

Features

- Input Voltage up to 30V
- MOSFET Turn on Resistor RSS(ON) =7.8mohm(Max)@Vgs=10V
- Drain to Drain MOSFET Module
- With ESD Protection
- Continuous Current=14A
- Green Product (RoHS, Lead-Free, Halogen-Free Compliant)

General Description

The GS95B0CS-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

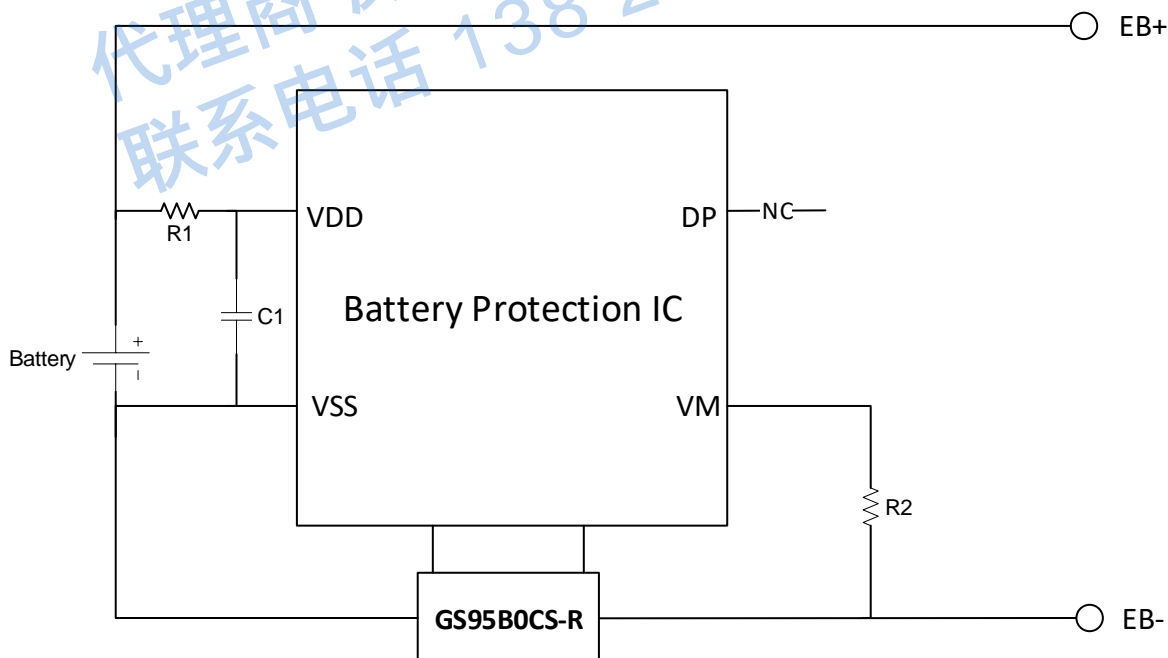


Figure 1 Application of GS95B0CS-R used in battery pack

Function Block Diagram

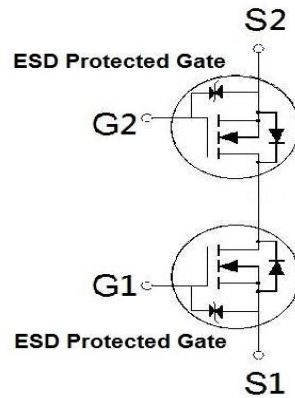


Figure 2 Function Block Diagram

Pin Configuration

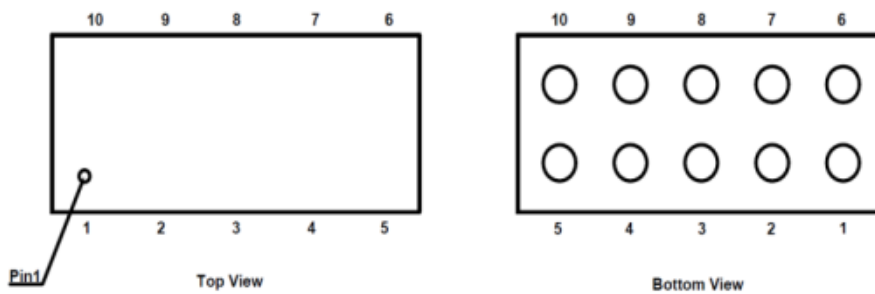


Figure 3 WLCSP 3.34x1.44

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}	30	V
