

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

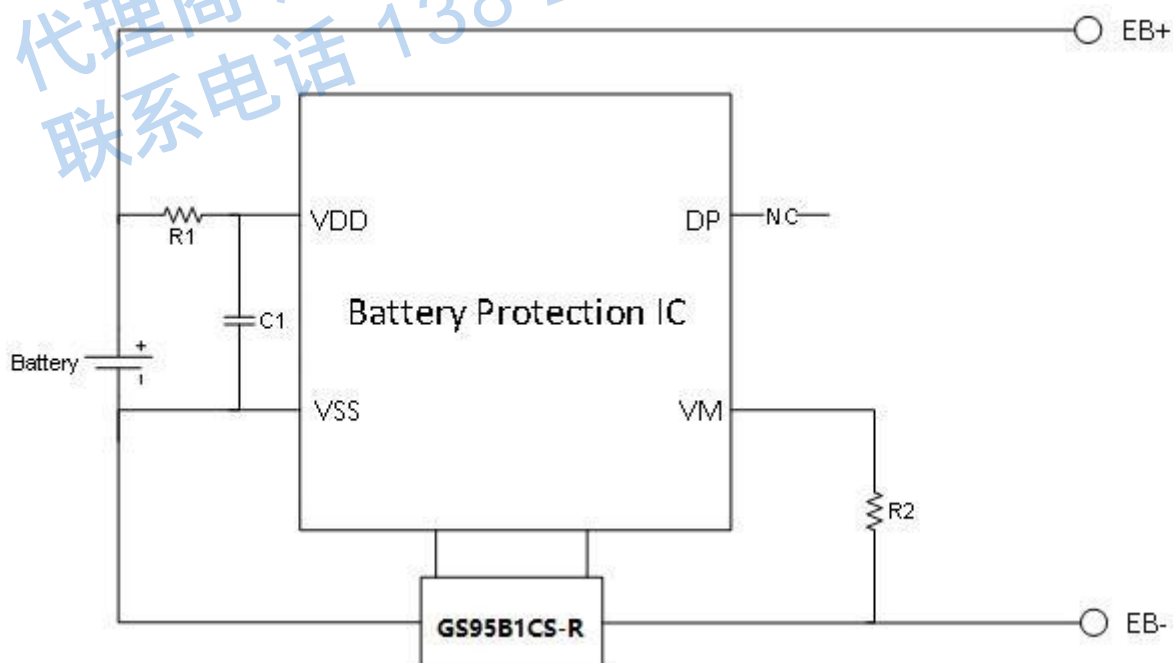


Figure 1 Application of GS95B1CS-R used in battery pack

Function Block Diagram

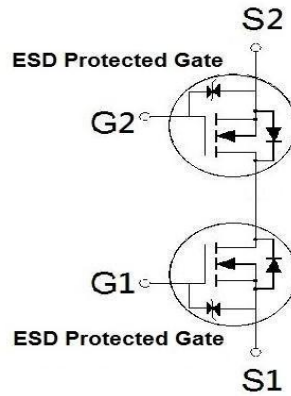


Figure 2 Function Block Diagram

Pin Configuration

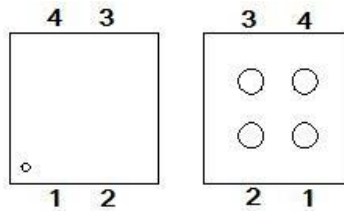


Figure 3 WLCSP 1.8x1.8

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

PARAMETER / TEST CONDITIONS	SYMBOL	LIMITS	UNITS
Source-Source Voltage	V_{SSS}	20	V
Gate-Source Voltage	V_{GSS}	± 12	V
Continuous Source Current	I_S	11	A
Pulsed Source Current ¹	I_{SP}	50	A
Total Dissipation ²	P_T	1.6	W
Operating Junction & Storage Temperature Range	T_j & T_{stg}	-55~150	$^{\circ}\text{C}$

Thermal Characteristics

PARAMETER / TEST CONDITIONS	SYMBOL	Typical	UNITS
Thermal Resistance ²	$R_{\theta JA}$	67	$^{\circ}\text{C} / \text{W}$

¹ $PW \leq 10\mu\text{s}$, duty cycle $\leq 1\%$.

