

## Features

- Input Voltage up to 20V
- MOSFET Turn on Resistor RSS(ON)  
=11.9mohm(Max)@Vgs=4.5V
- Drain to Drain MOSFET Module
- With ESD Protection
- Continuous Current=11A
- Green Product (RoHS, Lead-Free,  
Halogen-Free Compliant)

## General Description

The GS95B1CS-R drain to drain connected MOSFET module provides an integrated solution with small dimension for battery pack of Mobile phone and electronic bracelet application.

## Applications

- Mobile phone
- Electronic Bracelet

## Typical Application

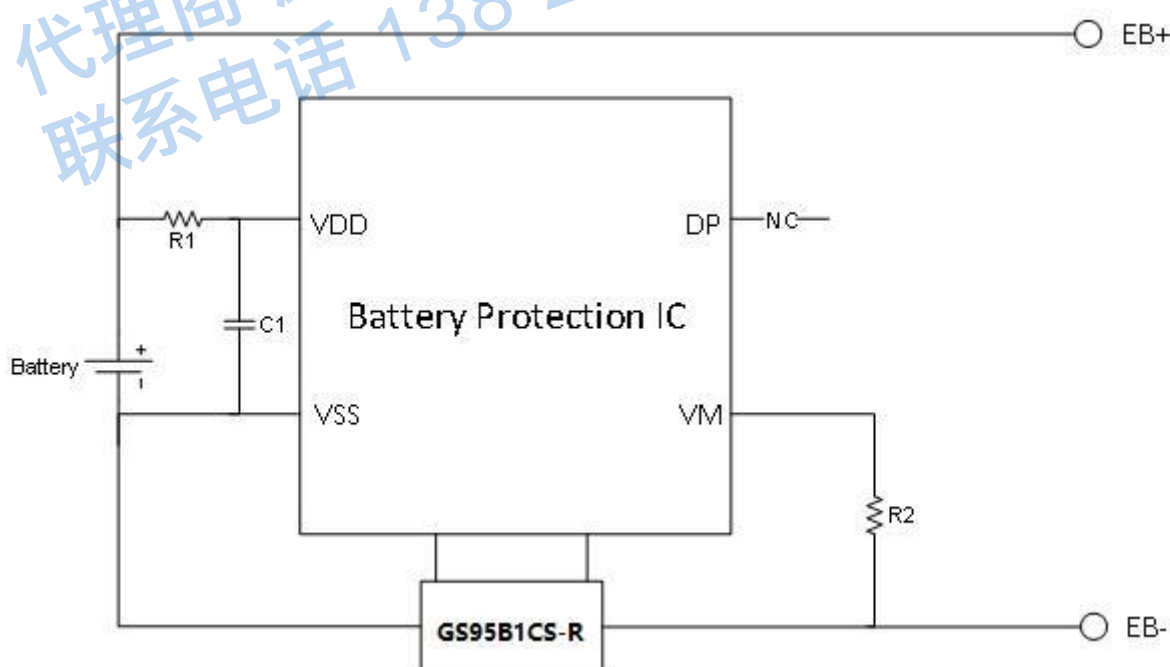


Figure 1 Application of GS95B1CS-R used in battery pack

## Function Block Diagram

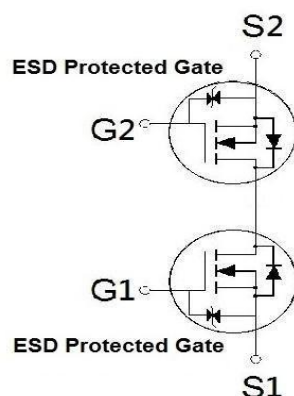


Figure 2 Function Block Diagram

## Pin Configuration

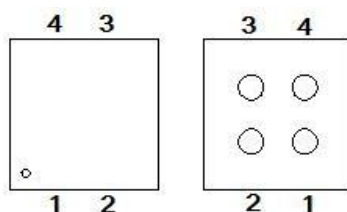


Figure 3 WLCSP 1.8x1.8

## Pin Descriptions

No.	Name	I/O type	Description
1	S1	I/O	Source1
2	G1	I	Gate1
3	G2	I	Gate2
4	S2	I/O	Source2