Gate-Source Voltage	V_{GSS}	± 20	V
Continuous Source Current	I_S	14	A
Pulsed Source Current ¹	I_{SP}	76	A
Total Dissipation	P_T	2.5	W
Thermal Resistance ¹	$R_{\theta JA}$	52	$^{\circ}\text{C} / \text{W}$
Operating Junction & Storage Temperature Range	T_j & T_{stg}	-55~150	$^{\circ}\text{C}$

¹The value of $R_{\theta JA}$ is measured with the device mounted on 1in^2 FR-4 board with 2oz. Copper, in a still air environment with $T_A=25^{\circ}\text{C}$

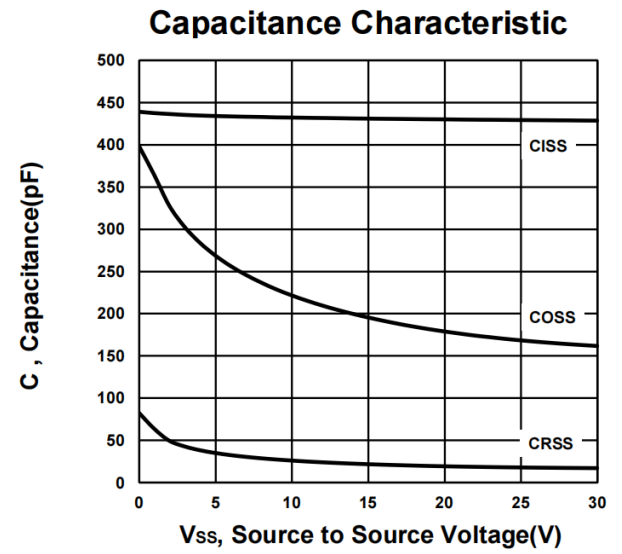
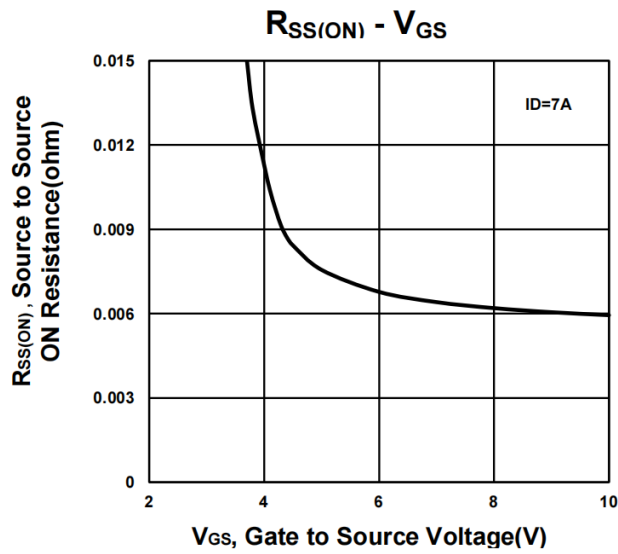
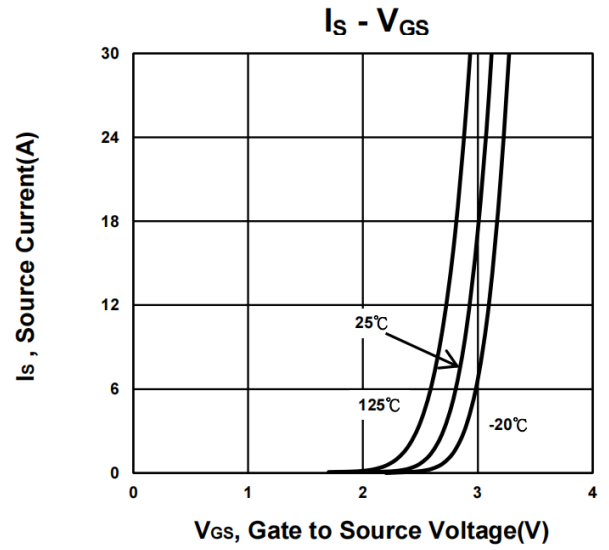
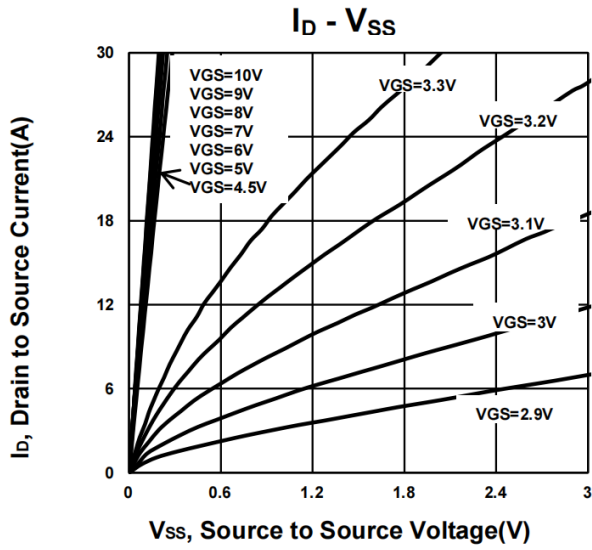
Electrical Characteristics ($T_J=25^{\circ}\text{C}$ Unless Otherwise Noted)

