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=20A
- Green Product (RoHS, Lead-Free, Halogen-Free Compliant)

General Description

The GS95B9CS-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

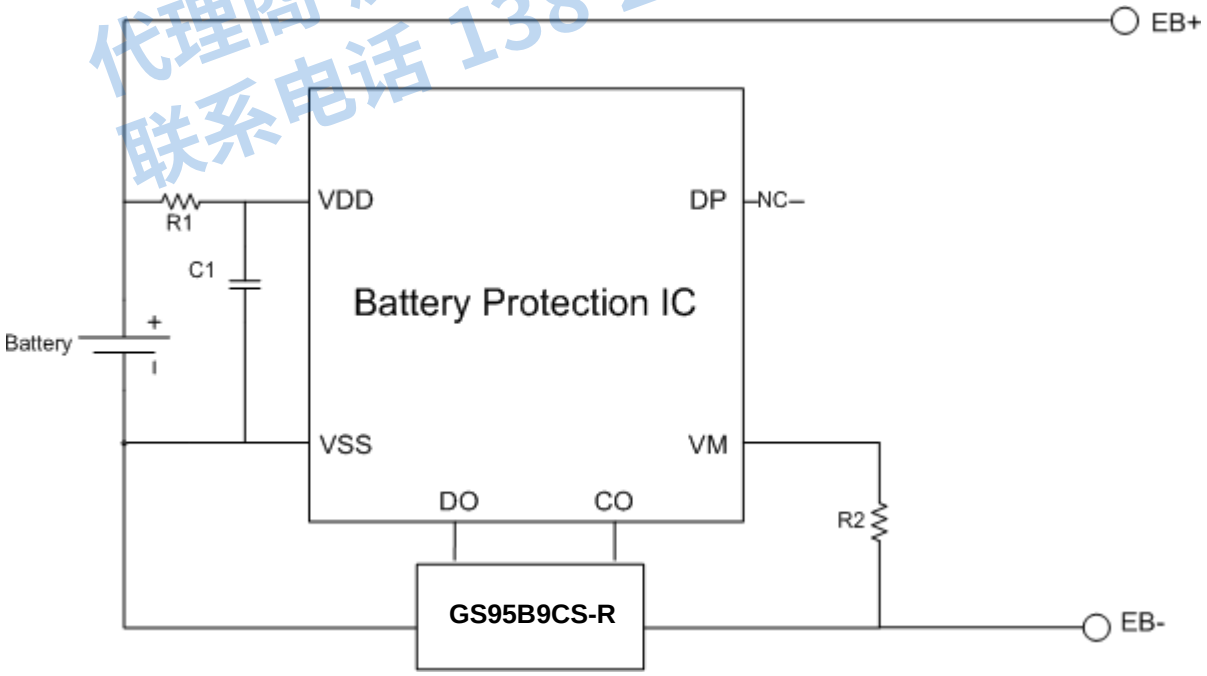


Figure 1 Application of GS95B9CS-R used in battery pack

Function Block Diagram

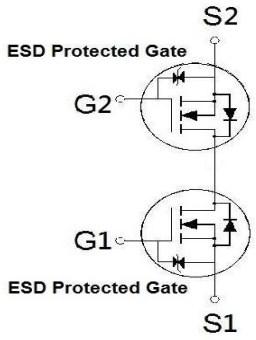


Figure 2 Function Block Diagram

Pin Configuration

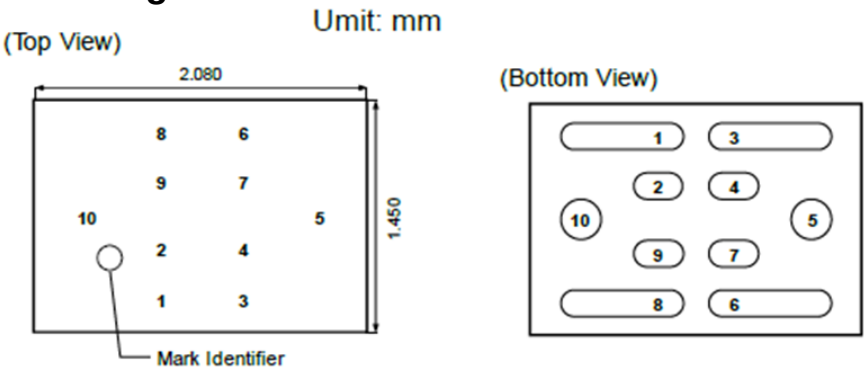


Figure 3 WLCSP 2.08x1.45

Pin Descriptions

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

Absolute Maximum Ratings (T_A=25°C Unless Otherwise Noted)

