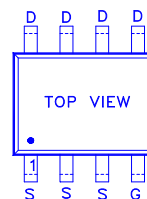
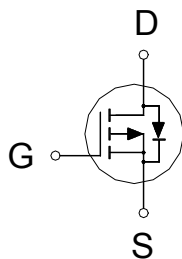


PRODUCT SUMMARY

$V_{(BR)DSS}$	$R_{DS(ON)}$	I_D
-30V	9m Ω	-11A



G : GATE
D : DRAIN
S : SOURCE

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

PARAMETERS/TEST CONDITIONS		SYMBOL	LIMITS	UNITS
Drain-Source Voltage		V_{DS}	-30	V
Gate-Source Voltage		V_{GS}	± 25	V
Continuous Drain Current	$T_A = 25^\circ\text{C}$	I_D	-11	A
	$T_A = 70^\circ\text{C}$		-8.7	
Pulsed Drain Current ¹		I_{DM}	-50	
Avalanche Current		I_{AS}	-35	
Avalanche Energy	$L = 0.1\text{mH}$	E_{AS}	61	mJ
Power Dissipation	$T_A = 25^\circ\text{C}$	P_D	1.8	W
	$T_A = 70^\circ\text{C}$		1.2	
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 ²	$R_{\theta JA}$		68	$^\circ\text{C} / \text{W}$
Junction-to-Case	$R_{\theta JC}$		25	

¹ Pulse width limited by maximum junction temperature.

² The 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 $T_A = 25^\circ\text{C}$.

ELECTRICAL CHARACTERISTICS ($T_J = 25^\circ\text{C}$, Unless Otherwise Noted)

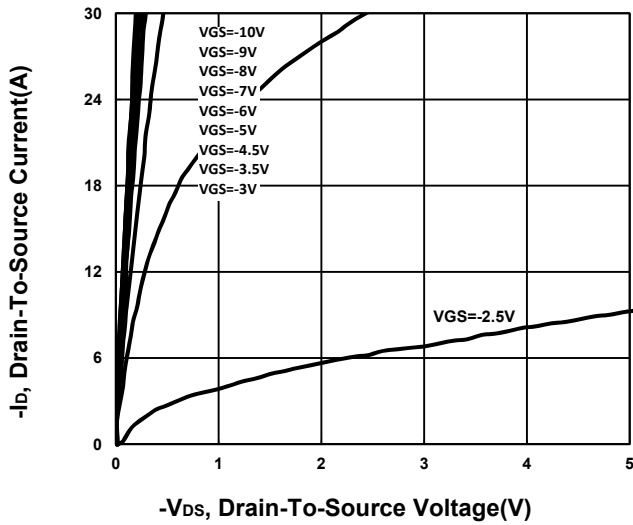
PARAMETER	SYMBOL	TEST CONDITIONS	LIMITS			UNIT
			MIN	TYP	MAX	
STATIC						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = -250\mu A$	-30			V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = -250\mu A$	-1	-1.6	-3	
Gate-Body Leakage	I_{GSS}	$V_{DS} = 0V, V_{GS} = \pm 25V$			± 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	
Drain-Source On-State Resistance ¹	R _{DS(ON)}	V _{GS} = -10V, I _D = -11A		7.2	9	mΩ
		V _{GS} = -4.5V, I _D = -11A		10.4	14	
Forward Transconductance ¹	g _{fs}	V _{DS} = -10V, I _D = -11A		40		S
DYNAMIC						
Input Capacitance	C _{iss}	V _{GS} = 0V, V _{DS} = -15V, f = 1MHz		2664		pF
Output Capacitance	C _{oss}			374		
Reverse Transfer Capacitance	C _{rss}			271		
Gate Resistance	R _g	V _{GS} = 0V, V _{DS} = 0V, f = 1MHz		3.7		Ω
Total Gate Charge ²	Q _{g(VGS=-10V)}	V _{DS} = -15V , I _D = -11A		56		nC
	Q _{g(VGS=-4.5V)}			28		
Gate-Source Charge ²	Q _{gs}			9		
Gate-Drain Charge ²	Q _{gd}			13		
Turn-On Delay Time ²	t _{d(on)}	V _{DD} = -15V I _D ≅ -11A, V _{GS} = -10V, R _{GEN} = 6 Ω		22		nS
Rise Time ²	t _r			26		
Turn-Off Delay Time ²	t _{d(off)}			102		
Fall Time ²	t _f			75		
SOURCE-DRAIN DIODE RATINGS AND CHARACTERISTICS (T _J = 25 °C)						
Continuous Current	I _S				-11	A
Forward Voltage ¹	V _{SD}	I _F = -11A, V _{GS} = 0V			-1.3	V
Reverse Recovery Time	t _{rr}	I _F =-11A, dI/dt=100A/μs		26		nS
Reverse Recovery Charge	Q _{rr}			14		uC