PARAMETER	SYMBOL	TEST CONDITIONS	LIMITS			UNITS
			MIN	TYP	MAX	
STATIC						
Source-Source Breakdown Voltage	$V_{(BR)SSS}$	$V_{GS} = 0\text{V}, I_S = 250\mu\text{A}$	30			V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{SS} = 10\text{V}, I_S = 250\mu\text{A}$	1.3	1.8	2.3	V
Gate-Source Leakage	I_{GSS}	$V_{SS} = 0\text{V}, V_{GS} = \pm 16\text{V}$			± 10	μA
Zero Gate Voltage Source Current	I_{SSS}	$V_{SS} = 30\text{V}, V_{GS} = 0\text{V}$			1	μA
Drain-Source On-State Resistance ¹	$R_{SS(ON)}$	$V_{GS} = 10\text{V}, I_S = 7\text{A}$	4.7	6.2	7.8	m Ω
		$V_{GS} = 4.5\text{V}, I_S = 7\text{A}$	6.4	8.5	11	
Forward Transfer Admittance ¹	g_{fs}	$V_{SS} = 5\text{V}, I_S = 7\text{A}$		45		S
DYNAMIC						
Input Capacitance	C_{iss}	$V_{GS} = 0\text{V}, V_{DS} = 15\text{V}, f = 1\text{MHz}$		433		pF
Output Capacitance	C_{oss}			195		
Reverse Transfer Capacitance	C_{rss}			21		

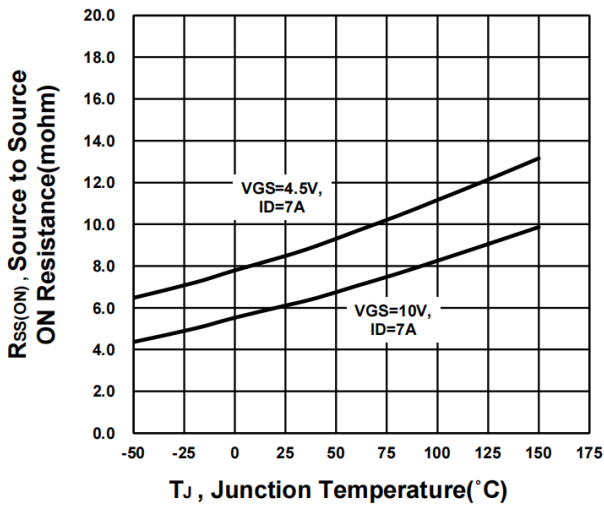
Total Gate Charge ²	Q_g	$V_{SS} = 15V, V_{GS} = 10V, I_S = 7A$		27		nC
Turn-On Delay Time ²	$t_{d(on)}$	$V_{SS} = 15V, I_S \cong 7A, V_{GS} = 10V$		0.57		uS
Rise Time ²	t_r			0.83		
Turn-Off Delay Time ²	$t_{d(off)}$			1.71		
Fall Time ²	t_f			1.85		
SOURCE-DRAIN DIODE RATINGS AND CHARACTERISTICS ($T_J = 25\text{ }^\circ\text{C}$)						
Forward Source-Source Voltage ¹	V_F	$I_S = 7A, V_{GS} = 0V$		0.72	1.2	V