PARAMETER / TEST CONDITIONS	SYMBOL	LIMITS	UNITS
Source-Source Voltage	V_{SSS}	12	V
Gate-Source Voltage	V_{GSS}	±8	V
Continuous Source Current	I_S	20	A
Pulsed Source Current[1]	I_{SP}	140	A
Total Dissipation[2]	P_T	1.5	W
Thermal Resistance[2]	$R_{\theta JA}$	70	°C / W
Operating Junction & Storage Temperature Range	Tj & Tstg	-55~150	°C

[1]PW≤10μs, duty cycle≤1%.

[2]When mounted on 1in^2 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 =1mA	12			V
Gate Threshold Voltage	$V_{GS(th)}$	V_{SS} = 10V , I_S = 1mA	0.35	0.90	1.4	V
Gate-Source Leakage	I_{GSS}	V_{SS} = 0V, V_{GS} = ±8V			±10	uA
		V_{SS} = 0V, V_{GS} = ±5V			±1	uA
Zero Gate Voltage Source Current	I_{SSS}	VSS = 12V , VGS = 0V			1	uA
Drain-Source On-State Resistance[1]	$R_{SS(ON)}$	V_{GS} = 4.5V, I_S = 3A	1.50	2.05	2.70	mΩ
		V_{GS} = 3.8V, I_S = 3A	1.60	2.20	2.85	mΩ
		V_{GS} = 3.1V, I_S = 3A	1.75	2.55	3.90	mΩ
		V_{GS} = 2.5V, I_S = 3A	2.00	3.30	6.60	mΩ

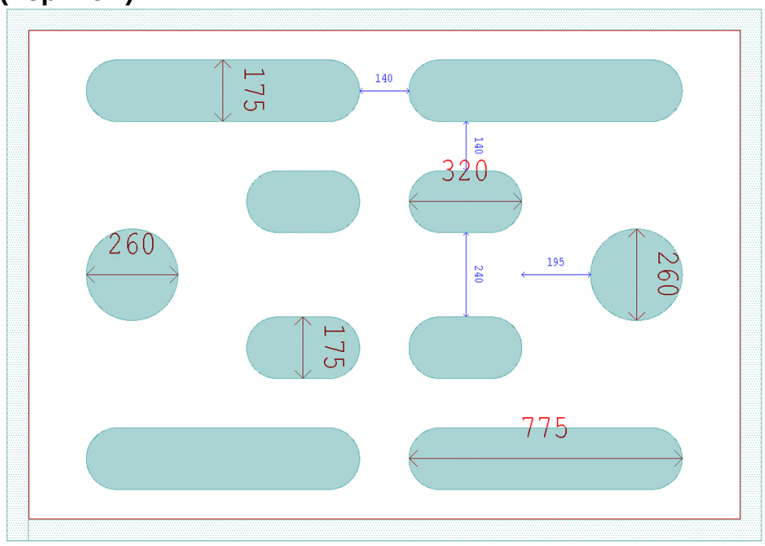
DYNAMIC						
Input Capacitance	C_{iss}	V_{GS} = 0V, V_{DS} = 12V, f = 1MHz		TBD		pF
Output Capacitance	C_{oss}			TBD		
Reverse Transfer Capacitance	C_{rss}			TBD		
Gate Resistance	R_g	F= 1MHz		400		Ω
Total Gate Charge[2]	Q_g	V_{SS} = 12V , V_{GS} = 4.5V， I_S = 5A		TBD		nC
Turn-On Delay Time[2]	$t_{d(on)}$	V_{SS} = 12V, $I_S \cong$ 5A,V_{GS} = 4.5V		TBD		nS
Rise Time[2]	t_r			TBD		
Turn-Off Delay Time[2]	$t_{d(off)}$			TBD		
Fall Time[2]	T_{f0}			TBD		
SOURCE-DRAIN DIODE RATINGS AND CHARACTERISTICS (T_J = 25 °C)						
Forward Source-Source Voltage[1]	V_F	I_S = 5A, V_{GS} = 0V		0.6	1.2	V

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

[2]Independent of operating temperature.

