

## Features

- Input Voltage up to 12V
- MOSFET Turn on Resistor RSS(ON)  
=2.2mohm(Typ)@Vgs=3.8V
- Drain to Drain MOSFET Module
- With ESD Protection
- Continuous Current=13.5A
- Green Product (RoHS, Lead-Free, Halogen-Free Compliant)

## General Description

The GS95B3CS-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

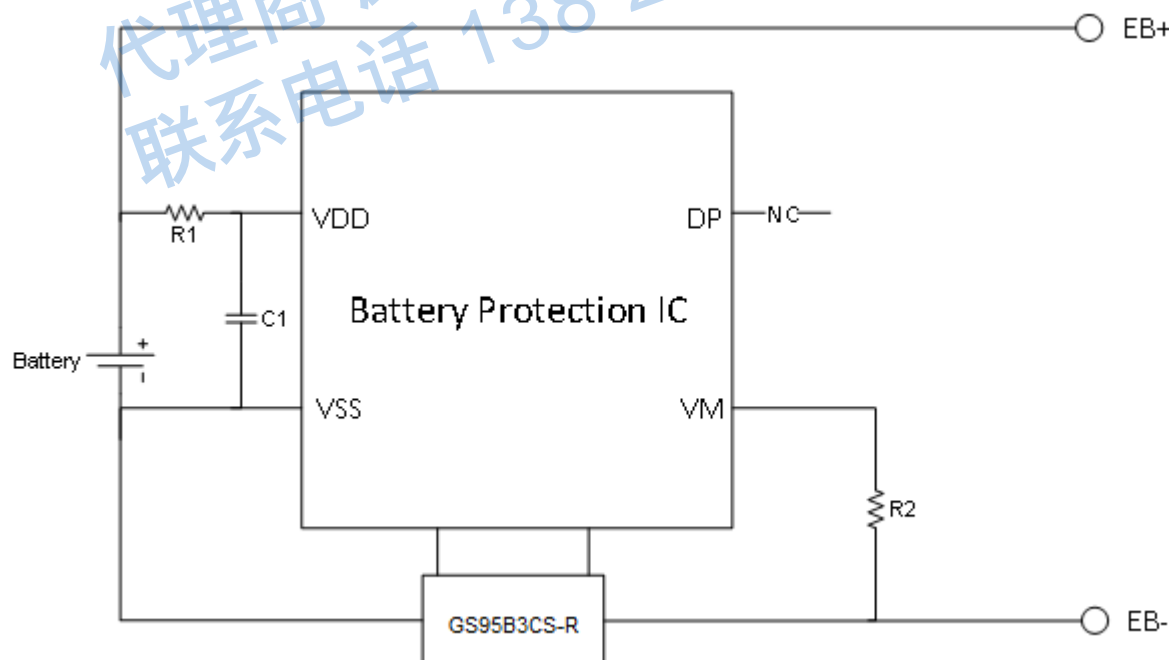


Figure 1 Application of GS95B3CS-R used in battery pack

## Function Block Diagram

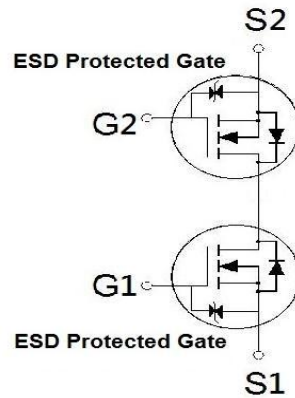


Figure 2 Function Block Diagram

## Pin Configuration

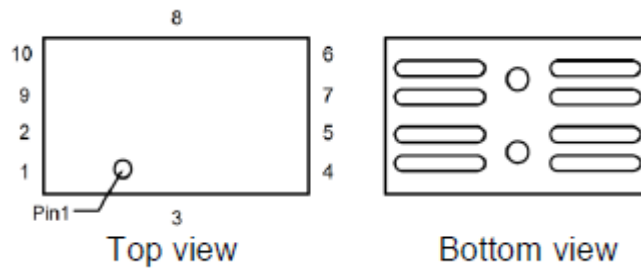


Figure 3 WLCSP 2.98x1.49

## Pin Descriptions

No.	Name	I/O type	Description
1	S1	I/O	Source1
2	S1	I/O	Source1
3	G1	I	Gate1
4	S1	I/O	Source1
5	S1	I/O	Source1
6	S2	I/O	Source2
7	S2	I/O	Source2
8	G2	I	Gate2
9	S2	I/O	Source2
10	S2	I/O	Source2