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

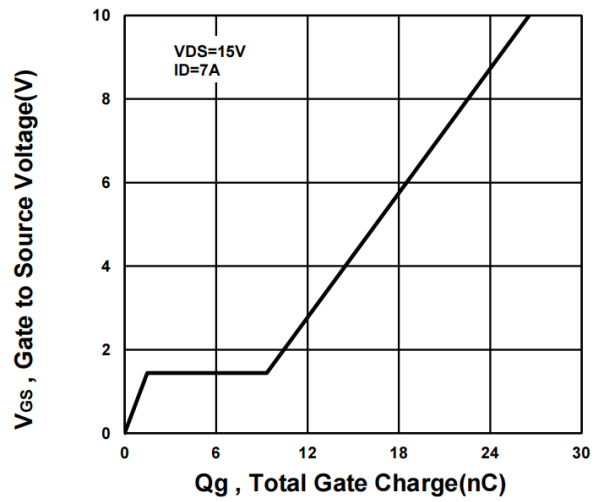
²Independent of operating temperature.



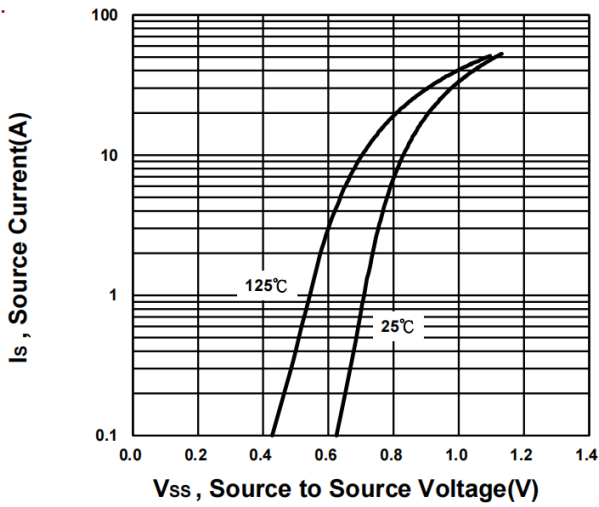
$R_{SS(ON)} - T_a$



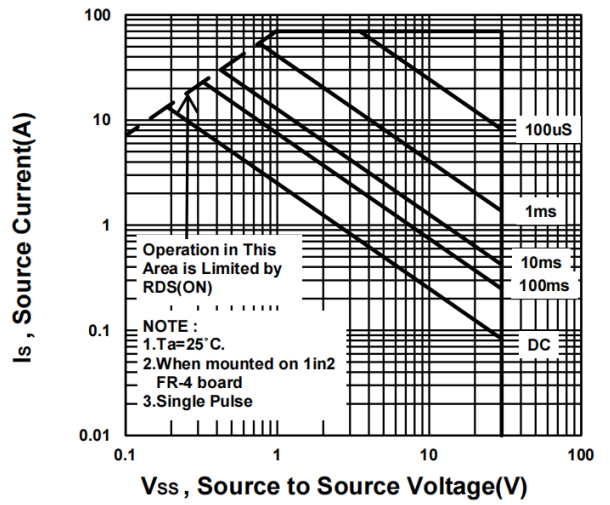
Gate charge Characteristics

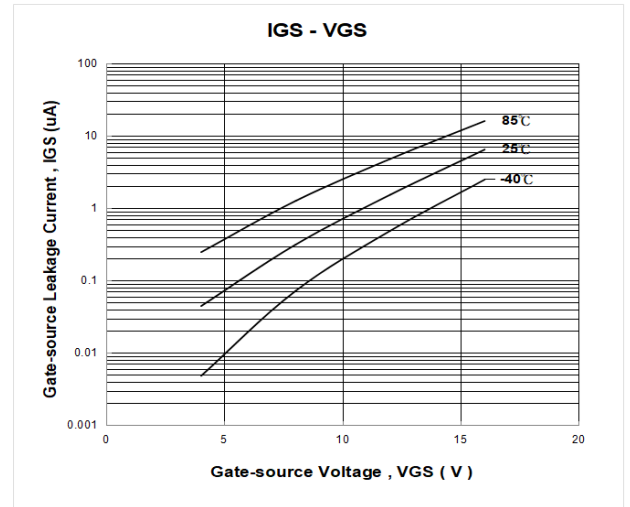
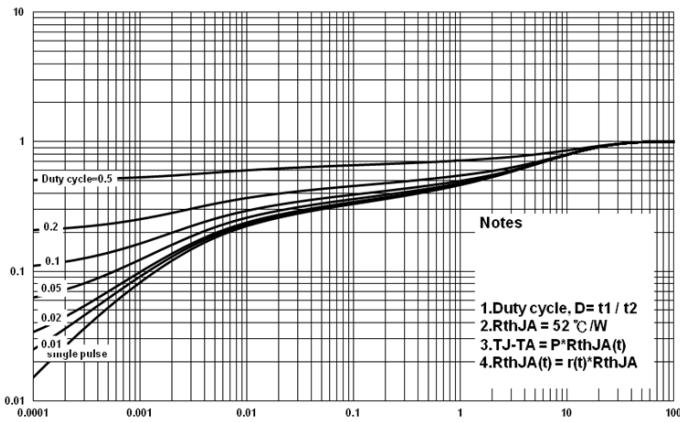