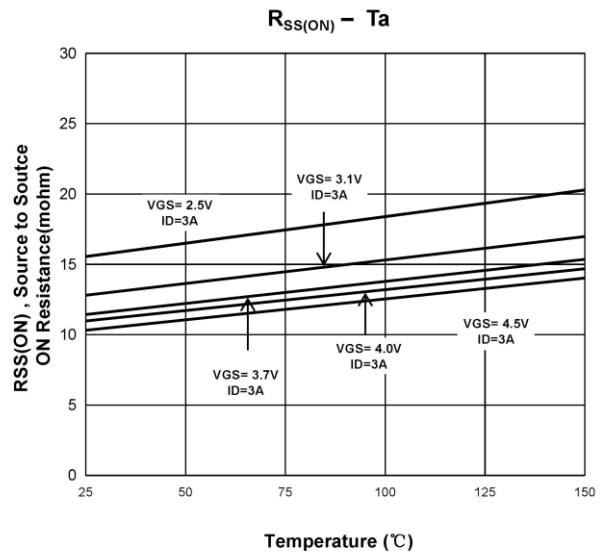
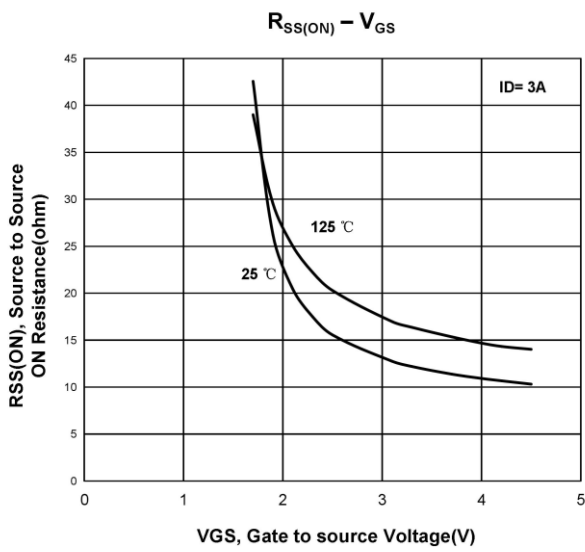
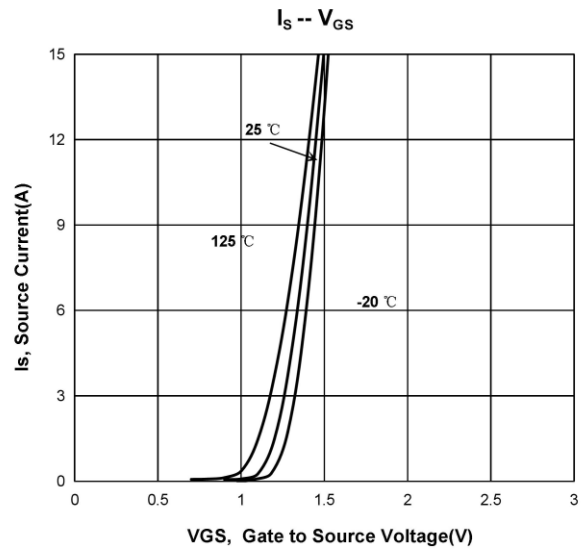
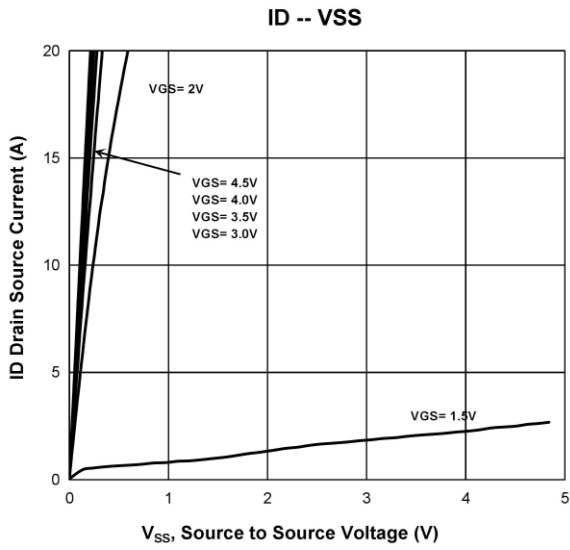
²When mounted on FR-4 board.