### Absolute Maximum Ratings (T<sub>A</sub>=25°C Unless Otherwise Noted)

PARAMETER / TEST CONDITIONS	SYMBOL	LIMITS	UNITS
Source-Source Voltage	V <sub>SSS</sub>	20	V
Gate-Source Voltage	V <sub>GSS</sub>	±12	V
Continuous Source Current	I <sub>S</sub>	11	A
Pulsed Source Current <sup>1</sup>	I <sub>SP</sub>	50	A
Total Dissipation <sup>2</sup>	P <sub>T</sub>	1.6	W
Operating Junction & Storage Temperature Range	T <sub>j</sub> & T <sub>stg</sub>	-55~150	°C

### Thermal Characteristics

PARAMETER / TEST CONDITIONS	SYMBOL	Typical	UNITS
Thermal Resistance <sup>2</sup>	R <sub>θJA</sub>	67	°C / W

<sup>1</sup>PW≤10μs, duty cycle≤1%.

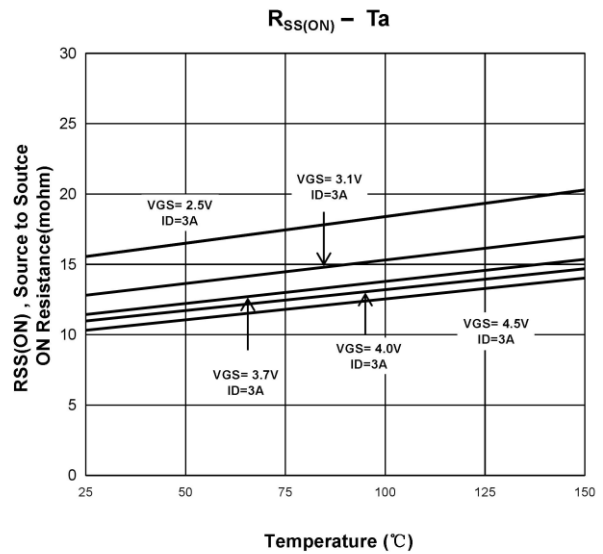
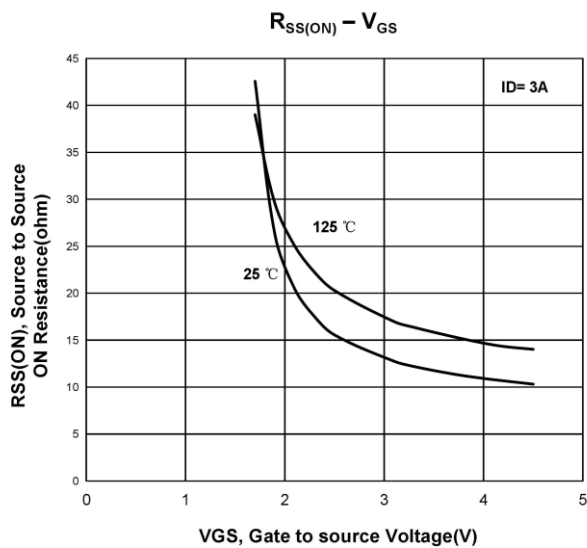
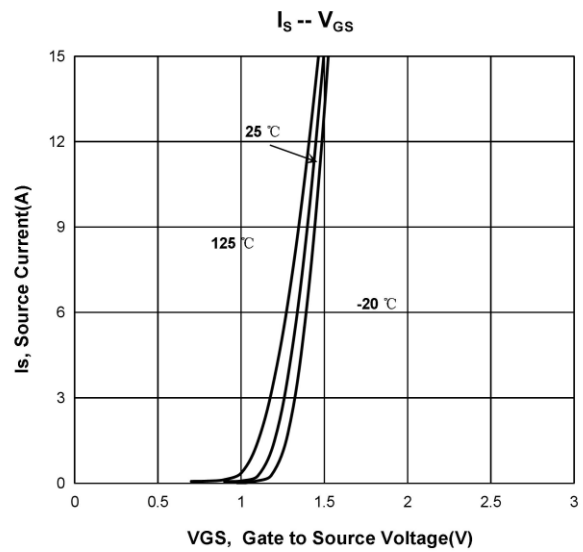
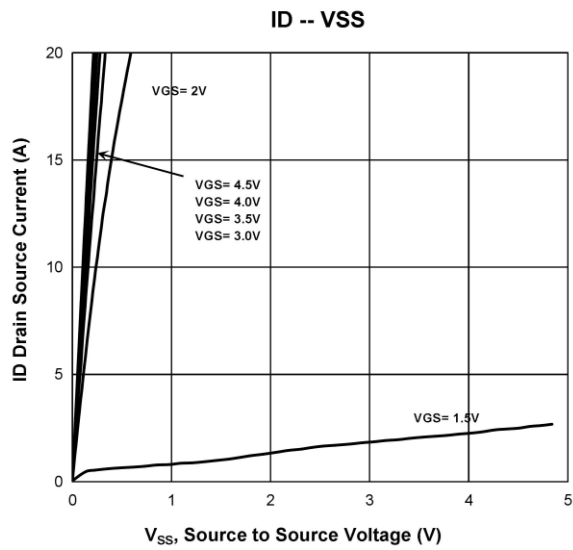
<sup>2</sup>When mounted on FR-4 board.

