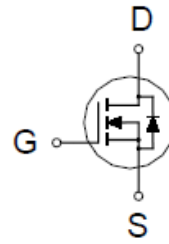
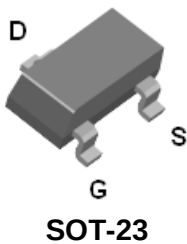


PB210BM

N-Channel Enhancement Mode MOSFET

PRODUCT SUMMARY

$V_{(BR)DSS}$	$R_{DS(ON)}$	I_D
100V	230mΩ @ $V_{GS} = 10V$	1.3A



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	1.3	A
	$T_A = 100\text{ }^{\circ}\text{C}$		0.8	
Pulsed Drain Current ¹		I_{DM}	18	
Avalanche Current		I_{AS}	18	
Avalanche Energy	$L = 0.1\text{mH}$	E_{AS}	16.5	mJ
Power Dissipation	$T_A = 25\text{ }^{\circ}\text{C}$	P_D	0.75	W
	$T_A = 70\text{ }^{\circ}\text{C}$		0.3	
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	$R_{\theta JA}$		166	$^{\circ}\text{C} / \text{W}$
Junction-to-Case	$R_{\theta JC}$		60	

¹Pulse width limited by maximum junction temperature.

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

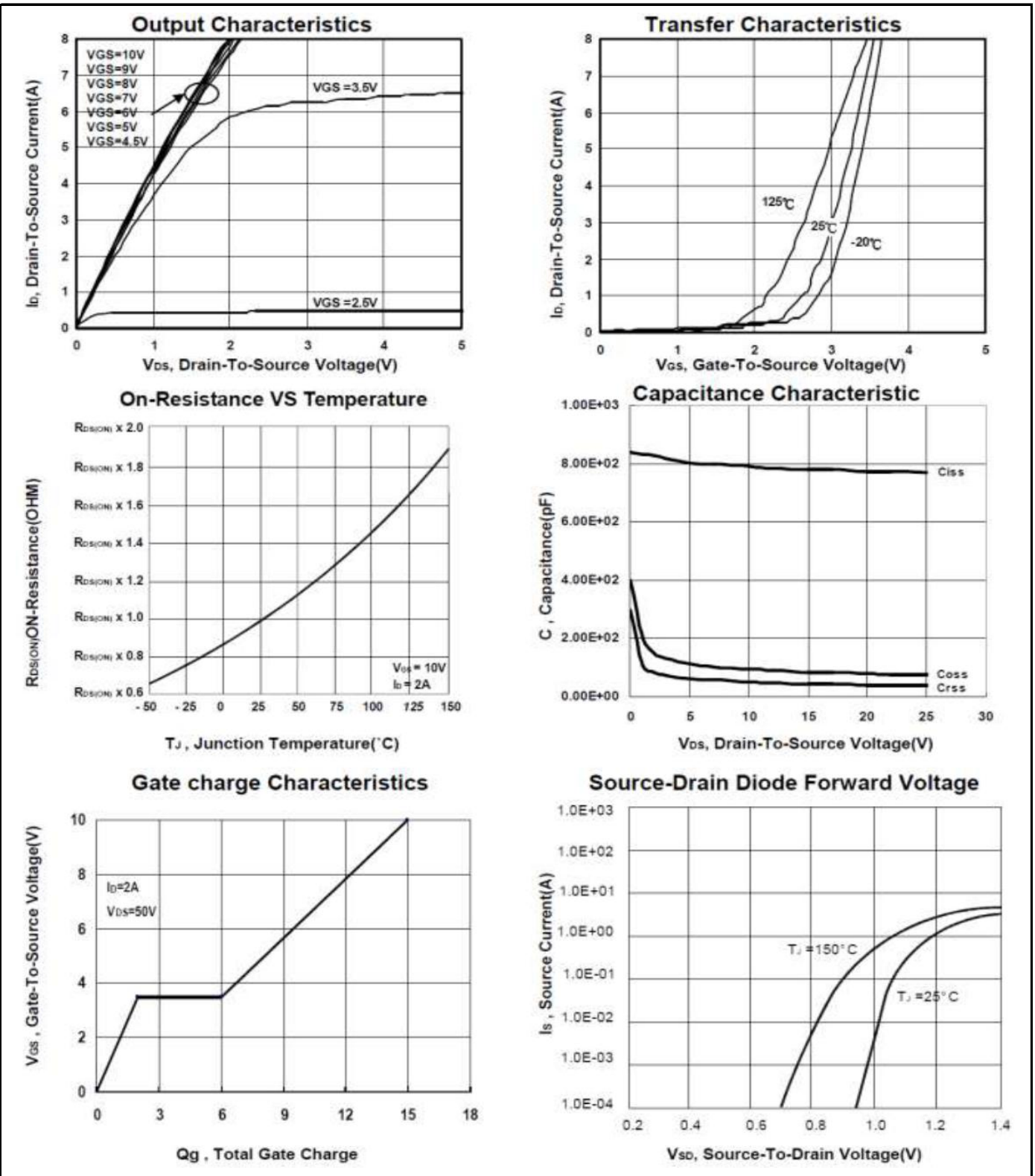
PARAMETER	SYMBOL	TEST CONDITIONS	LIMITS			UNITS
			MIN	TYP	MAX	
STATIC						
Drain-Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D = 250μA	100			V
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = 250μA	1	1.5	2	
Gate-Body Leakage	I _{GSS}	V _{DS} = 0V, V _{GS} = ±20V			±100	nA
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = 80V, V _{GS} = 0V			1	μA
		V _{DS} = 80V, V _{GS} = 0V , T _J = 125 °C			10	
On-State Drain Current ¹	I _{D(ON)}	V _{DS} = 10V, V _{GS} = 10V	18			A
Drain-Source On-State Resistance ¹	R _{DS(ON)}	V _{GS} = 10V, I _D = 2A		220	230	mΩ
		V _{GS} = 5V, I _D = 1A		230	240	
Forward Transconductance ¹	g _{fs}	V _{DS} = 10V, I _D = 2A		10		S
DYNAMIC						
Input Capacitance	C _{iss}	V _{GS} = 0V, V _{DS} = 25V, f = 1MHz		802		pF
Output Capacitance	C _{oss}			80		
Reverse Transfer Capacitance	C _{rss}			41		
Gate Resistance	R _g	V _{GS} = 0V, V _{DS} = 0V, f = 1MHz		2.5		Ω
Total Gate Charge ²	Q _g	V _{DS} = 50V, V _{GS} = 10V, I _D = 2A		15		nC
Gate-Source Charge ²	Q _{gs}			2		
Gate-Drain Charge ²	Q _{gd}			4		
Turn-On Delay Time ²	t _{d(on)}	V _{DD} = 50V, I _D ≅ 2A, V _{GEN} = 10V, R _{GS} = 6Ω		16		nS
Rise Time ²	t _r			330		
Turn-Off Delay Time ²	t _{d(off)}			39		
Fall Time ²	t _f			111		
SOURCE-DRAIN DIODE RATINGS AND CHARACTERISTICE (T _J = 25 °C)						
Continuous Current	I _S				10	A
Forward Voltage ¹	V _{SD}	I _F = 2A, V _{GS} = 0V			1.4	V
Reverse Recovery Time	t _{rr}	I _F = 2A, dl/dt = 500A/μS		75		nS
Reverse Recovery Charge	Q _{rr}			0.17		nC

