

BRCS020N03ZC

Rev.A Jan.-2022



DA

A	2022.1.18	All	AOS-AONS32304	

/ Descriptions

PDFN5x6 N-Channel MOSFET in a PDFN5x6 Plastic Package .

/ Features

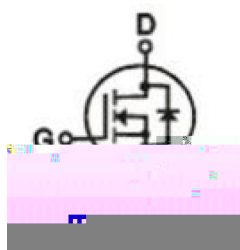
Low $R_{DS(ON)}$ to minimize conductive loss; low Gate Charge for fast switching; Low Thermal resistance; HF Product.

/ Applications

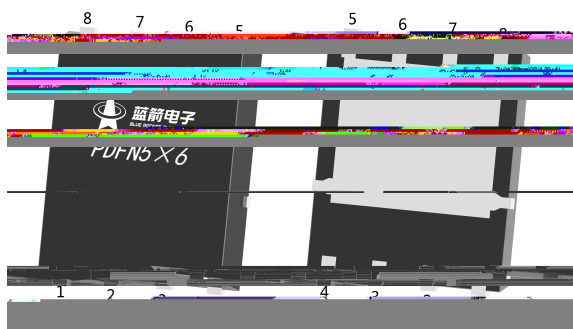
MB/NB/UMPC/VGA	Buck	-
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Battery Management,High Frequency Point-of-Load Synchronous Buck Converter for MB/NB/UMPC/VGA,Networking DC-DC Power System,Load Switch.

/ 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

见印章说明。See Marking Instructions.

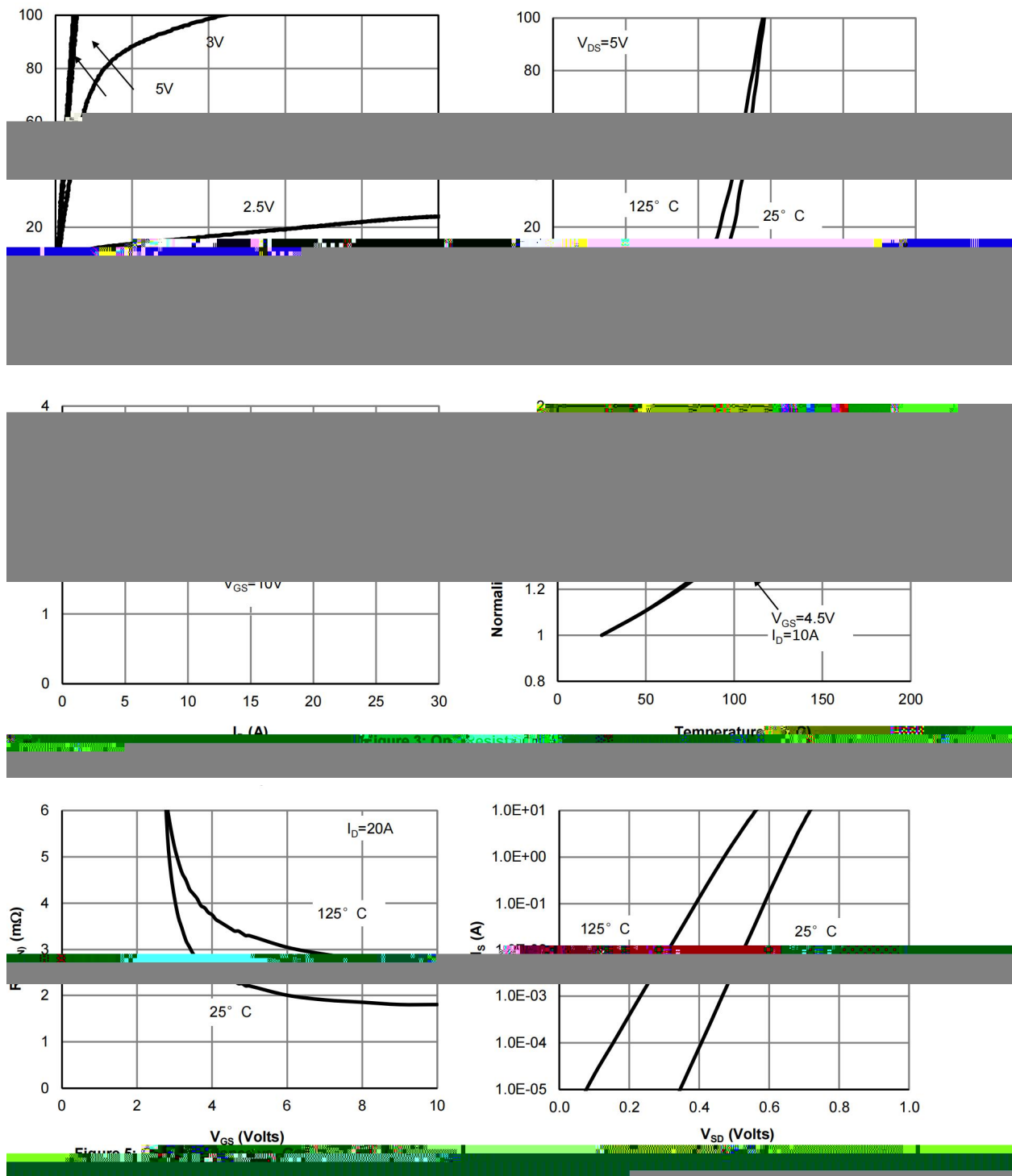
Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V _{DS}	30	V
Drain Current - Continuous		I _D	150	A
Drain Current – Pulsed		I _{DM}	285	A
Gate-Source Voltage		V _{GS}	± 20	V
Power Dissipation		P _D (T _c =25°C)	78	W
Single Pulse Avalanche Energy(L=0.5mH)		E _{AS}	590	mJ
Avalanche Current(L=0.5mH)		I _{AS}	33.5	A
Junction and Storage Temperature Range		T _j , T _{stg}	-55 to 150	°C
Thermal resistance, junction - ambient	t ≤ 10s	R _{θJA}	20	°C / W
	Steady-State		50	
Thermal resistance, junction - case	Steady-State	R _{θJC}	1.6	

