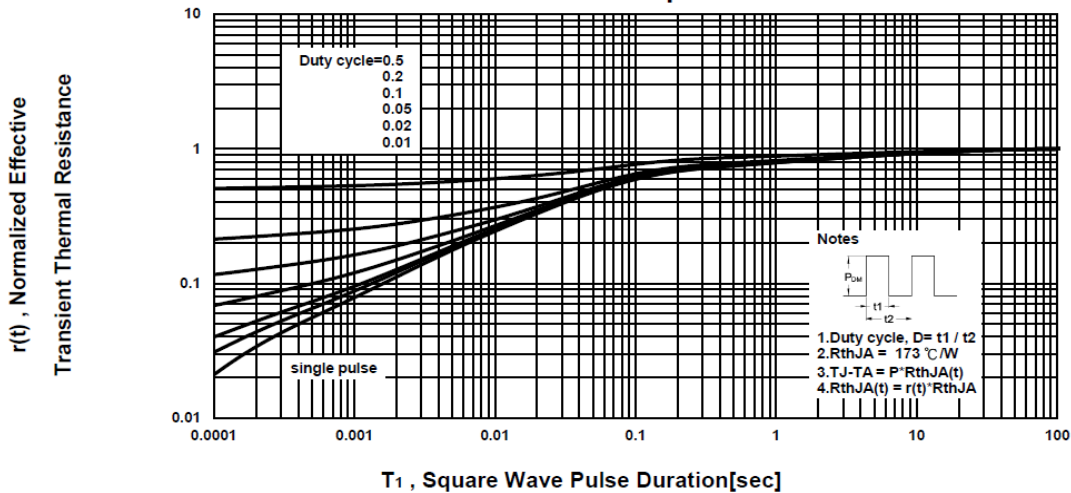
Safe Operating Area



Single Pulse Maximum Power Dissipation



Transient Thermal Response Curve



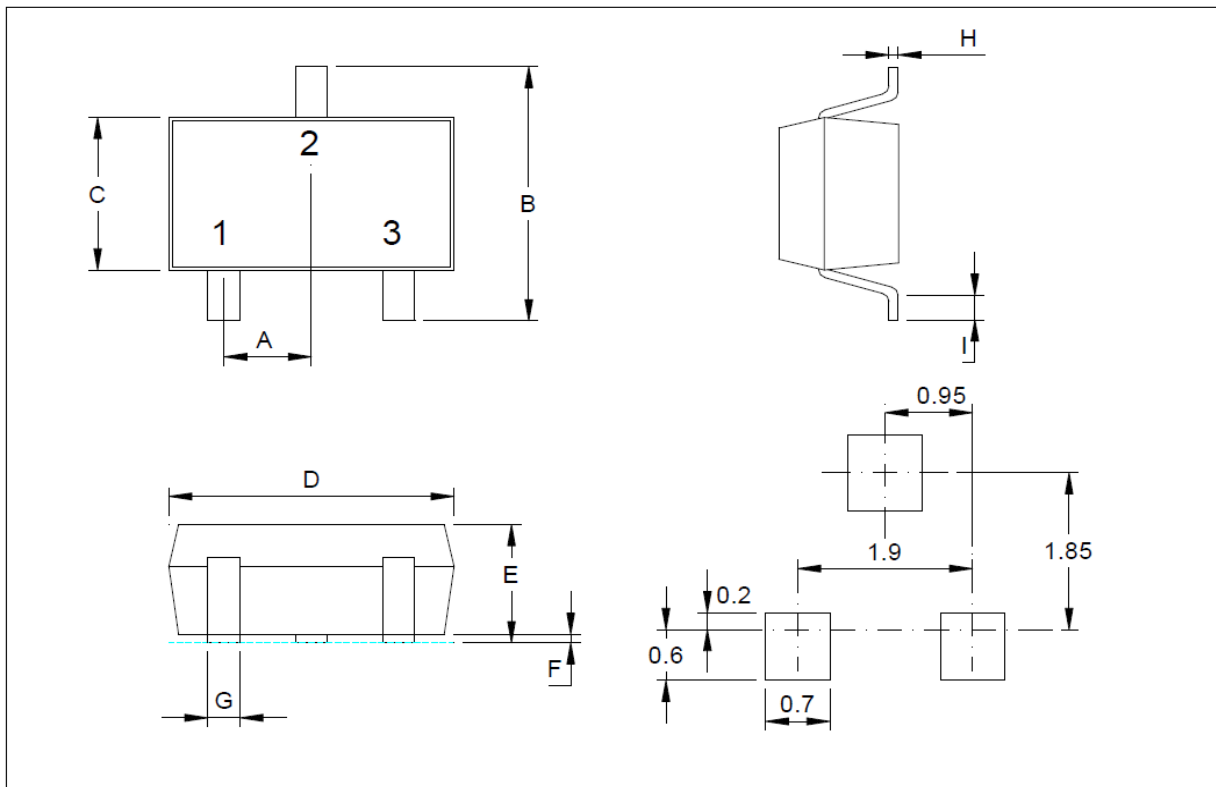
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P-Channel Enhancement Mode MOSFET