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

²Independent of operating temperature.

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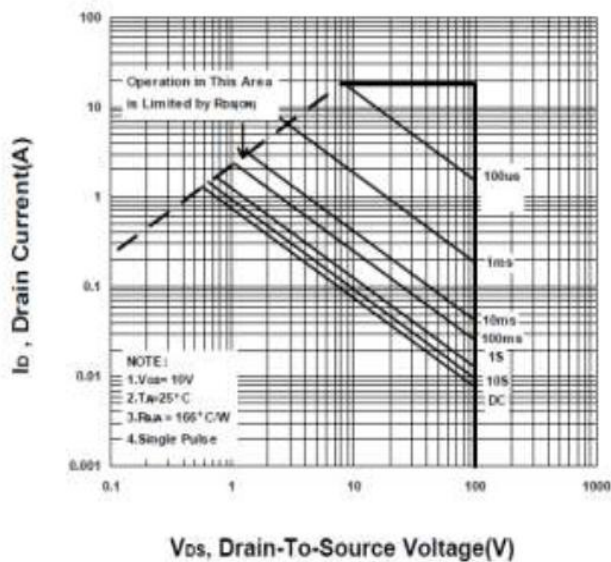
N-Channel Enhancement Mode MOSFET



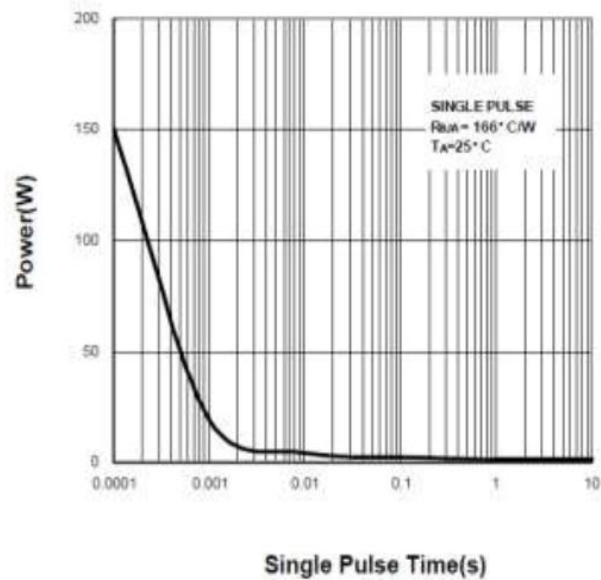
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N-Channel Enhancement Mode MOSFET