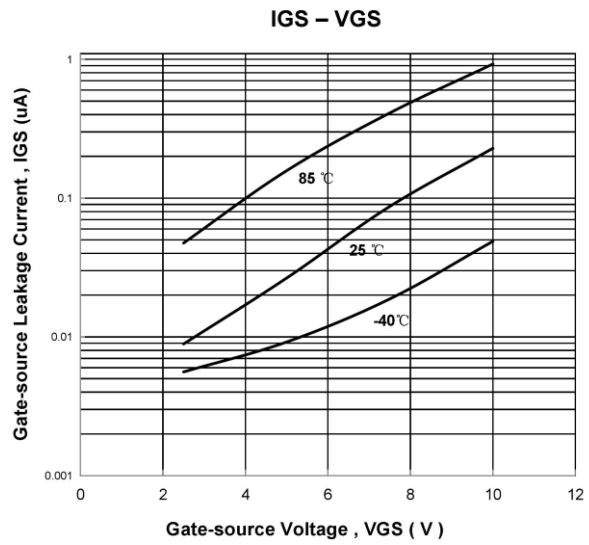
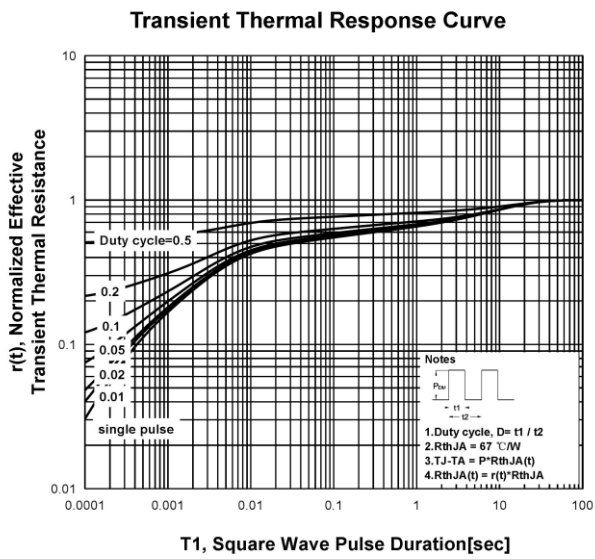
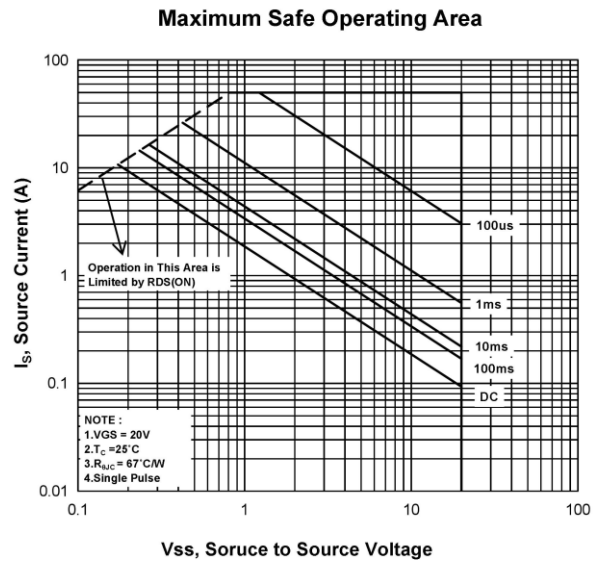
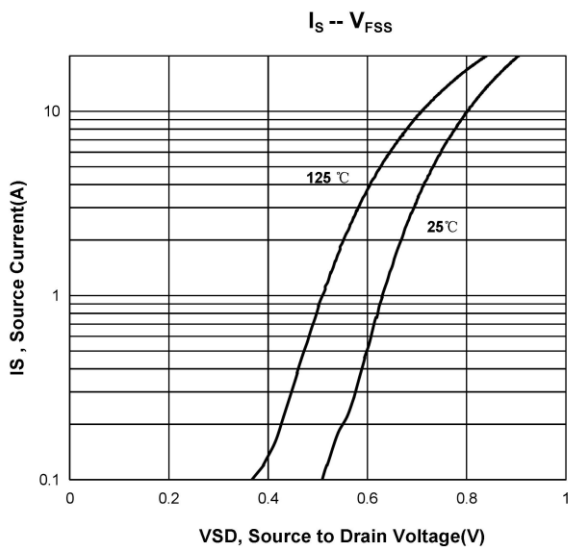
Electrical Characteristics (T_J=25°C Unless Otherwise Noted)

