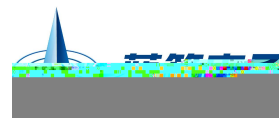




# BRCS200N04ZB

Rev.B Jun.-2021



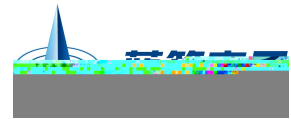
DATA SHEET

DFN 3\*3A-8L 塑封封装 N 沟道 MOS 场效应管。

N-Channel Enhancement Mode Field Effect Transistor in a DFN 3\*3A-8L Plastic Package.

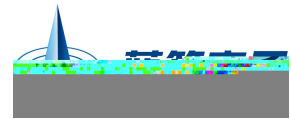
$V_{DS} (V) = 40V$

$I_D = 12 A (V_{GS} = \pm 20V)$



参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Drain-Source Voltage	$V_{DSS}$	40	V
Drain Current	$I_D(T_c=25^\circ C)$	12	A
Gate-Source Voltage	$V_{GS}$	$\pm 20$	V
Avalanche Current	$I_{AS}$	11.7	A
Avalanche energy(L=0.5mH)	$E_{AS}$	54.8	mJ
Power Dissipation	$P_D(T_c=25^\circ C)$	11	W
Junction Temperature Range	$T_j$	150	$^\circ C$
Storage Temperature Range	$T_{stg}$	-55~150	$^\circ C$
Maximum Junction-to-Ambient	$t \leq 10s$	$R_{\theta JA}$	40
	Steady-State	$R_{\theta JA}$	75
Maximum Junction-to-Case	Steady-State	$R_{\theta JC}$	11

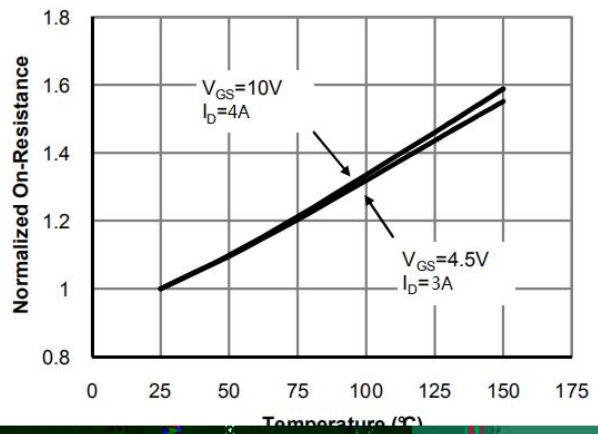
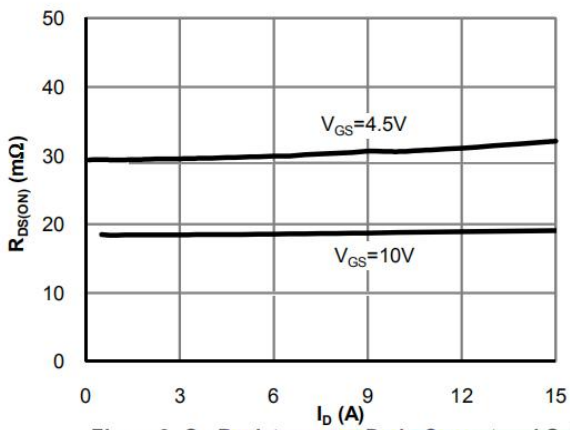
参数 Parameter	符号 Symbol	测试条件 Test Conditions	最小值 Min	典型值 Typ	最大值 Max	单位 Unit
Drain-Source Breakdown Voltage	$BV_{DSS}$	$V_{GS}=0V$ $I_D=250\mu A$	40	45		V
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS}=40V$ $V_{GS}=0V$			1.0	$\mu A$
Gate-Body Leakage Current Forward	$I_{GSS}$	$V_{GS}=\pm 20V$ $V_{DS}=0V$			$\pm 100$	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=250\mu A$	1.0	1.7	2.5	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10V$ $I_D=4A$		19.9	22	m $\Omega$