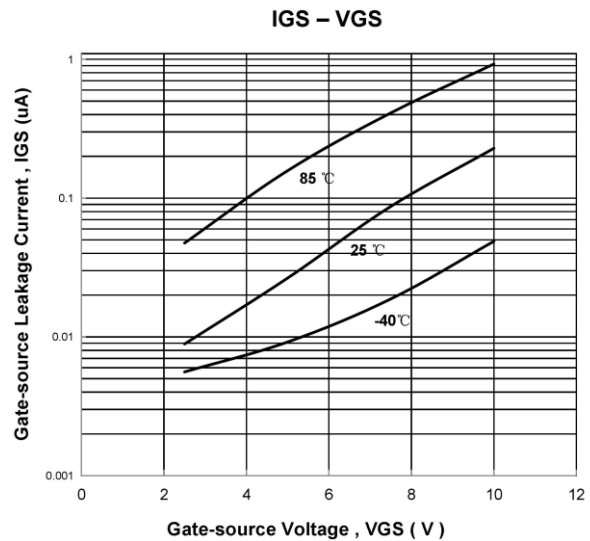
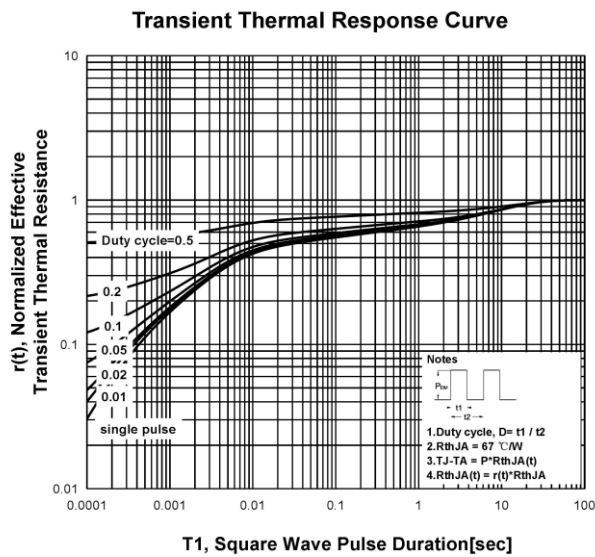
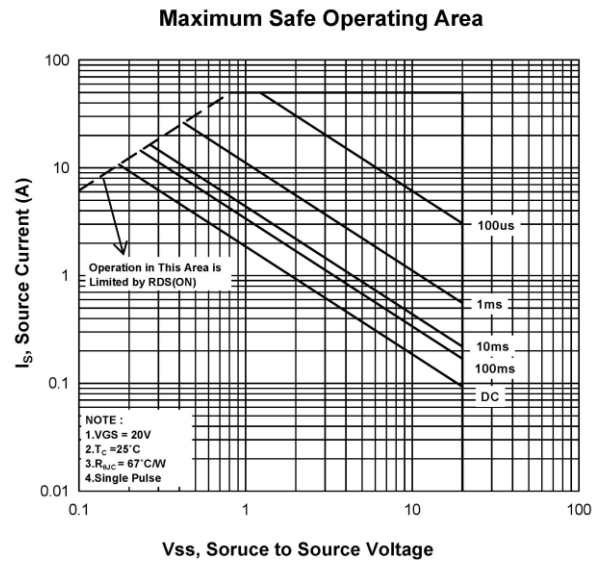
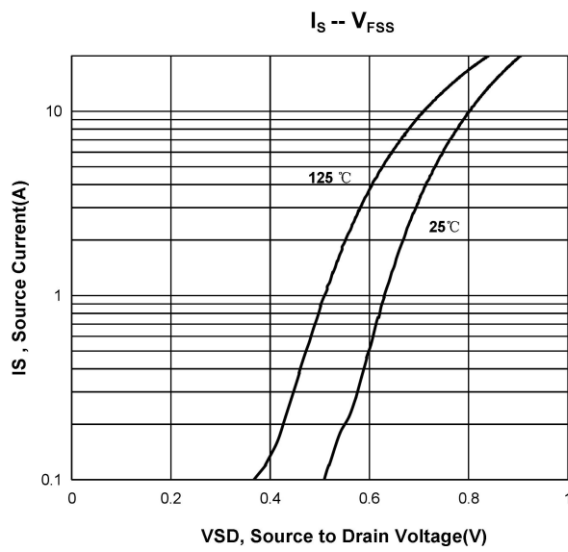
# Electrical Characteristics (T<sub>J</sub>=25°C Unless Otherwise Noted)