**Absolute Maximum Ratings ( $T_A=25^{\circ}\text{C}$  Unless Otherwise Noted)**

PARAMETER / TEST CONDITIONS	SYMBOL	LIMITS	UNITS
Source-Source Voltage	$V_{SSS}$	12	V
Gate-Source Voltage	$V_{GSS}$	$\pm 8$	V
Continuous Source Current <sup>2</sup>	$I_S$	13.5	A
Pulsed Source Current <sup>1</sup>	$I_{SP}$	127	A
Total Dissipation <sup>2</sup>	$P_T$	0.54	W
Thermal Resistance <sup>2</sup>	$R_{\theta JA}$	51	$^{\circ}\text{C} / \text{W}$
Operating Junction & Storage Temperature Range	$T_j$ & $T_{stg}$	-55~150	$^{\circ}\text{C}$

<sup>1</sup> $PW \leq 100\mu\text{s}$ , duty cycle  $\leq 2\%$ .

<sup>2</sup>When mounted on 1in<sup>2</sup> FR-4 board.

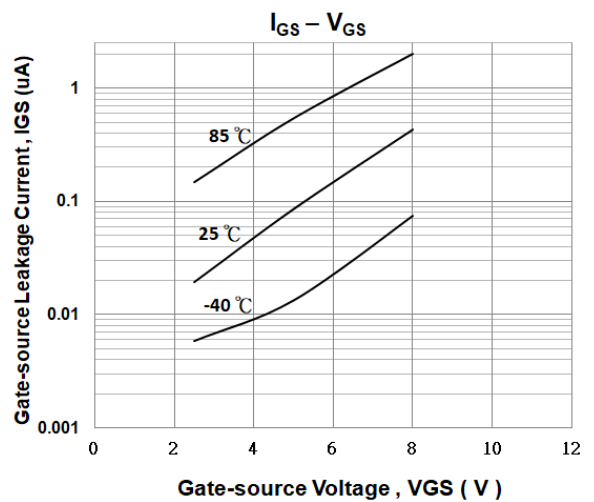
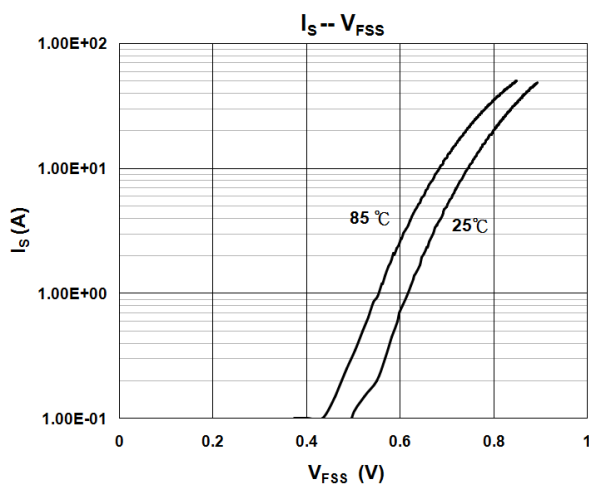
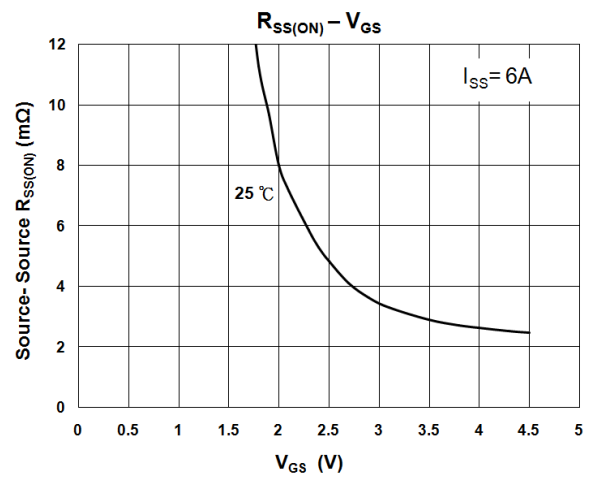
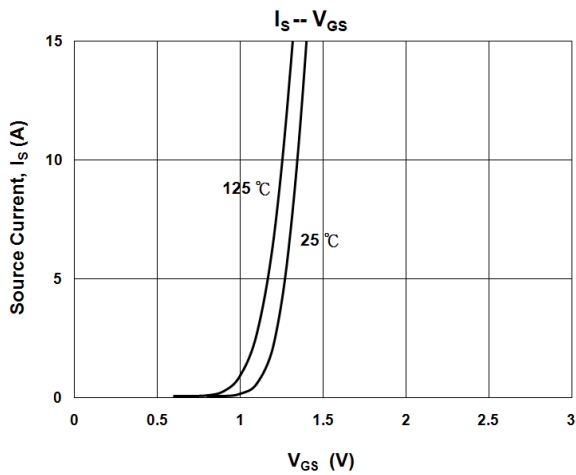
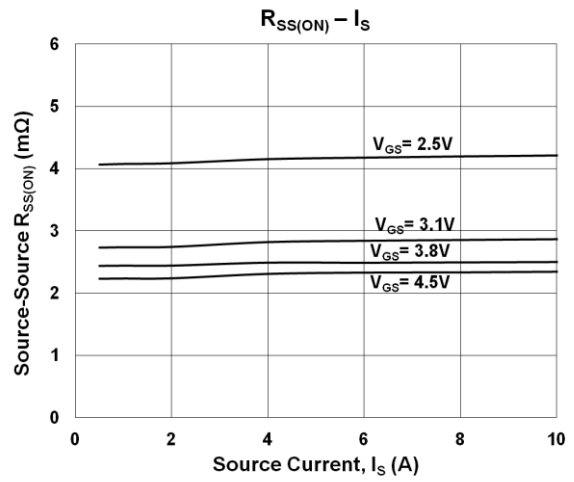
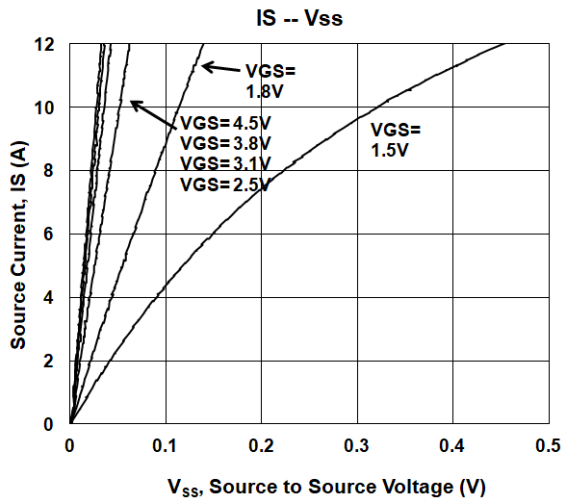
**Electrical Characteristics ( $T_J=25^{\circ}\text{C}$  Unless Otherwise Noted)**

