

BRCS200N10SZC

Rev.A Jun.-2022



DATA SHEET

/ Revised record

A	2022.06.28	All	AOS-AON6452 BR-BRCS250N10SYB		

/ Descriptions

PDFN 5×6 封装 N 沟道场效应管。
N-Channel MOSFET in a PDFN 5×6 Plastic Package .

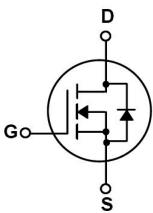
/ Features

$V_{DS} (V) = 100V$
 $I_D = 28A (V_{GS} = \pm 20V)$
 $R_{DS(ON)} @ 10V \leq 20mR (Typ. 18mR)$
。 HF Product.

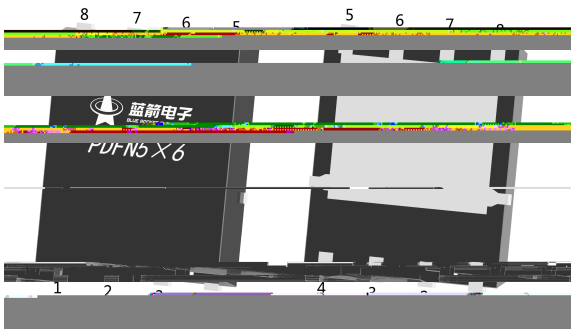
/ Applications

DC/DC AC/DC DC/DC
Synchronous rectification in DC/DC and AC/DC converters, Isolated DC/DC Converters in Telecom and Industrial.

/ Equivalent Circuit



/ Pinning



PIN1、2、3: S PIN4: G PIN5、6、7、8: D

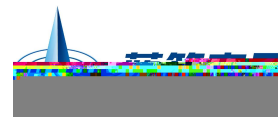
Pin	极性
1	S
2	S
3	S
4	G
5	D
6	D
7	D
8	D

/ Marking

。 See Marking Instructions.

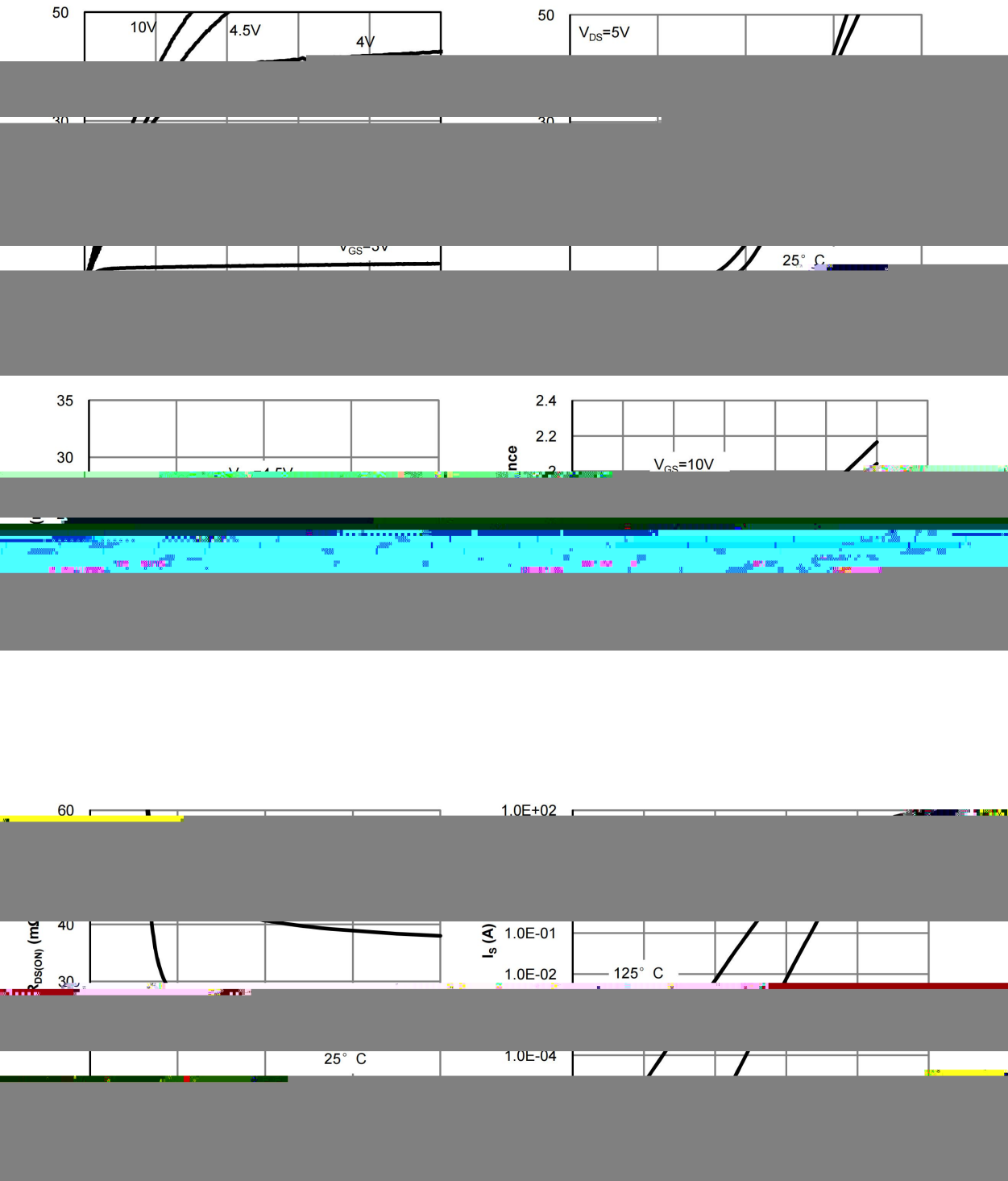
/ Absolute Maximum Ratings($T_a=25^\circ\text{C}$)