PARAMETER	SYMBOL	TEST CONDITIONS	LIMITS			UNITS
			MIN	TYP	MAX	
STATIC						
Source-Source Breakdown Voltage	V <sub>(BR)SSS</sub>	V <sub>GS</sub> = 0V, I <sub>S</sub> =250uA	20			V
Gate Threshold Voltage	V <sub>GS(th)</sub>	V <sub>SS</sub> = V <sub>GS</sub> , I <sub>S</sub> = 250uA		0.9		V
Gate-Source Leakage	I <sub>GSS</sub>	V <sub>SS</sub> = 0V, V <sub>GS</sub> = ±10V			±10	uA
Zero Gate Voltage Source Current	I <sub>SSS</sub>	V <sub>SS</sub> = 20V , V <sub>GS</sub> = 0V			1	uA
Drain-Source On-State Resistance <sup>1</sup>	R <sub>SS(ON)</sub>	V <sub>GS</sub> = 4.5V, I <sub>S</sub> = 3A	7.0	9.4	11.9	mΩ
		V <sub>GS</sub> = 4.0V, I <sub>S</sub> = 3A	7.2	9.8	12.5	
		V <sub>GS</sub> = 3.7V, I <sub>S</sub> = 3A	7.4	10.2	14.0	
		V <sub>GS</sub> = 3.1V, I <sub>S</sub> = 3A	8.0	11.1	15.5	
		V <sub>GS</sub> = 2.5V, I <sub>S</sub> = 3A	8.6	13.0	20	
Forward Transfer Admittance <sup>1</sup>	g <sub>fs</sub>	V <sub>SS</sub> = 5V, I <sub>S</sub> =3A		29.5		S
DYNAMIC						
Gate Resistance	R <sub>g</sub>	F= 1MHz		1.5		k Ω
Turn-On Delay Time <sup>2</sup>	t <sub>d(on)</sub>	V <sub>SS</sub> = 10V, V <sub>GS</sub> = 4.5V, I <sub>S</sub> ≅ 3A		0.50		uS
Rise Time <sup>2</sup>	t <sub>r</sub>			1.14		
Turn-Off Delay Time <sup>2</sup>	t <sub>d(off)</sub>			2.90		
Fall Time <sup>2</sup>	t <sub>f</sub>			2.45		
SOURCE-DRAIN DIODE RATINGS AND CHARACTERISTICS (T <sub>J</sub> = 25 °C)						
Forward Source-Source Voltage <sup>1</sup>	V <sub>F</sub>	I <sub>S</sub> = 1A, V <sub>GS</sub> = 0V		0.6		V