I_S - V_F

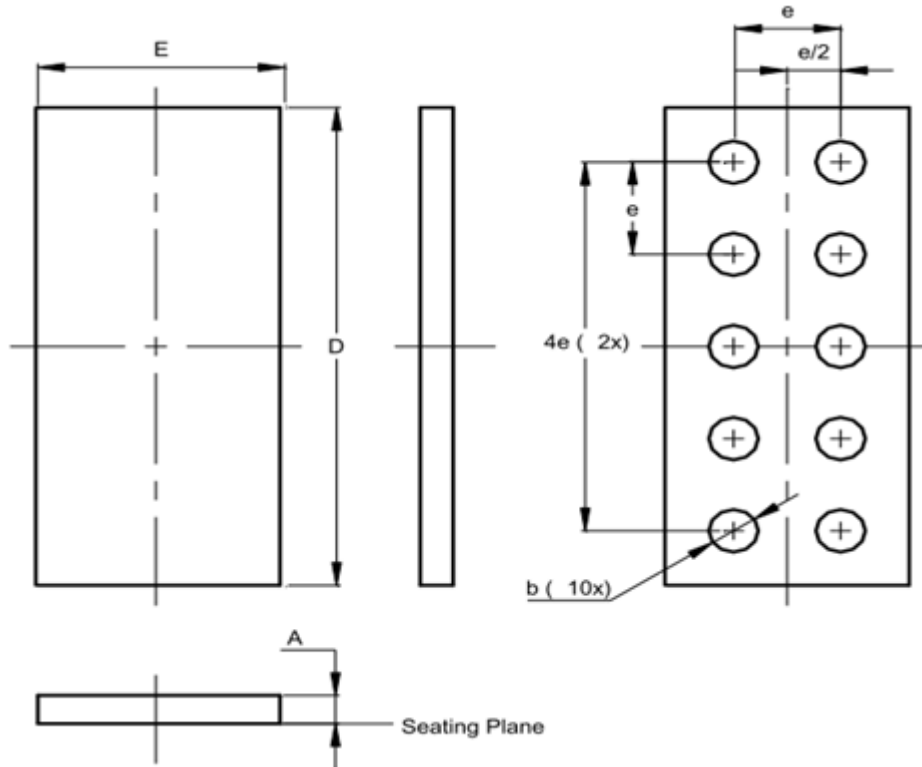


Safe Operating Area





Package Dimensions, WLCSP 3.34x1.44

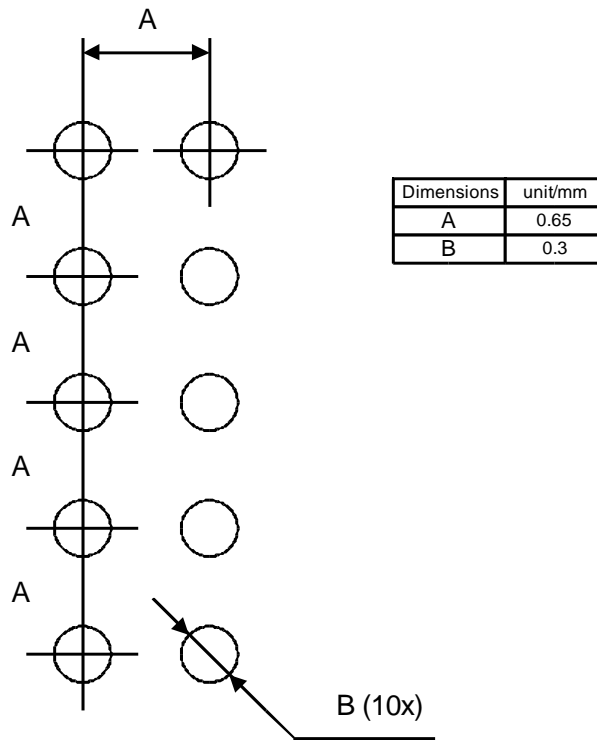


Symbol	Dimensions in Millimeters		
	Min.	Typ.	Max.
A	0.18	0.2	0.22
øb	0.27	0.3	0.33
D	3.31	3.34	3.37
E	1.41	1.44	1.47
e	-	0.65	-