Package Dimension

SOT-23 (S) MECHANICAL DATA

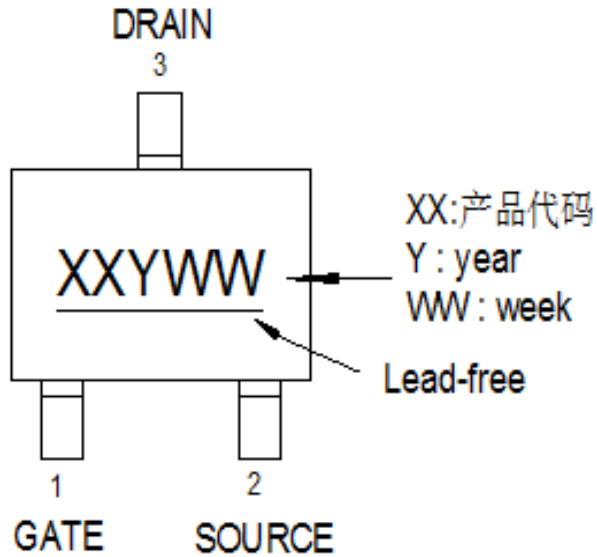
Dimension	mm			Dimension	mm		
	Min.	Typ.	Max.		Min.	Typ.	Max.
A	0.9		1	H	0.08		0.2
B	2.25		2.85	I	0.15		0.6
C	1.2		1.4				
D	2.8		3.04				
E	0.89		1.2				
F	0		0.1				
G	0.3		0.5				