**/ Electrical Characteristics(Ta=25 )**

参数 Parameter	符号 Symbol	测试条件 Test Conditions	最小值 Min	典型值 Typ	最大值 Max	单位 Unit
Input Capacitance	$C_{iss}$	$V_{DS}=10V$ $V_{GS}=0V$ $f=1.0MHz$		880		pF
Output Capacitance	$C_{oss}$			790		
Reverse Transfer Capacitance	$C_{rss}$			260		
Turn-On Delay Time	$t_{d(on)}$	$V_{GS}=10V$ $V_{DS}=20V$ $R_{GEN}=3\Omega$ $R_L=2.5\Omega$		4		ns
Turn-On Rise Time	$t_r$			3		
Turn-Off Delay Time	$t_{d(off)}$			15		
Turn-Off Fall Time	$t_f$			2		
Total Gate Charge	$Q_g(10V)$	$V_{GS}=10V$ $V_{DS}=20V$ $I_D=8A$		6.5		nC
Total Gate Charge	$Q_g(4.5V)$			3		
Gate-Source Charge	$Q_{gs}$			1.2		
Gate-Drain Charge	$Q_{gd}$			1,1		

/ **Electrical Characteristic Curve**

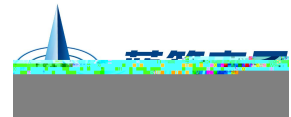


**Figure 3: On-Resistance vs Drain Current and Temperature**



**BRCS200N04ZB**

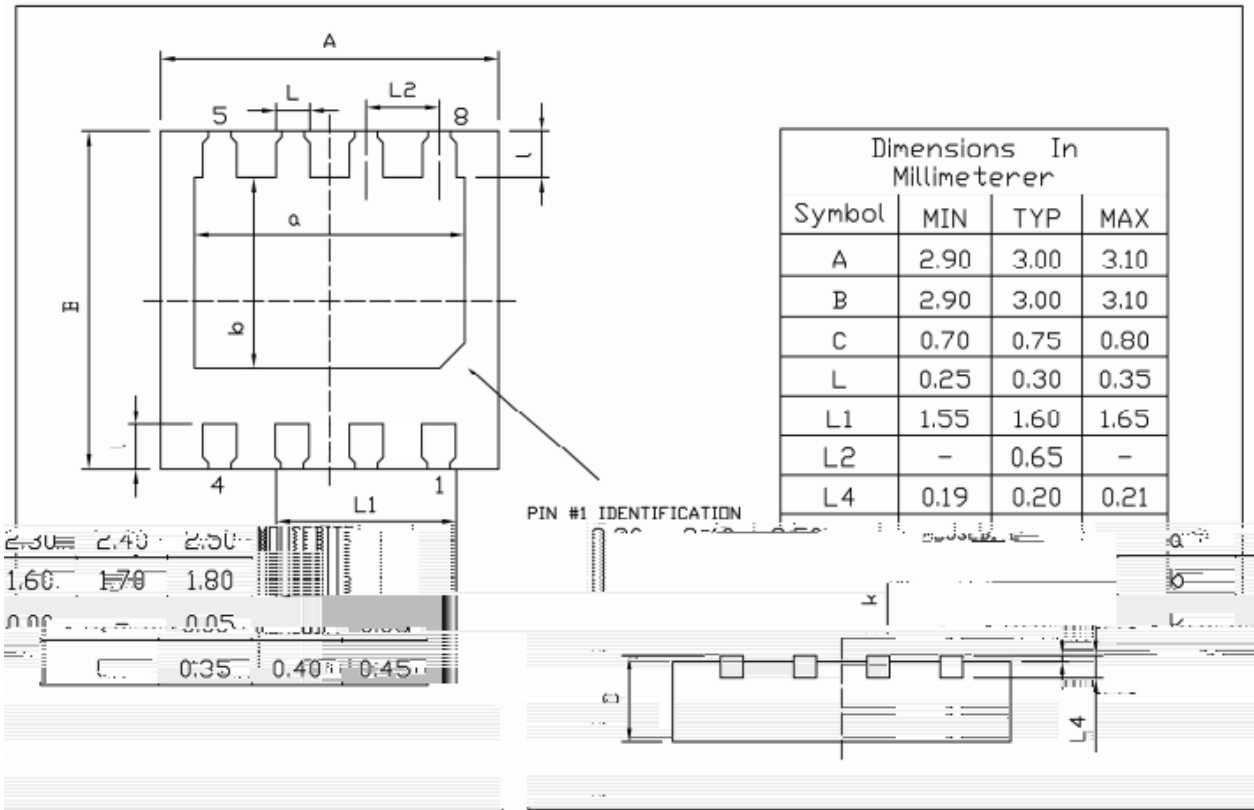
Rev.B Jun.-

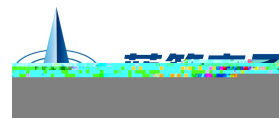


**/ Package Dimensions**

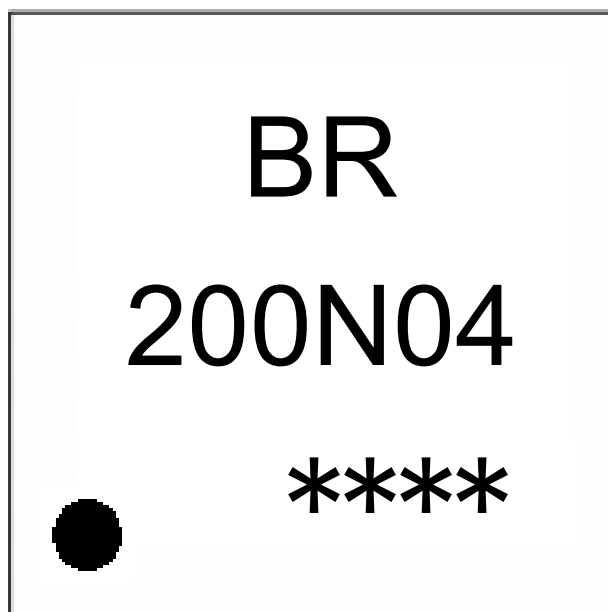
DFN3X3A-8L

Unit:mm





**/ Marking Instructions**



说明：

BR： 为公司代码

200N04： 为型号代码