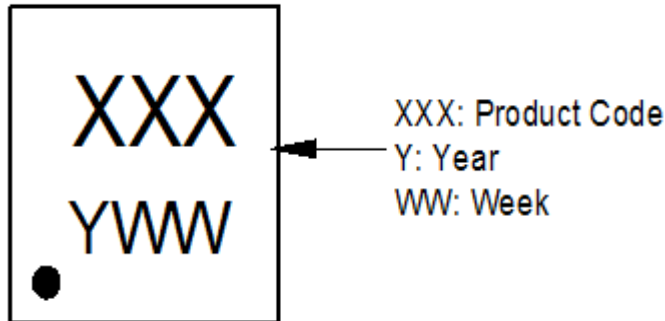
Note

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

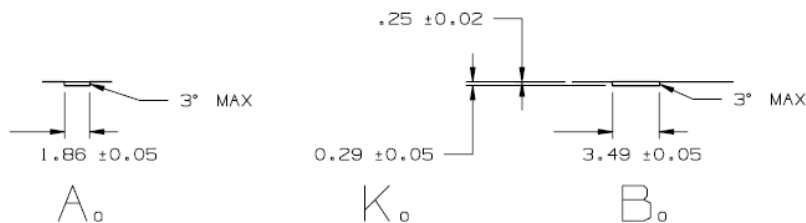
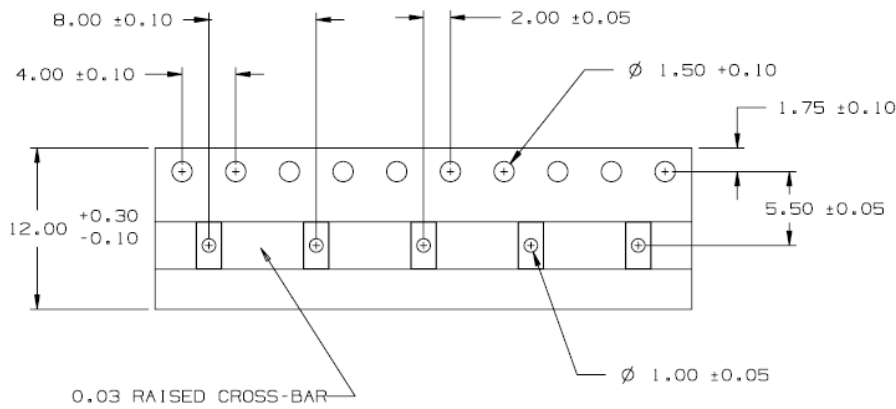
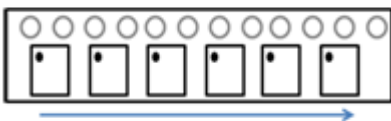
Recommend Footprint



A. Marking Information(Product Code: A25)