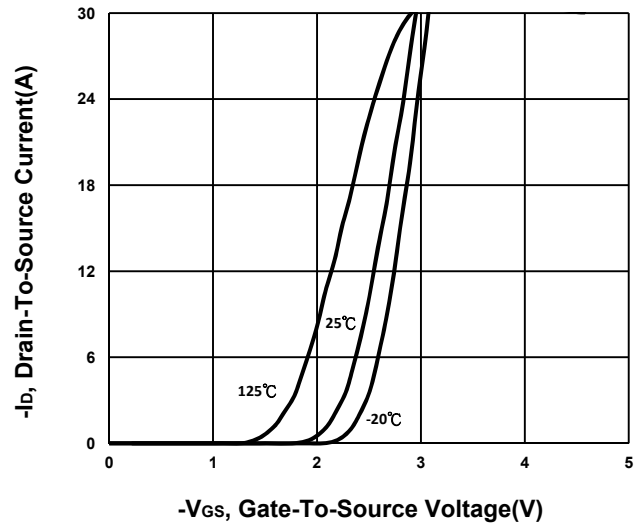
¹Pulse test : Pulse Width $\leq 300 \mu sec$, Duty Cycle $\leq 2\%$.

²Independent of operating temperature.

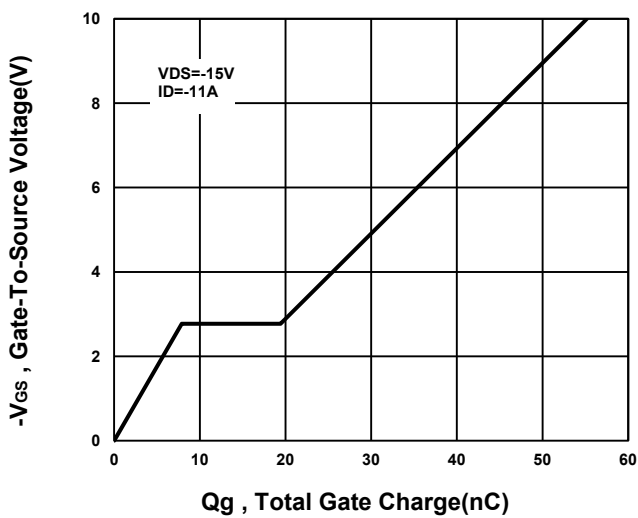
Output Characteristics



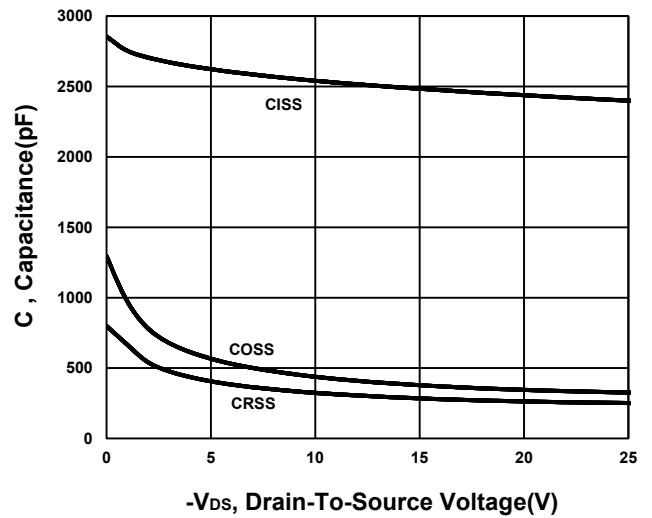
Transfer Characteristics



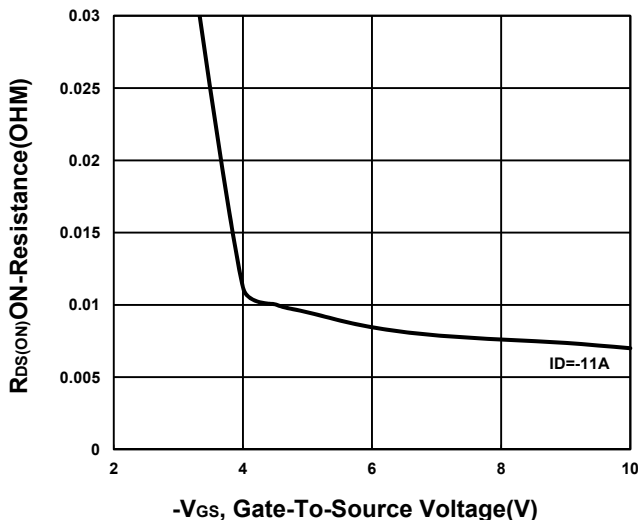