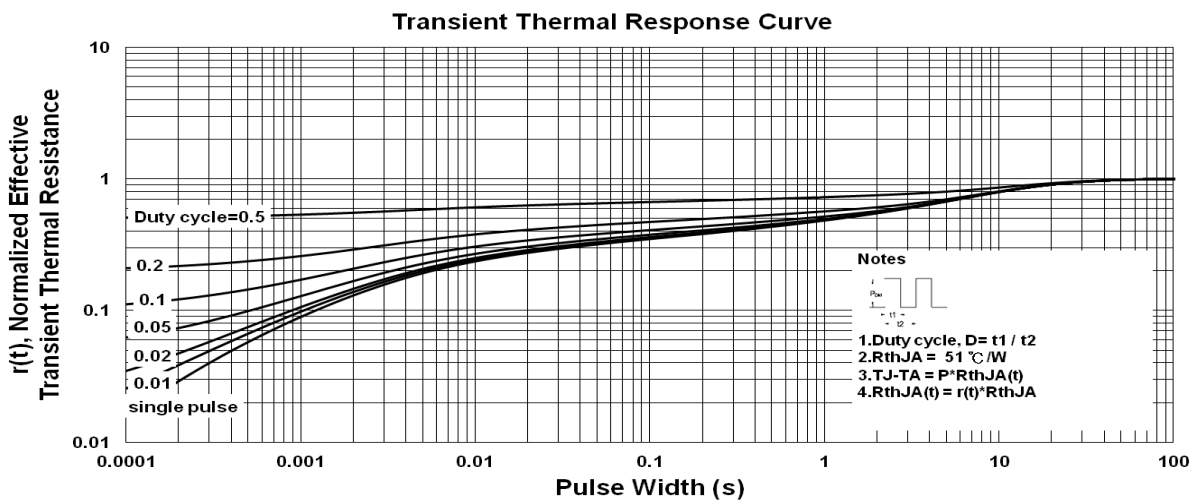
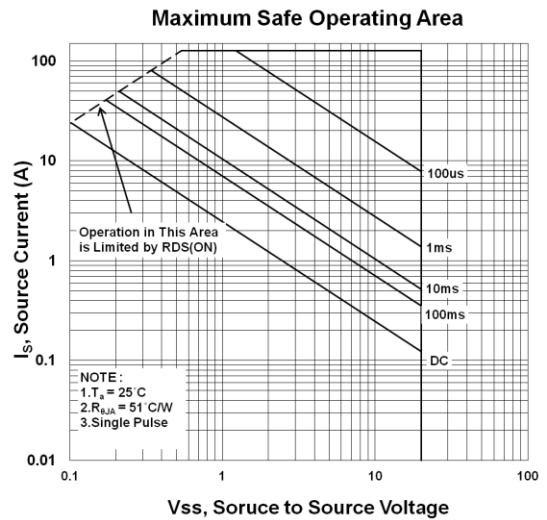
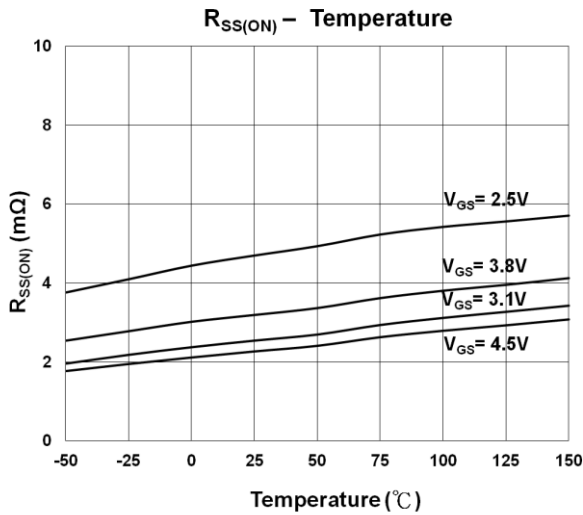
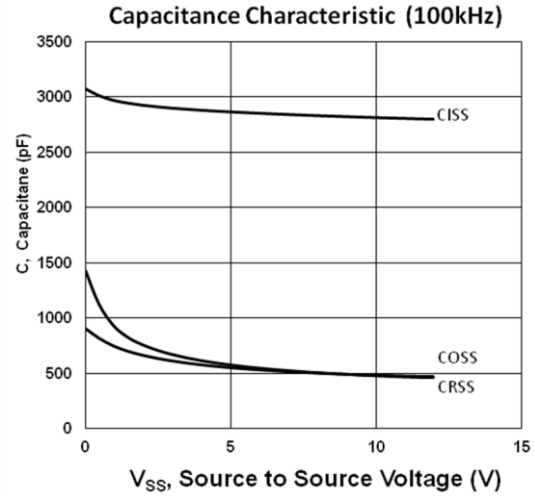
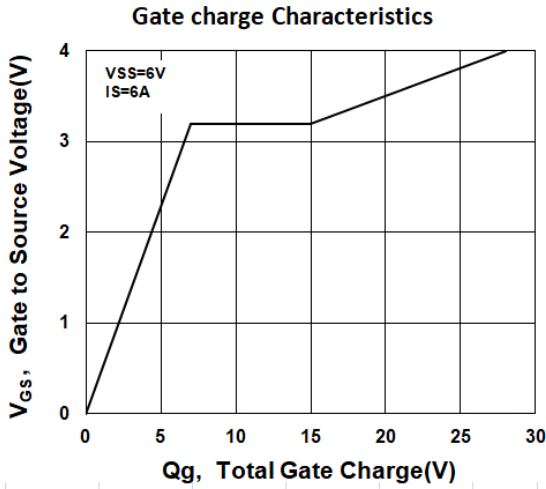
PARAMETER	SYMBOL	TEST CONDITIONS	LIMITS			UNITS
			MIN	TYP	MAX	
<b>STATIC</b>						
Source-Source Breakdown Voltage	$V_{(BR)SSS}$	$V_{GS} = 0V, I_S = 250\mu\text{A}$	12			V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{SS} = V_{GS}, I_S = 250\mu\text{A}$		0.9	1.4	V
Gate-Source Leakage	$I_{GSS}$	$V_{SS} = 0V, V_{GS} = \pm 8V$			$\pm 10$	$\mu\text{A}$
		$V_{SS} = 0V, V_{GS} = \pm 5V$			$\pm 1$	$\mu\text{A}$
Zero Gate Voltage Source Current	$I_{SSS}$	$V_{SS} = 12V, V_{GS} = 0V$			1	$\mu\text{A}$
Drain-Source On-State Resistance <sup>1</sup>	$R_{SS(ON)}$	$V_{GS} = 4.5V, I_S = 6A$	1.55	2.1	2.75	m $\Omega$
		$V_{GS} = 3.8V, I_S = 6A$	1.6	2.2	2.85	
		$V_{GS} = 3.1V, I_S = 6A$	1.65	2.4	3.95	
		$V_{GS} = 2.5V, I_S = 6A$	1.9	3.1	6.1	