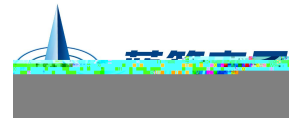
\*\*\*\*： 为生产批号代码，随生产批号变化。

Note:

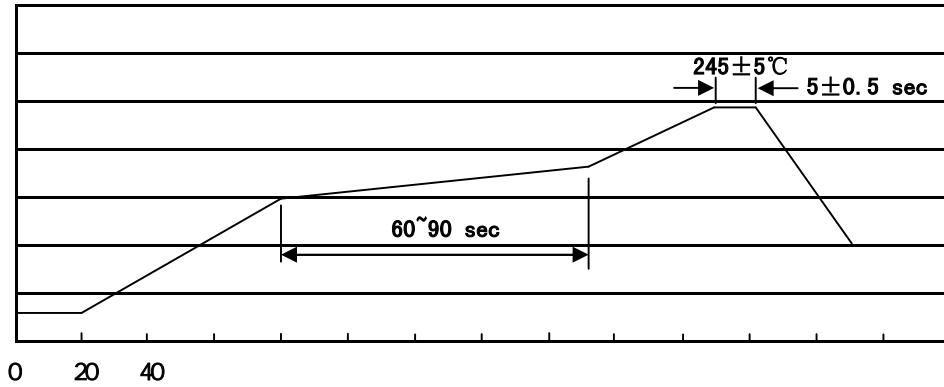
BR: Company Code.

200N04: Product Type

\*\*\*\*: Lot No. Code, code change with Lot No.



( ) / Temperature Profile for IR Reflow Soldering(Pb-Free)



Note:

- |   |         |           |                                         |
|---|---------|-----------|-----------------------------------------|
| 1 | 150 180 | 60 90sec; | 1.Preheating:150~180 , Time:60~90sec.   |
| 2 | 245±5   | 5±0.5sec; | 2.Peak Temp.:245±5 , Duration:5±0.5sec. |
| 3 | 2 10    | /sec.     | 3. Cooling Speed: 2~10 /sec.            |

/ Resistance to Soldering Heat Test Conditions

260±5                      10±1 sec.                      Temp.:260±5°C                      Time:10±1 sec

/ Packaging SPEC.

/ REEL

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm <sup>3</sup> )		
	Units/Reel 只/卷盘	Reels/Inner Box 卷盘/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Reel	Inner Box 盒	Outer Box 箱
DFN 3*3A-8L	5,000	2	10,000	6	60,000	13" ×12	360×360×50	380×335×366

/ Notices