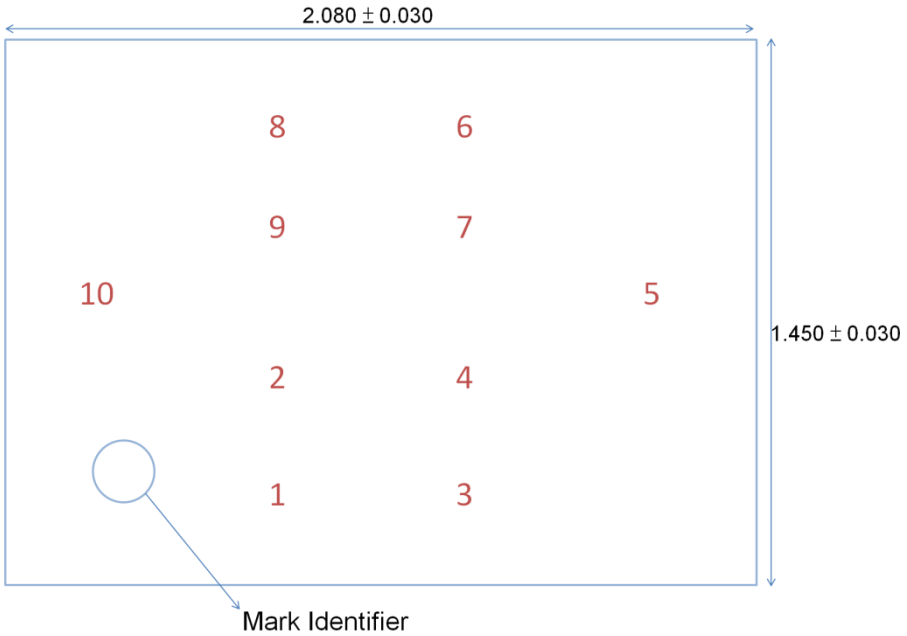
Package Dimensions, WLCSP 2.080x1.450

(Top View)



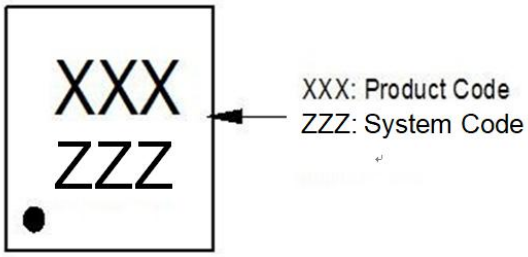
(Front View)

(Bottom View)