Gate charge Characteristics



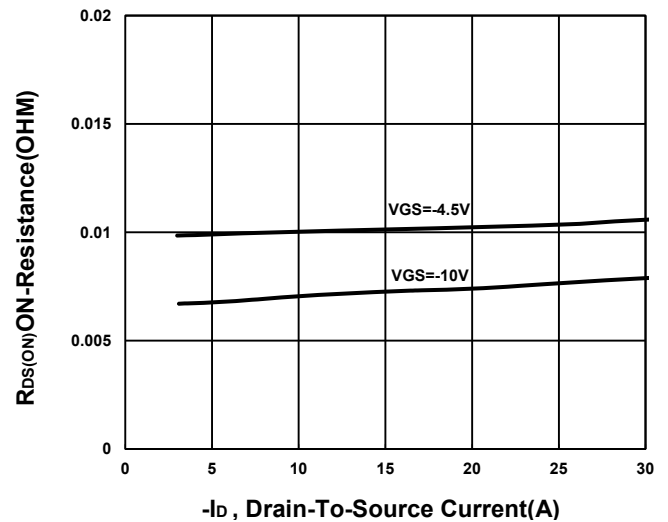
Capacitance Characteristic



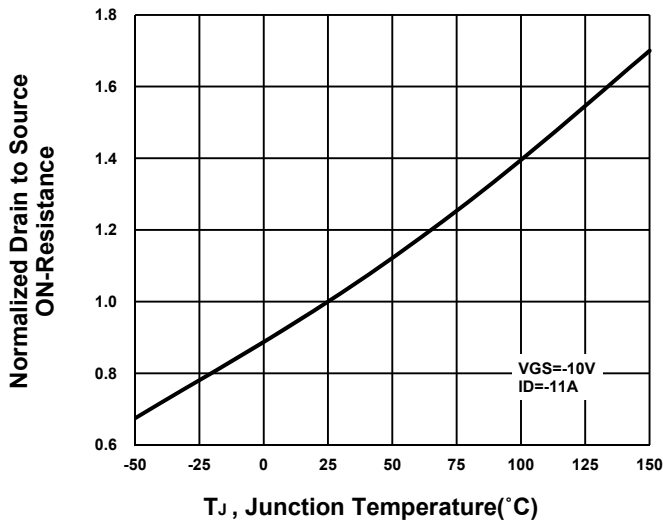
On-Resistance VS Gate-To-Source



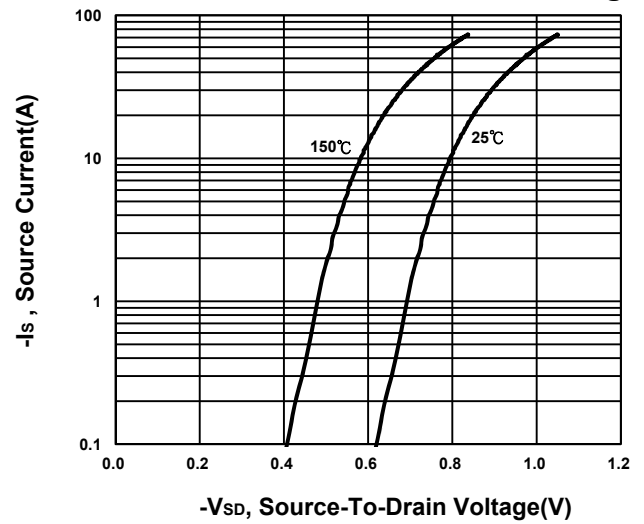
On-Resistance VS Drain Current



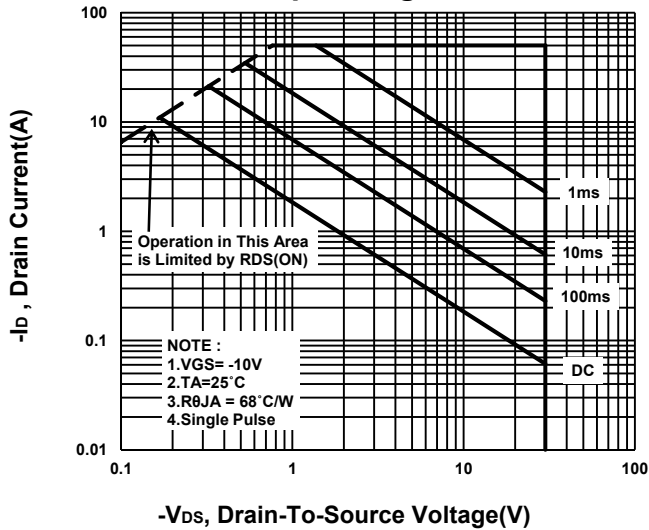