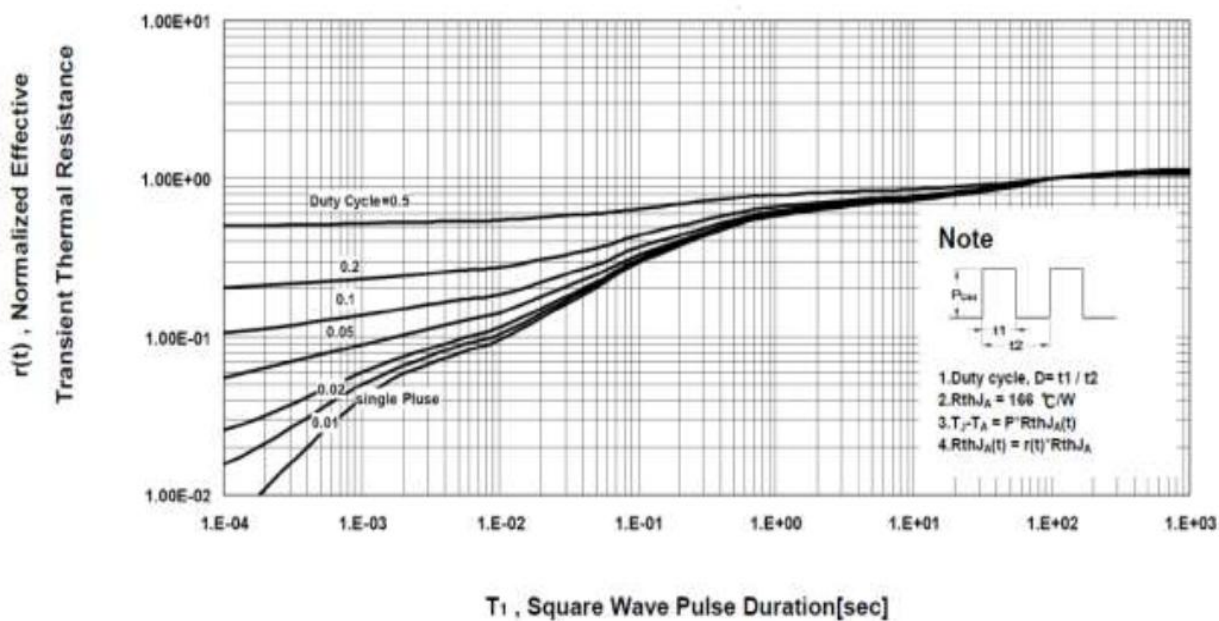
Safe Operating Area



Single Pulse Maximum Power Dissipation

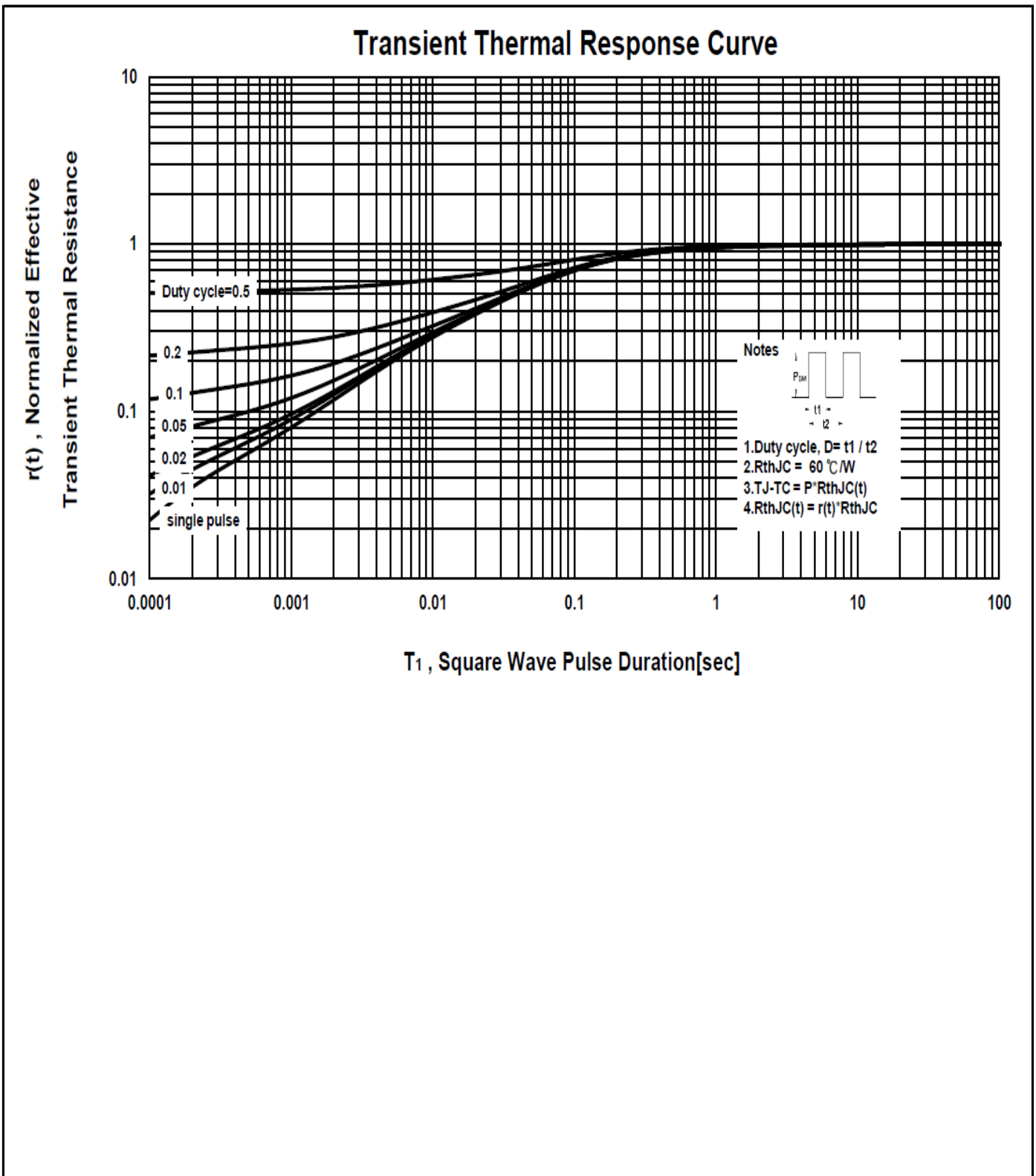


Transient Thermal Response Curve



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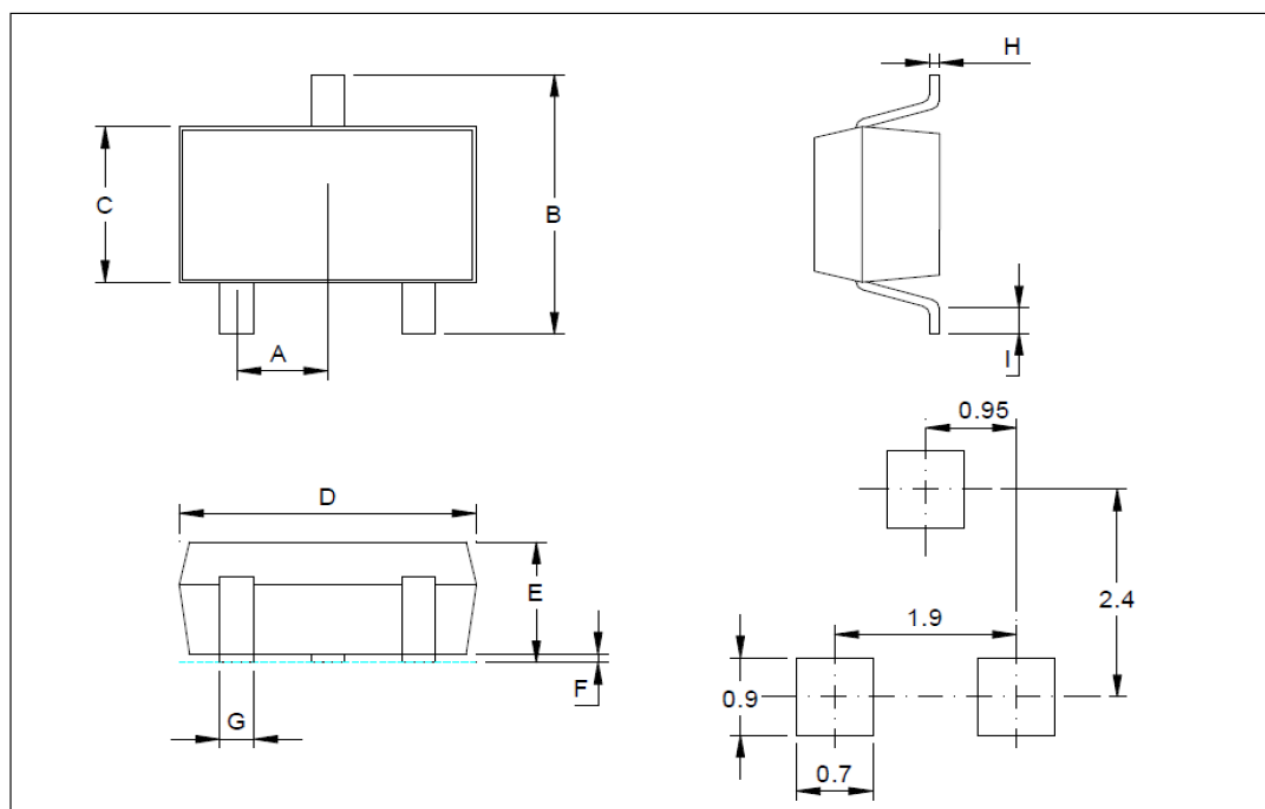