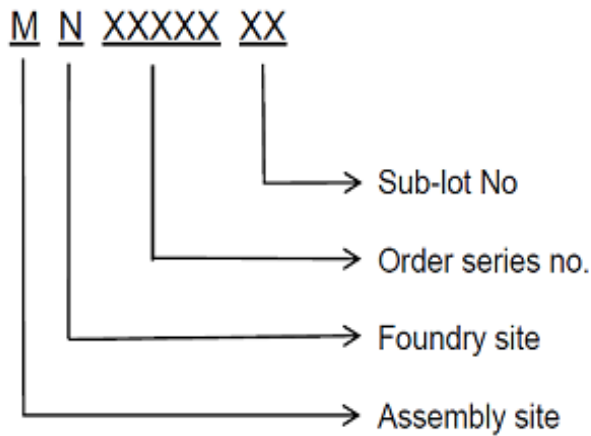
B. Tape&Reel Information:1500pcs/Reel



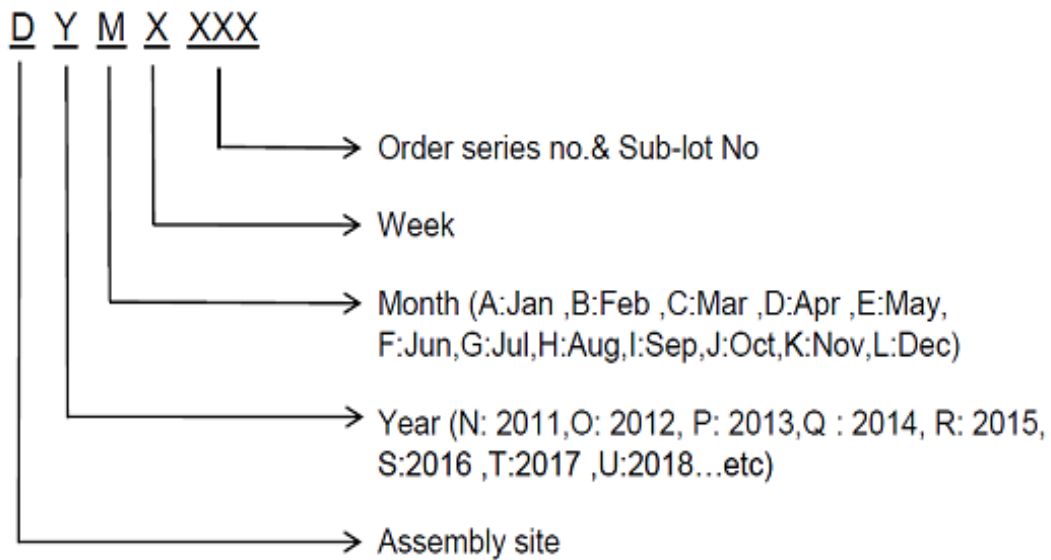
Note: All Dimension in millimeter

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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