On-Resistance VS Temperature



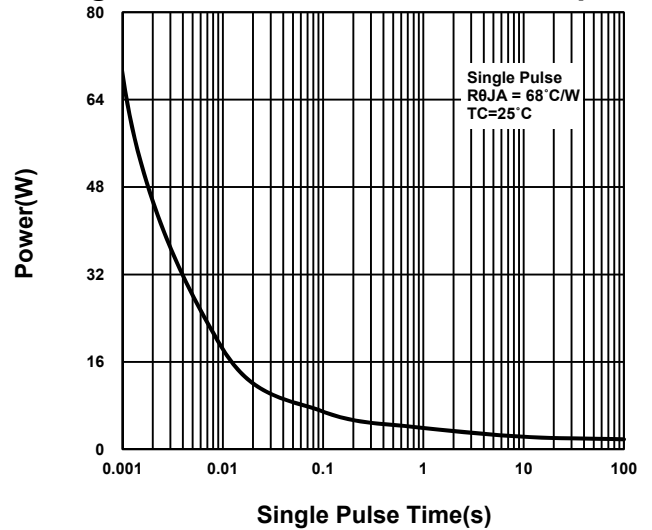
Source-Drain Diode Forward Voltage



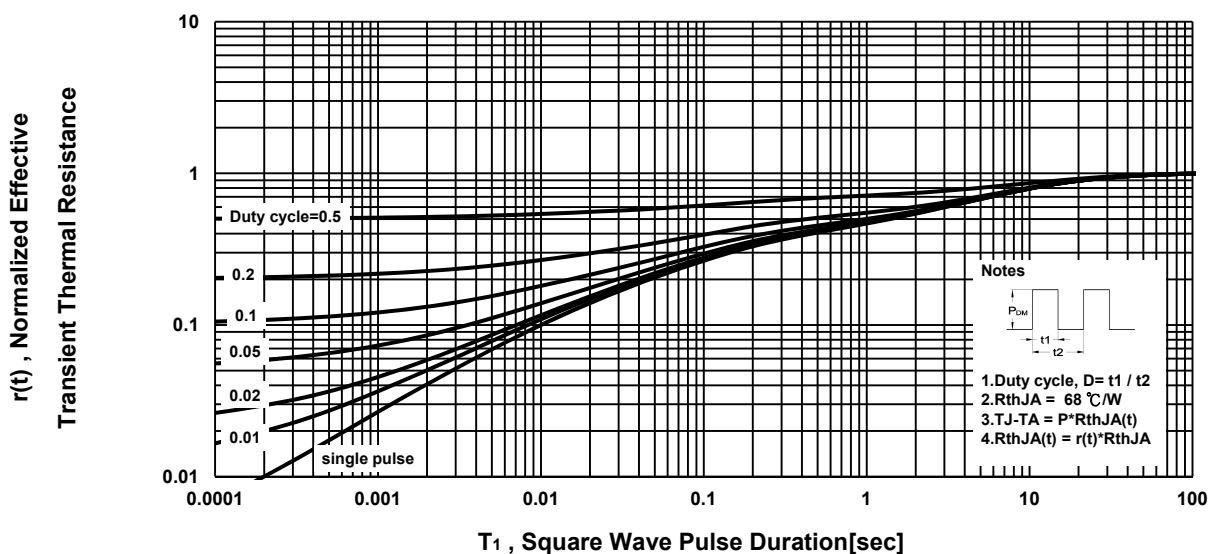
Safe Operating Area



Single Pulse Maximum Power Dissipation



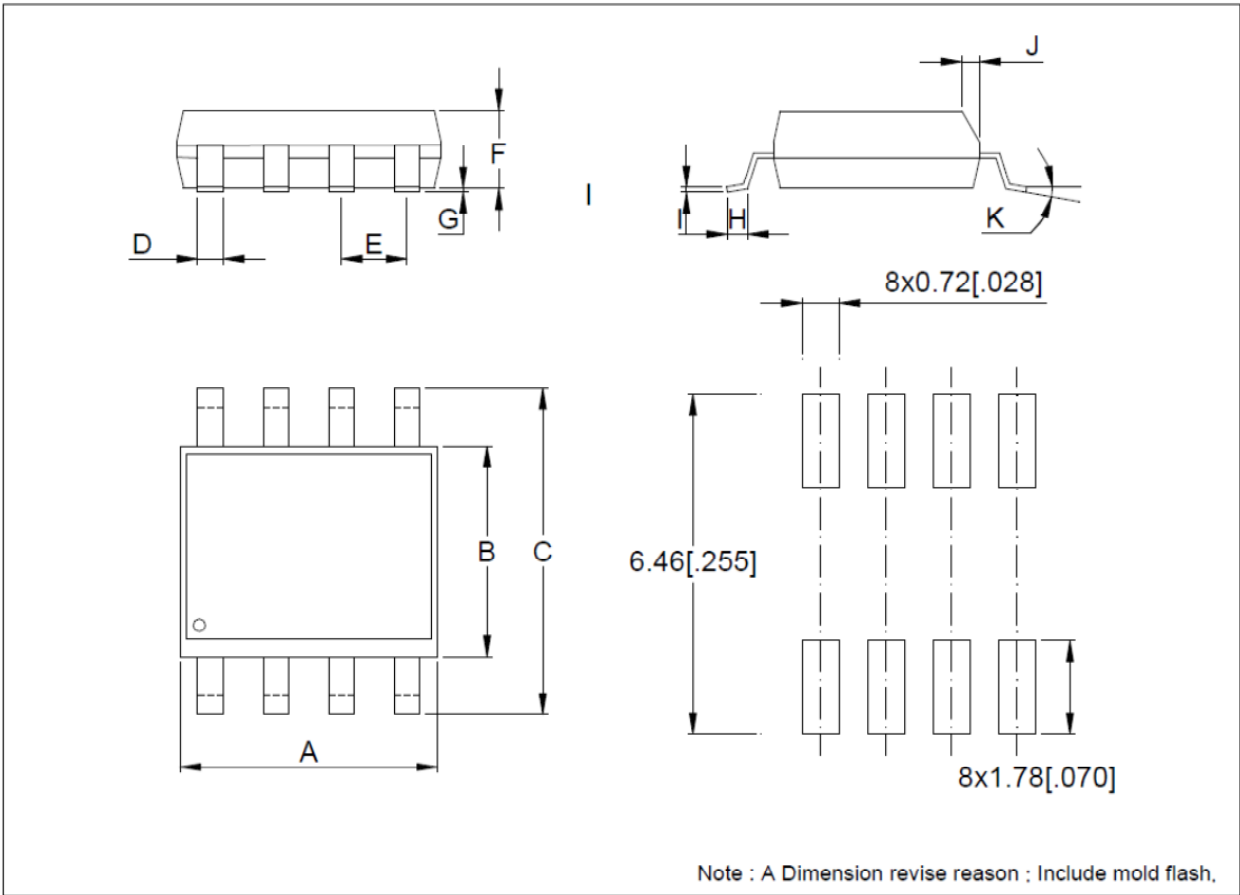
Transient Thermal Response Curve



Package Dimension

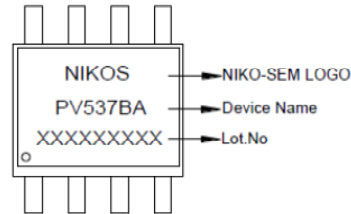
SOP-8 MECHANICAL DATA

Dimension	mm			Dimension	mm		
	Min.	Typ.	Max.		Min.	Typ.	Max.
A	4.8	4.9	5.3	H	0.4	0.6	0.93
B	3.8	3.9	4	I	0.17	0.21	0.25
C	5.79	6	6.2	J	0.25	0.375	0.5
D	0.31	0.4	0.51	K	0°	3°	8°
E	1.25	1.27	1.29				
F	1.15	1.3	1.65				
G	0.05	0.15	0.25				