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Package Dimension

SOT-23 MECHANICAL DATA

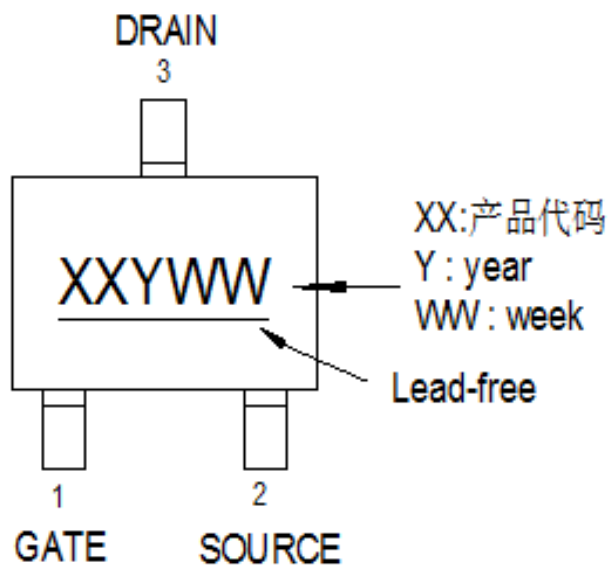
Dimension	mm			Dimension	mm		
	Min.	Typ.	Max.		Min.	Typ.	Max.