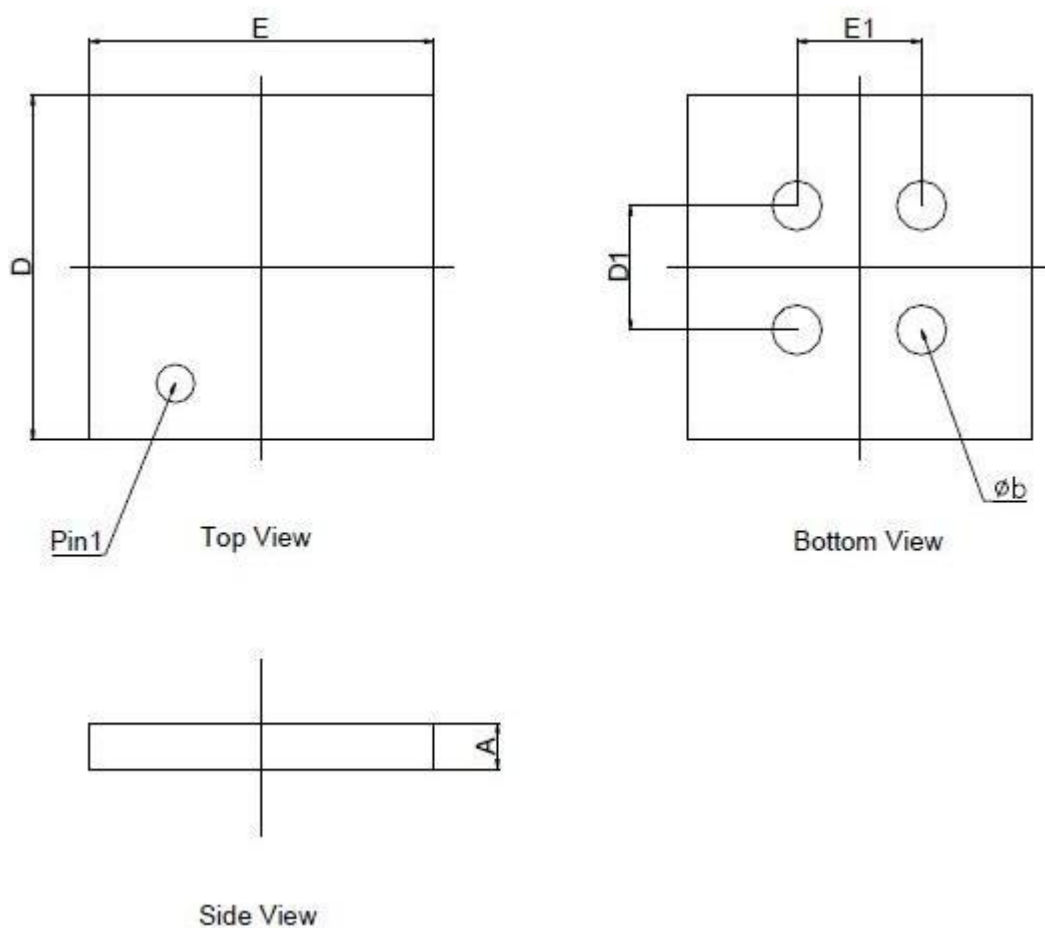
<sup>1</sup>Pulse test : Pulse Width ≤ 300 μsec, Duty Cycle ≤ 2%.

<sup>2</sup>Independent of operating temperature.





## Package Dimensions, WLCSP 1.8x1.8

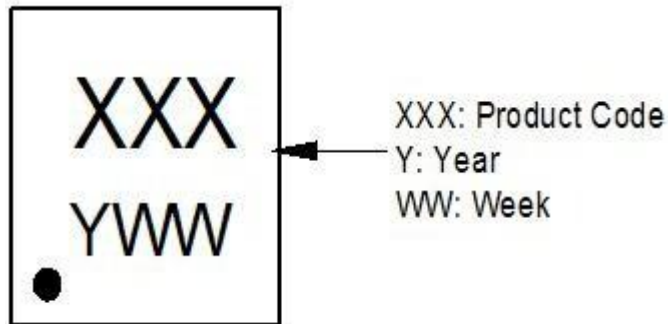


Symbol	Dimensions in Millimeters		
	Min.	Typ.	Max.
A	0.100	0.105	0.110
øb		0.26	
D		1.8	
D1		0.65	
E		1.8	
E1		0.65	