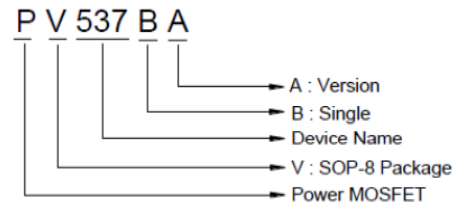


A. Marking Information:(Please see the corresponding data sheet)

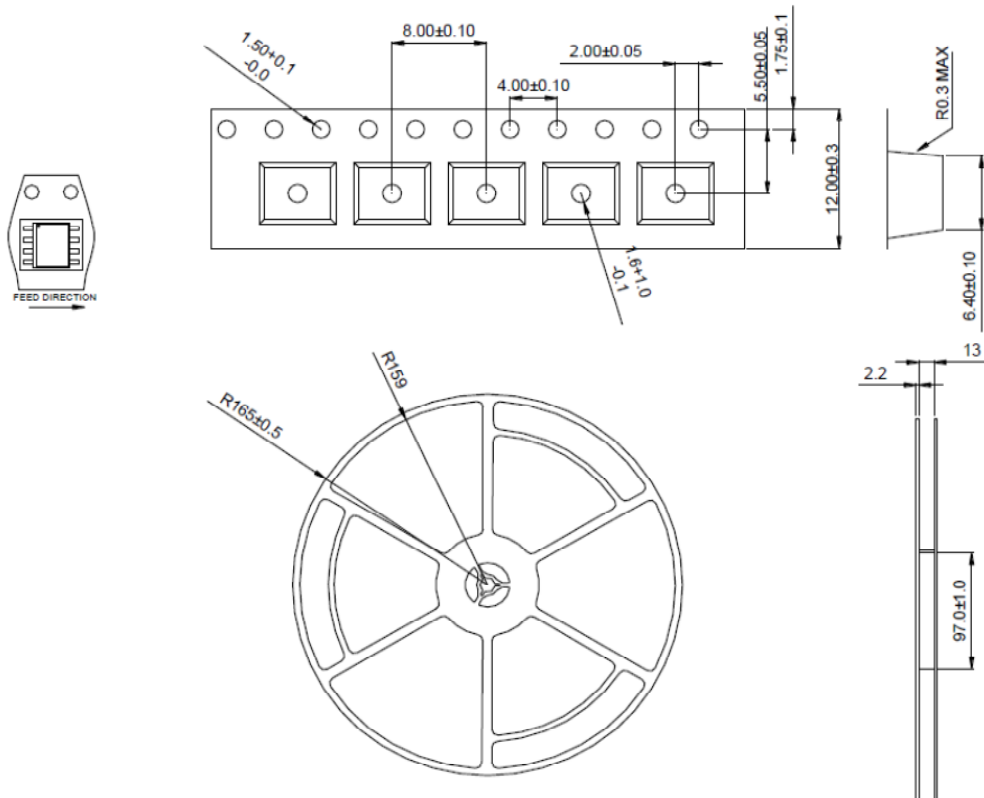
1.零件Marking 文字面說明



2.零件 Part number 說明



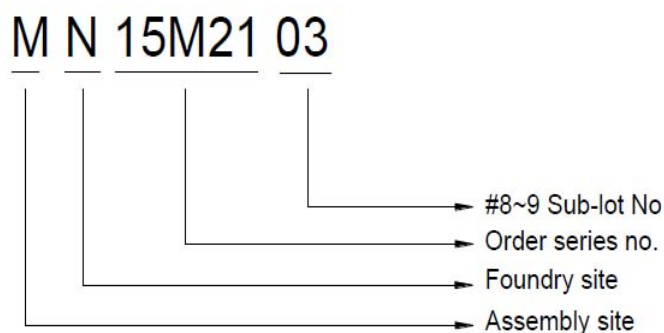
B. Tape&Reel Information:2500pcs/Reel



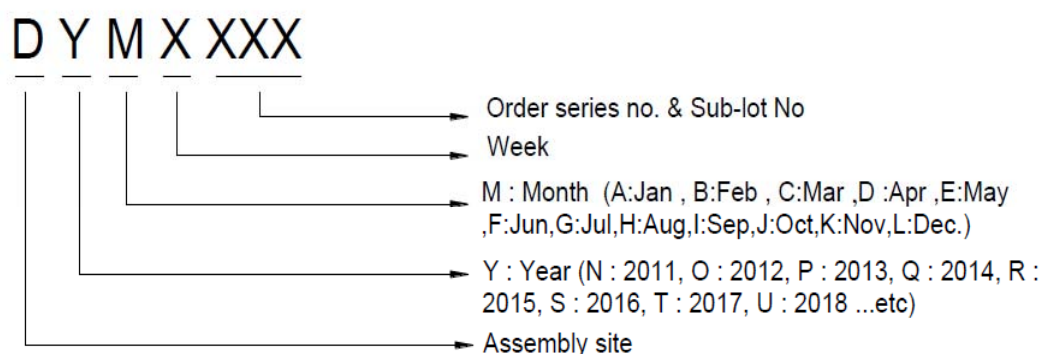
附註:All Dimension in millimeter

C. Lot.No. & Date Code rule

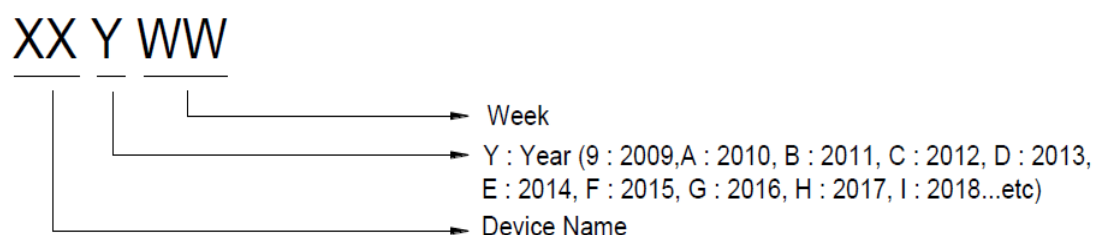
1.LOT.NO.



2.Date Code



3.Date Code (for Small package)



D. Label rule

標籤內容 (Label content)



1	Label Size	30 * 90 mm
2	Font style	Times New Roman or Arial (或可區分英文”O”和數字”0”，”G 和”Q”的字型即可) (Or any font capable of being distinguished for Letter O and digital 0, and for G and Q))
3	NIKO-SEM	Height: 4 mm
4	NIKO SEMICONDUCTOR CO., LTD.	Height: 1 mm
5	Package	Height: 2 mm
6	Date	Height: 2 mm Shipping date: YYYY/MM/DD, ex. 2008/09/12
7	Device	Height: 3 mm (Max: 16 Digit) Device Name not including Rev.
8	Lot	Height: 3 mm (Max: 9 Digit) Sub lot
9	D/C	Height: 3 mm (Max: 7 Digit)
10	QTY	Height: 3 mm (Max: 6 Digit) Thousand mark is no needed
11	Pb Free label	 Diameter: 1 cm bottom color: Green Font color: Black Font style: Arial
12	Halogen Free label	 Diameter: 1 cm bottom color: Green Font color: Black Font style: Arial
13	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