A		1.05		H	0.1		0.2
B	2.4		3	I	0.3		0.6
C	1.4		1.73				
D	2.7		3.1				
E	1		1.31				
F	0		0.15				
G	0.3		0.5				



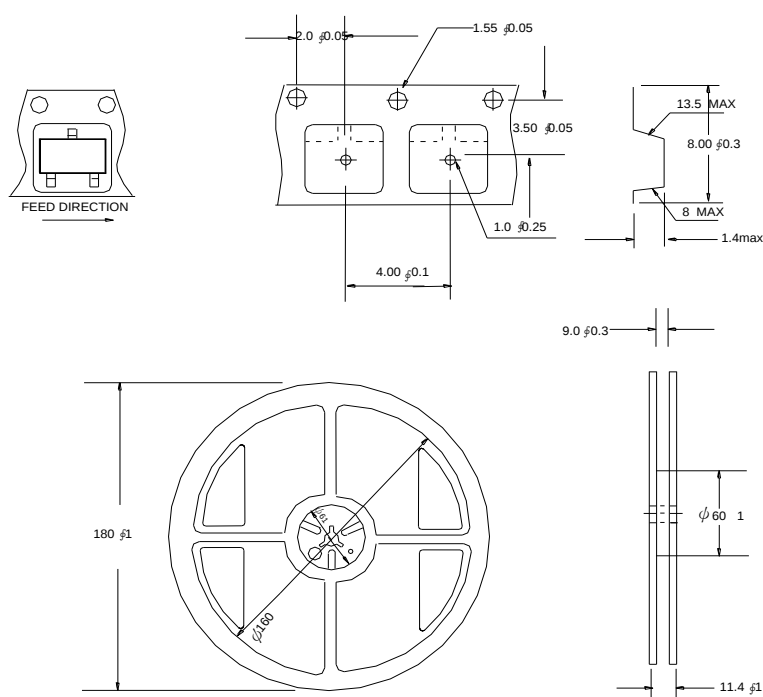
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A. Marking Information (此产品代码为：1V)