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	100	V
Drain Current		$I_D(T_c=25^\circ\text{C})$	28	A
Drain Current - Pulsed		I_{DM}	60	A
Gate-Source Voltage		V_{GS}	± 20	V
Single Pulsed Avalanche Energy		E_{AS}	14.4	mJ
Avalanche Current		I_{AS}	6	A
Power Dissipation		$P_D(T_c=25^\circ\text{C})$	35	W
Operating and Storage Temperature Range		T_J, T_{stg}	-55 to 150	$^\circ\text{C}$
Junction-to-Ambient	$t \leq 10$	$R_{\theta JA}$	30	$^\circ\text{C/W}$
Junction-to-Ambient	Steady-State		64	
Junction-to-Case	Steady-State	$R_{\theta JC}$	3.5	

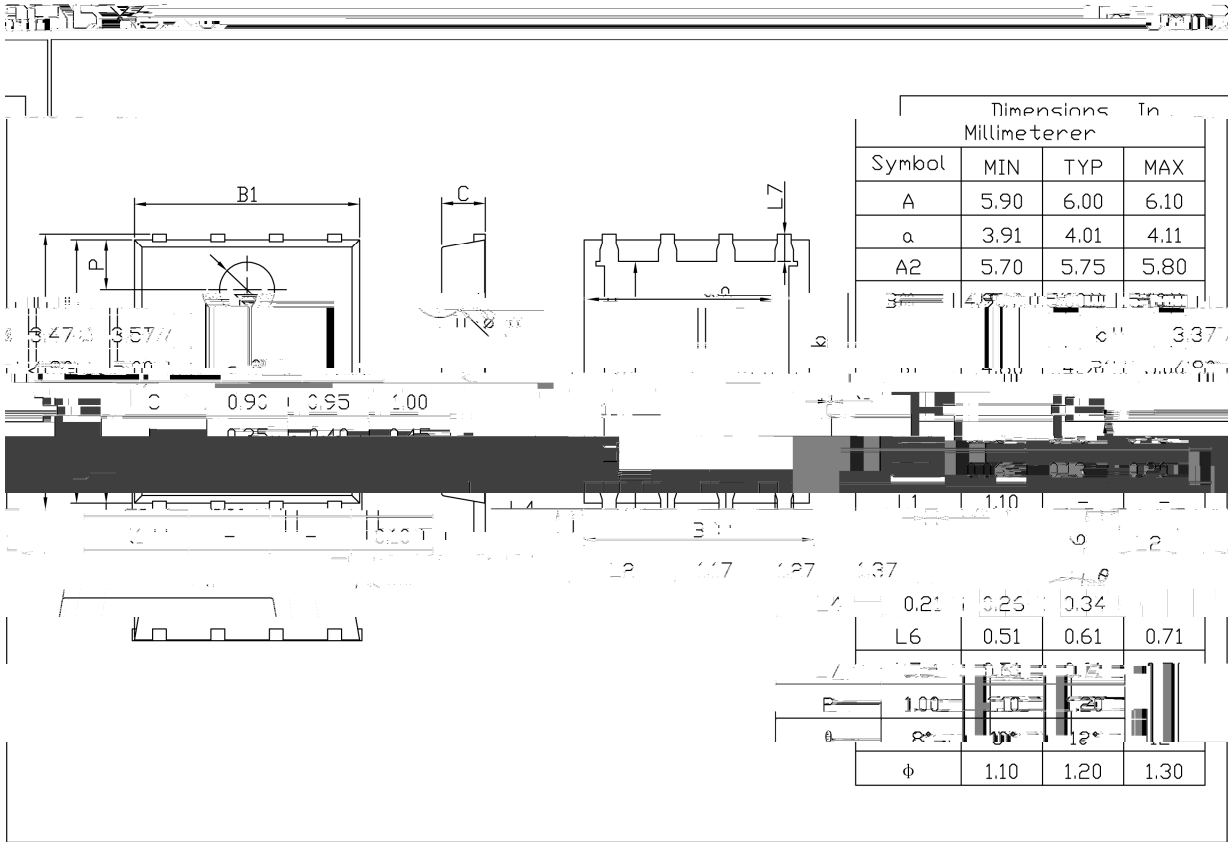


Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V$ $I_D=250\mu A$	100	109		V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=100V$ $V_{GS}=0V$			1	μA
Gate-Body Leakage Current Forward	I_{GSS}	$V_{GS}=\pm 20V$ $V_{DS}=0V$			± 0.1	μA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=250\mu A$	1.0	1.6	2.5	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10V$ $I_D=20A$		18	20	$m\Omega$
		$V_{GS}=4.5V$ $I_D=10A$		25	28	$m\Omega$
Drain-Source Diode Forward Voltage	V_{SD}	$V_{GS}=0V$ $I_S=1A$			1.2	V