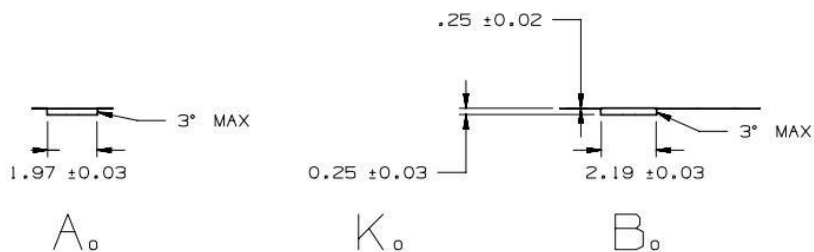
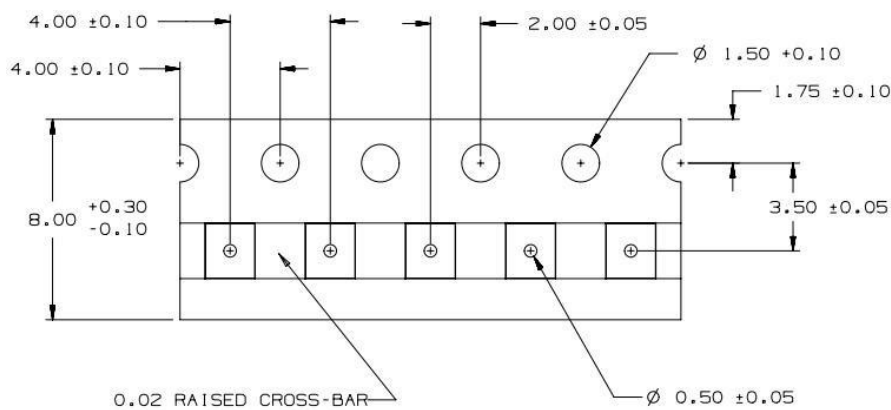
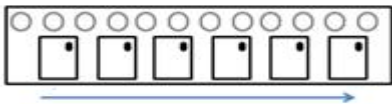
### Note

- 1.Min.: Minimum dimension specified.
- 2.Max.: Maximum dimension specified.
- 3.Typ.: Typical dimension specified for reference.

## A. Marking Information(Product Code : A26)



## B. Tape&Reel Information : 3000pcs/Reel

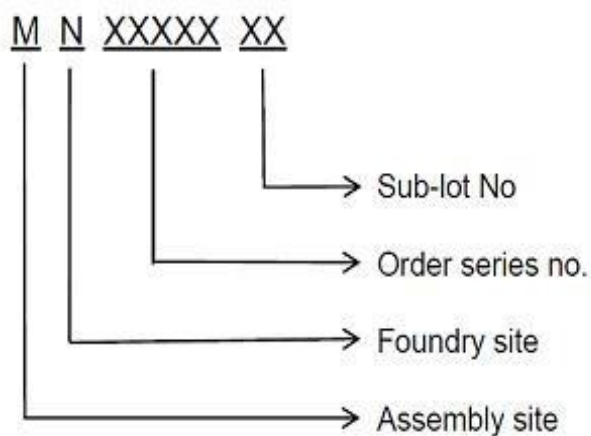


**Note: All Dimension in millimeter**

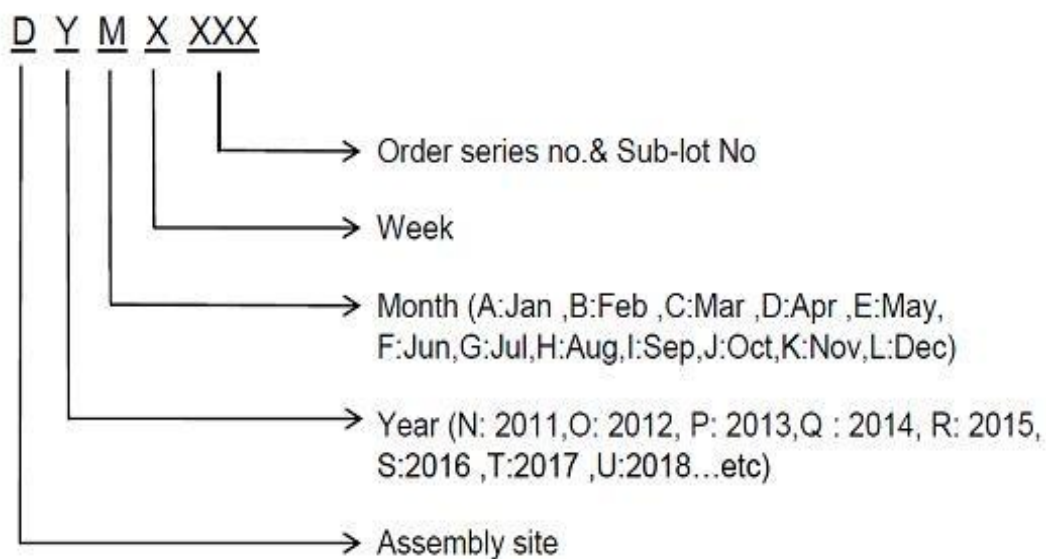


## C. Lot No. & Date Code Rule

### 1. Lot No.





### 2. Date Code



## D.Label rule

### 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

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