B. Tape&Reel Information:3000pcs/Reel

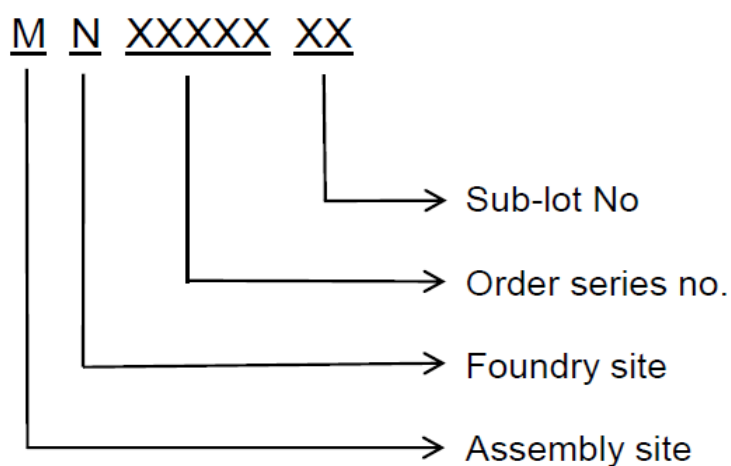


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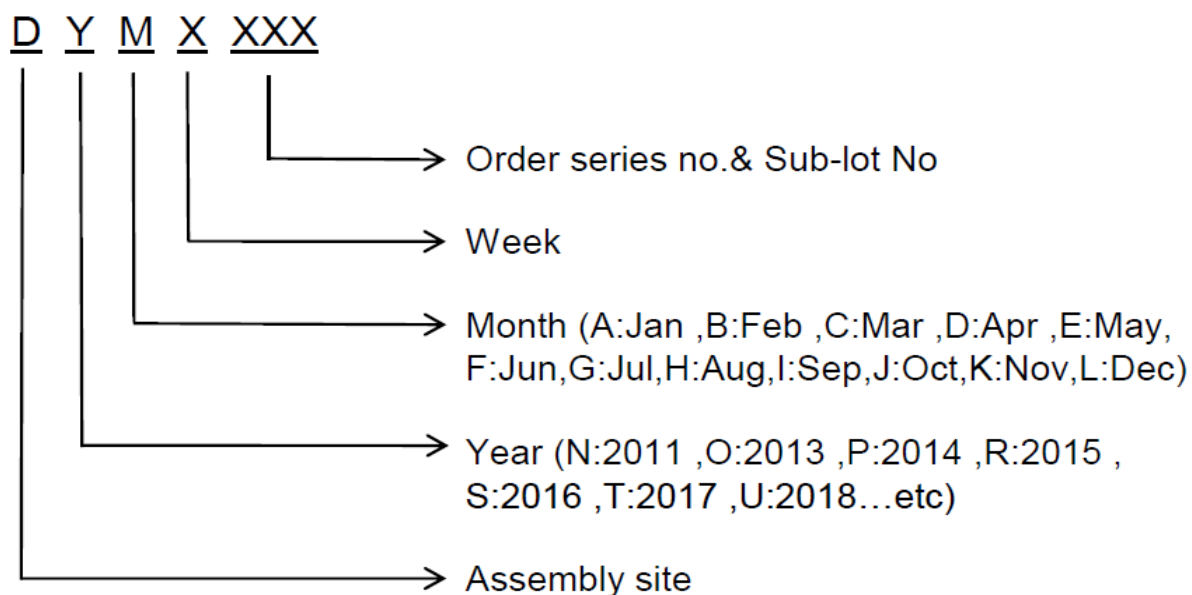
N-Channel Enhancement Mode MOSFET

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