DYNAMIC						
Input Capacitance	$C_{iss}$			2819		pF
Output Capacitance	$C_{oss}$	$V_{GS} = 0V, V_{SS} = 10V, f = 100kHz$		486		
Reverse Transfer Capacitance	$C_{rss}$			483		
Total Gate Charge <sup>2</sup>	$Q_g$	$V_{SS} = 6V, V_{GS} = 4V, I_S = 6A$		28		nC
Gate-source Charge <sup>2</sup>	$Q_{gs}$			7		
Gate-drain Charge <sup>2</sup>	$Q_{gd}$			8		
Turn-On Delay Time <sup>2</sup>	$t_{d(on)}$	$V_{SS} = 6V, V_{GS} = 4V, I_S \cong 6A$		1.70		uS
Rise Time <sup>2</sup>	$t_r$			4.93		
Turn-Off Delay Time <sup>2</sup>	$t_{d(off)}$			7.21		
Fall Time <sup>2</sup>	$t_f$			9.22		
SOURCE-DRAIN DIODE RATINGS AND CHARACTERISTICS ( $T_J = 25^\circ C$ )						
Forward Source-Source Voltage <sup>1</sup>	$V_F$	$I_S = 6A, V_{GS} = 0V$		0.6		V

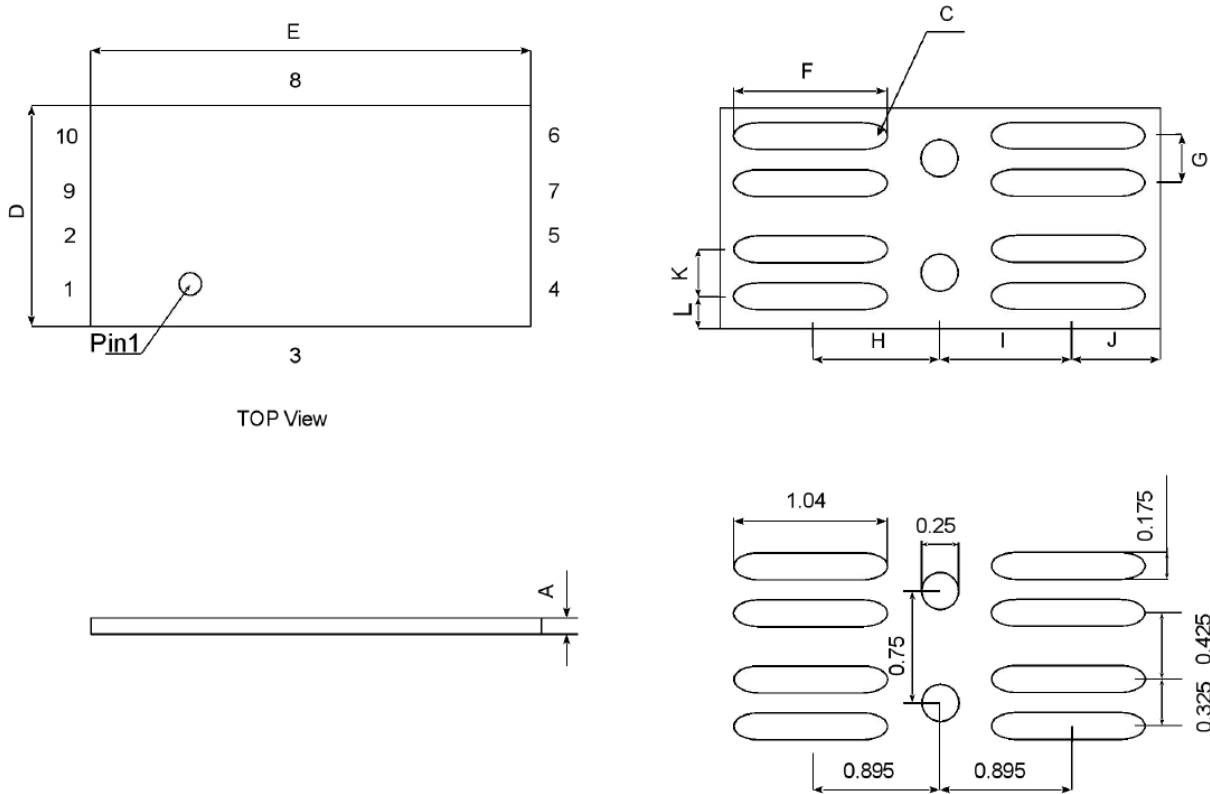
<sup>1</sup>Pulse test : Pulse Width  $\leq 300 \mu\text{sec}$ , Duty Cycle  $\leq 2\%$ .

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





**Package Dimensions, WLCSP 2.98x1.49**

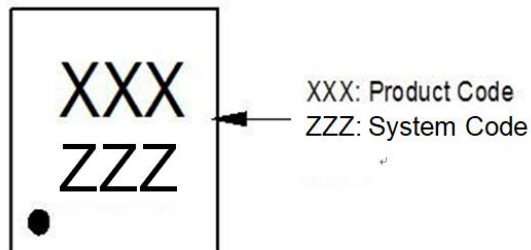


Symbol	Dimensions in Millimeters			Symbol	Dimensions in Millimeters		
	Min.	Typ.	Max.		Min.	Typ.	Max.
A		0.13		H		0.895	
C		R0.0875		I		0.895	
D		1.49		J		0.595	
E		2.98		K		0.325	
F		1.04		L		0.2075	
G		0.325					

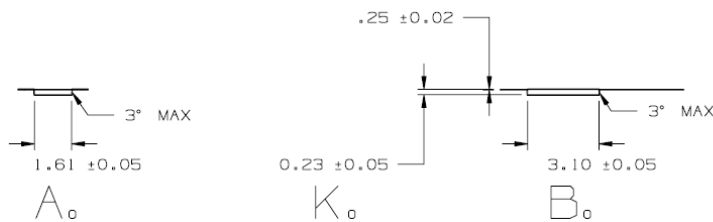
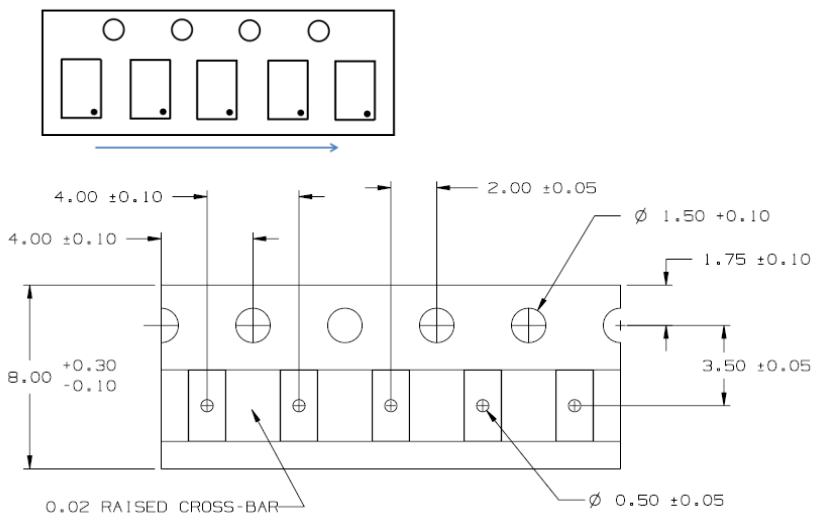
**Note**