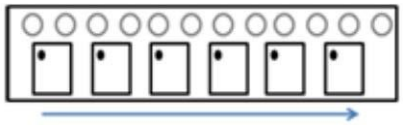


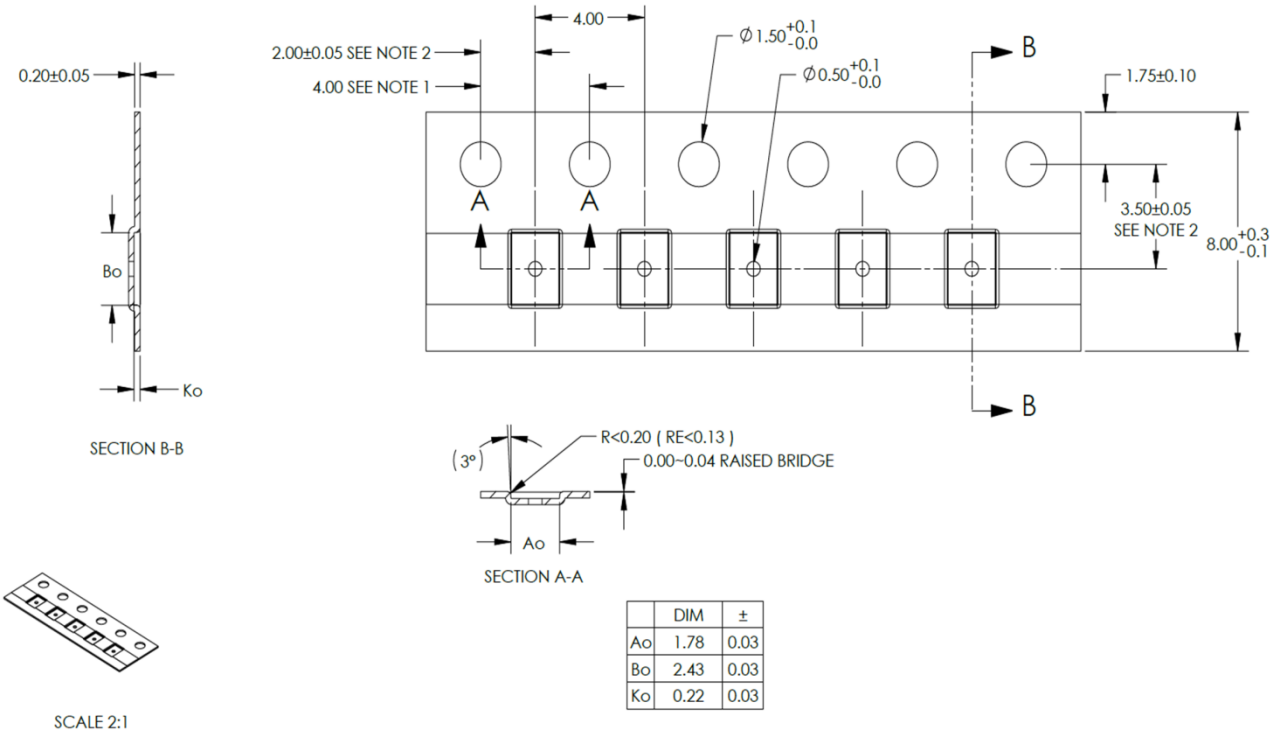
Note：All Dimension in millimeter

A. Marking Information(Product Code ： A33)



B. Tape & Reel Information : 5000pcs/Reel





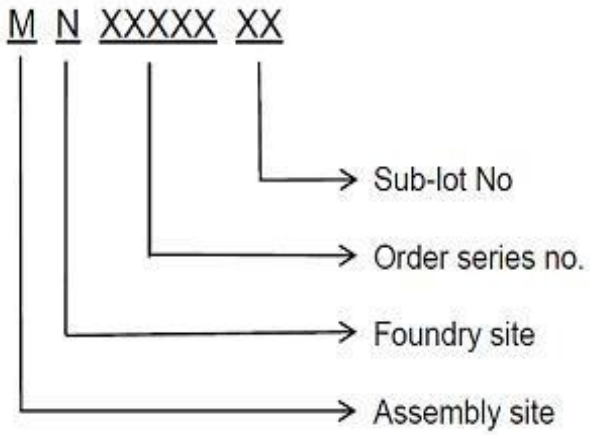
SCALE 2:1

	DIM	±
Ao	1.78	0.03
Bo	2.43	0.03
Ko	0.22	0.03

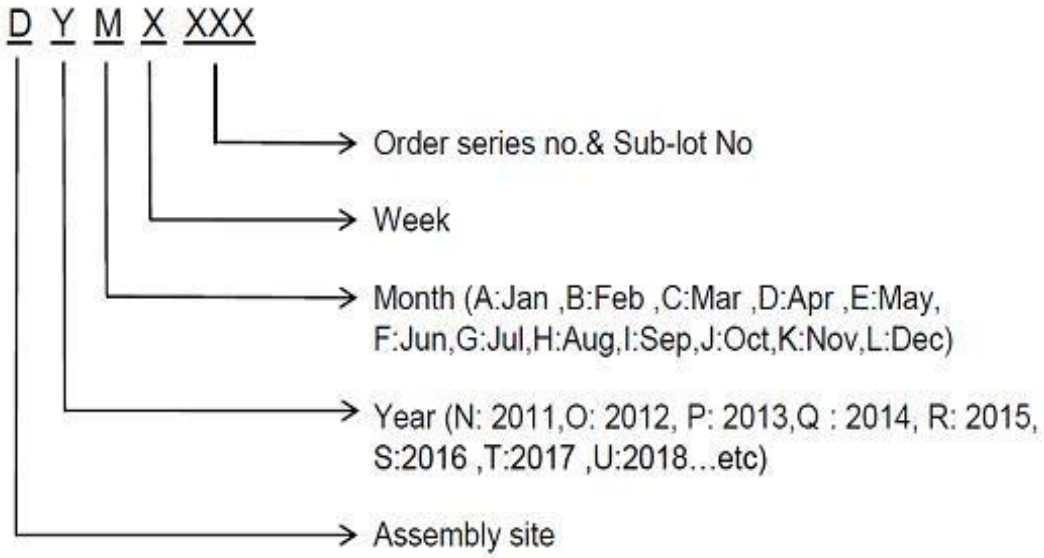
Note：All Dimension in millimeter

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	RoHS long axis: 12 mm minor axis:6 mm bottom color: White Font color: Black Font style: Arial
10	Halogen Free label	G 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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