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

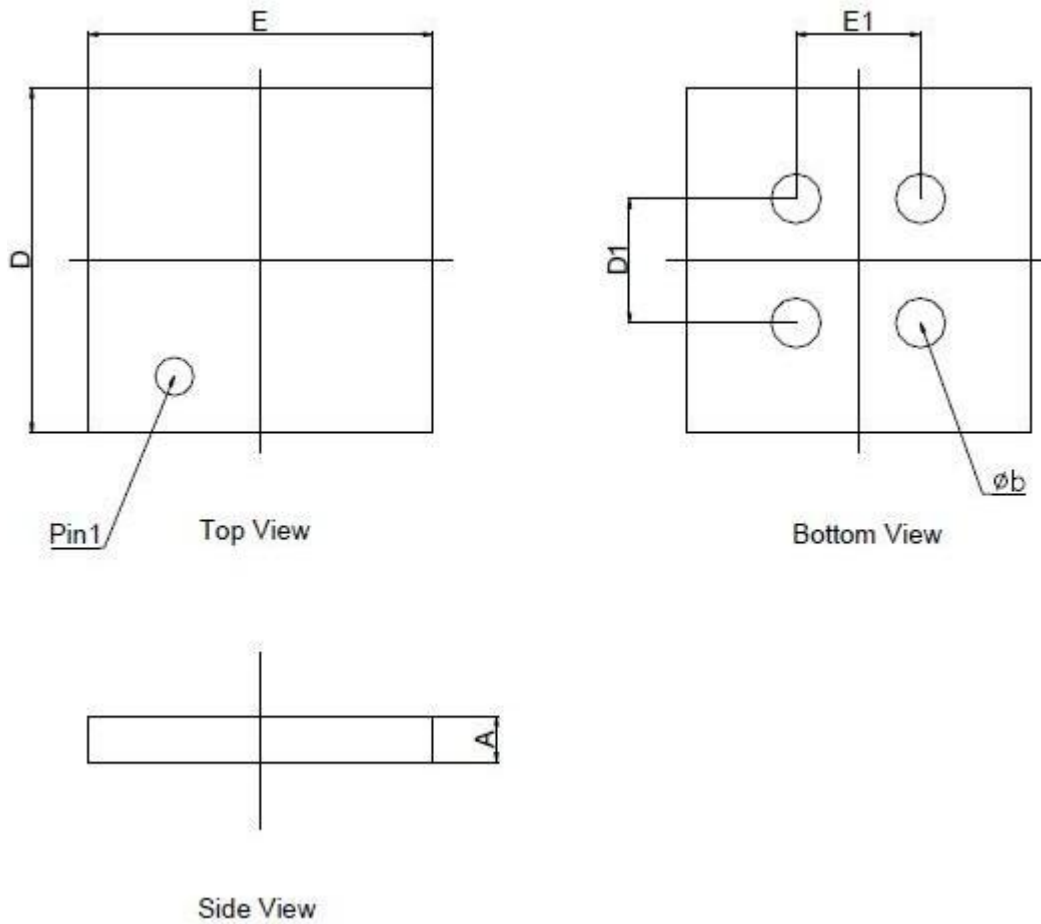
¹Pulse test : Pulse Width ≤ 300 μsec, Duty Cycle ≤ 2%.

²Independent of operating temperature.





Package Dimensions, WLCSP 1.8x1.8

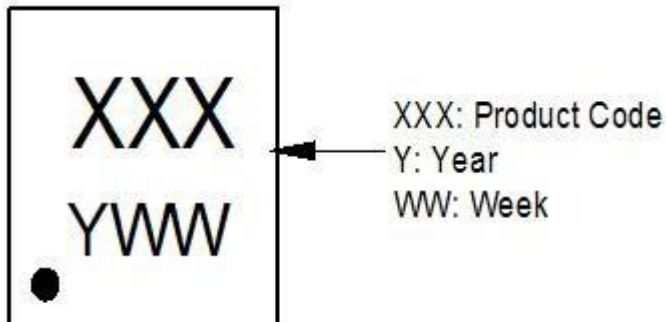


Symbol	Dimensions in Millimeters		
	Min.	Typ.	Max.
A	0.100	0.105	0.110
øb		0.26	
D		1.8	
D1		0.65	
E		1.8	
E1		0.65	