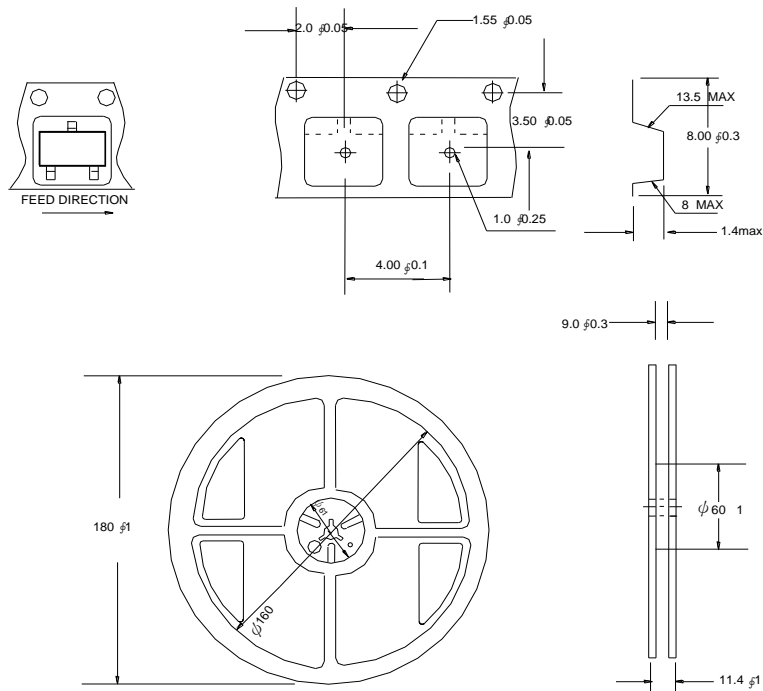
PM569BA

P-Channel Enhancement Mode MOSFET

A. Marking Information (此产品代码为：7D)



B. Tape & Reel Information: 3000pcs/Reel

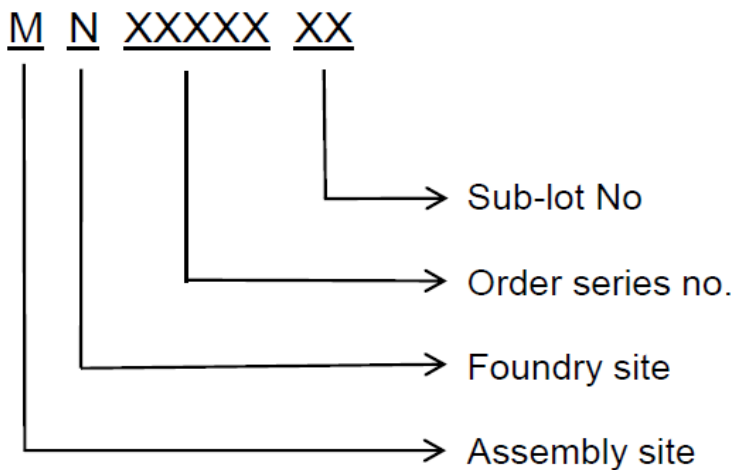


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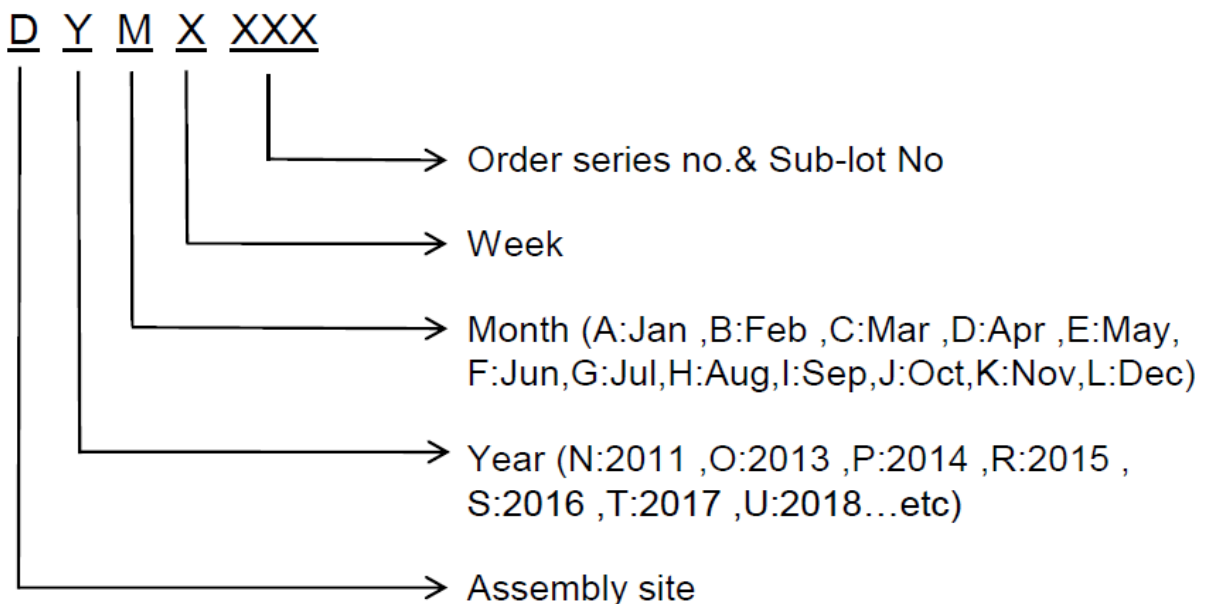
P-Channel Enhancement Mode MOSFET

C. Lot No.&Date Code rule

1.Lot No.



2.Date Code





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P-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	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