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

**A. Marking Information(Product Code: A28)**



**B. Tape&Reel Information:5000pcs/Reel**

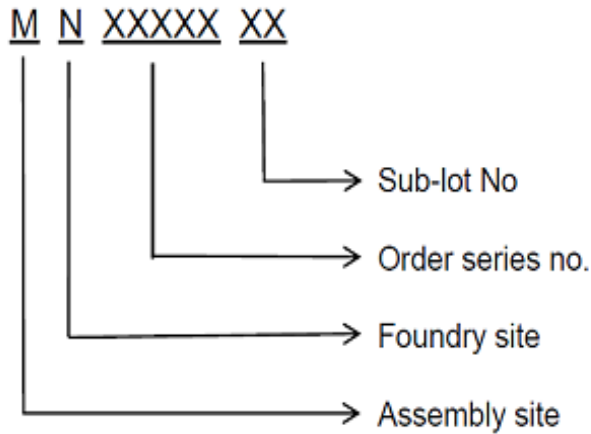


**Note: All Dimension in millimeter**

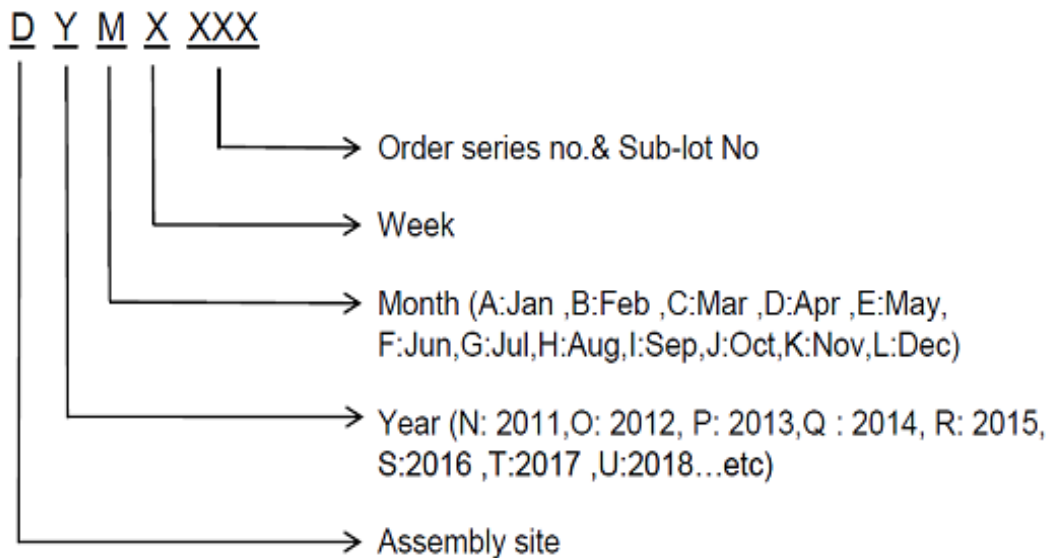


### C. Lot No. & Date Code Rule

#### 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	Device	Height: 3 mm (Max: 16 Digit)
6	Lot	Height: 3 mm (Max: 9 Digit) Sub lot
7	D/C	Height: 3 mm (Max: 7 Digit)
8	QTY	Height: 3 mm (Max: 6 Digit) Thousand mark is no needed
9	RoHS label	 long axis: 12 mm      minor axis: 6 mm bottom color: White Font color: Black      Font style: Arial
10	Halogen Free label	 Diameter: 10 mm      bottom color: Green Font color: Black      Font style: Arial
11	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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