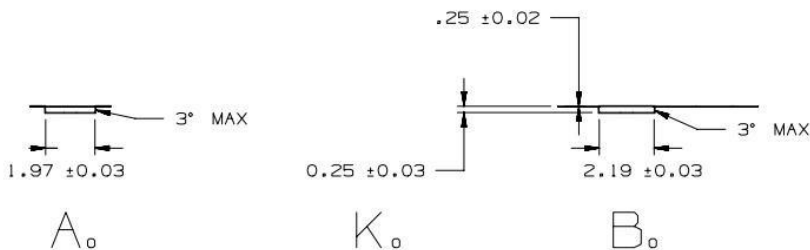
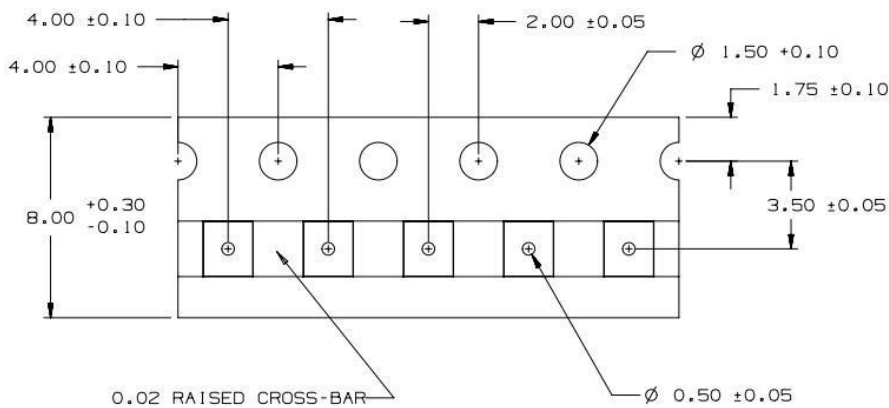
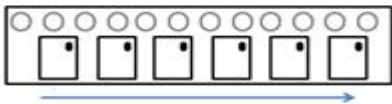
Note

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

A. Marking Information(Product Code : A26)



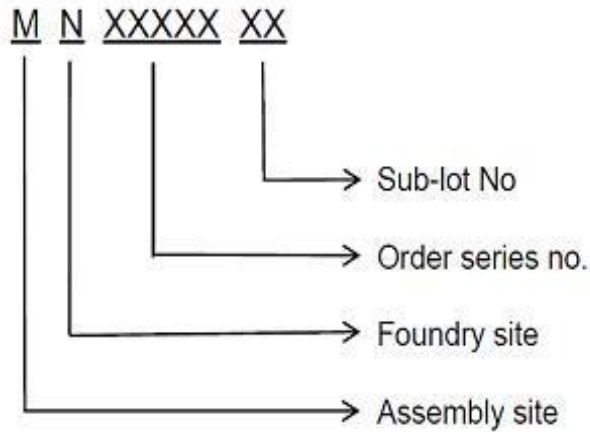
B. Tape&Reel Information : 3000pcs/Reel



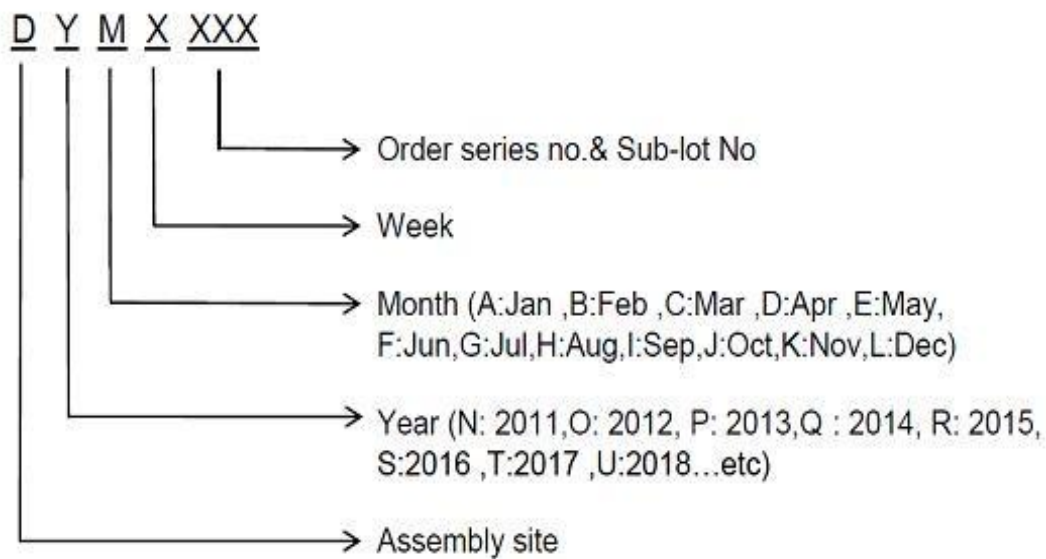
Note: All Dimension in millimeter

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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