Input Capacitance	C_{iss}	$V_{DS}=25V$ $V_{GS}=0V$ $f=1.0MHz$		820		pF
Output Capacitance	C_{oss}			475		
Reverse Transfer Capacitance	C_{rss}			35		
Gate resistance	R_g	$V_{GS}=0V$ $V_{DS}=0V$ $f=1MHz$		1.9		Ω
Total Gate Charge	$Q_{g(10V)}$	$V_{GS}=10V$ $V_{DS}=50V$ $I_D=9A$		17		nC
Total Gate Charge	$Q_{g(4.5V)}$			9		
Gate Source Charge	Q_{gs}			3		
Gate Drain Charge	Q_{gd}			3.5		
Turn-On Delay Time	$t_{d(on)}$	$V_{GS}=10V$ $V_{DS}=50V$ $R_L=5.5\Omega$ $R_{GEN}=3.0\Omega$		5		ns
Turn-On Rise Time	t_r			3.2		
Turn-Off Delay Time	$t_{d(off)}$			21		
Turn-Off Fall Time	t_f			3		

/ Electrical Characteristic Curve

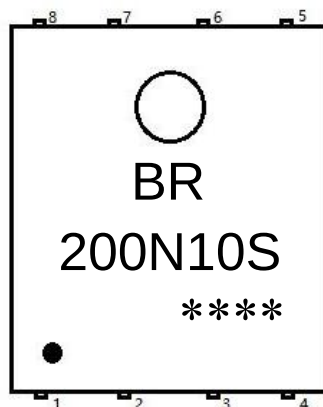


/ Package Dimensions



Rev.00 201812

/ Marking Instructions



说明：

BR： 为公司代码

200N10S： 为产品型号

****： 为生产批号代码，随生产批号变化

Note：

BR： Company Code

200N10S： 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°C, Time:60~90sec. |
| 2 | 245±5 | 5±0.5sec; | 2.Peak Temp.:245±5°C, Duration:5±0.5sec. |
| 3 | 2 10°C/sec. | | 3. Cooling Speed: 2~10°C/sec. |

/ **Resistance to Soldering Heat Test**