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV _{DSS}	I _D =250uA, V _{GS} =0V	30	35		V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =30V, V _{GS} =0V			1	uA
Gate-Body leakage current	I _{GSS}	V _{DS} =0V, V _{GS} = ±20V			±100	nA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250uA	1.0	1.5	3.0	V
Static Drain-Source On-Resistance	R _{DS(ON)}	V _{GS} =10V, I _D =20A		1.8	2.0	mΩ
		V _{GS} =4.5V, I _D =10A		2.4	3.0	

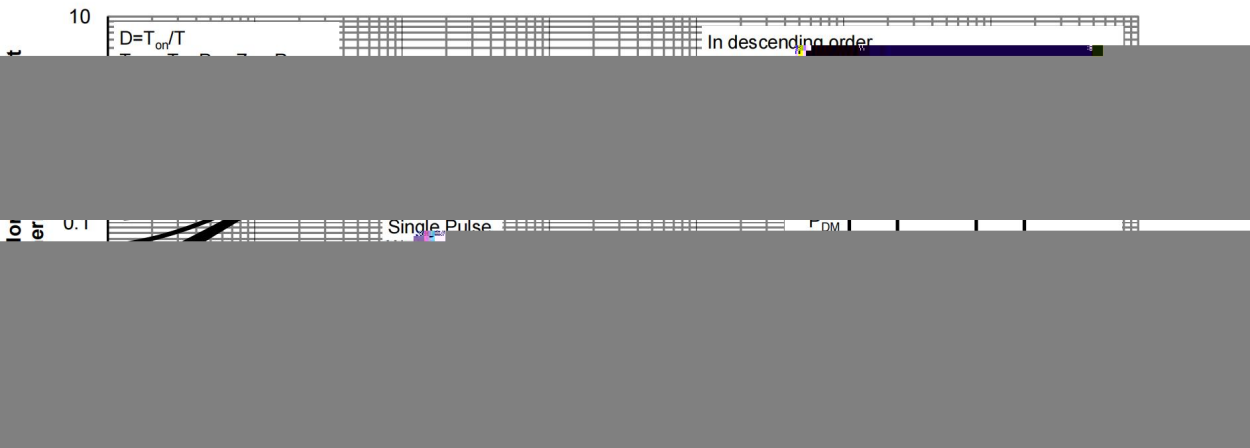
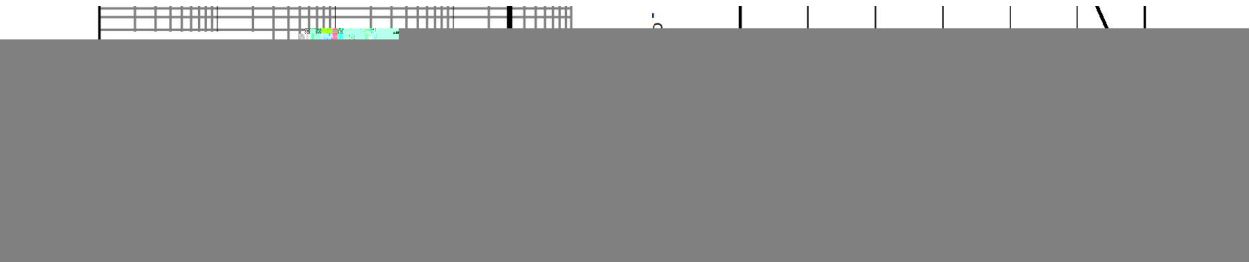
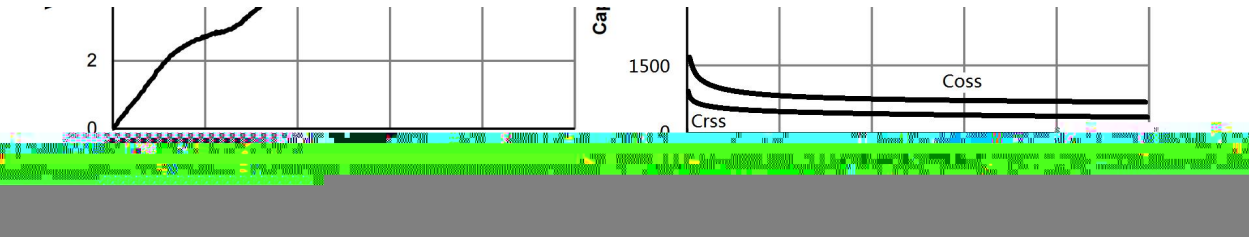
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-On Delay Time	$t_{d(on)}$	$V_{GS}=10V$ $V_{DS}=15V$ $R_L=0.75\ \Omega$ $R_{GEN}=3\ \Omega$		9		ns
Turn-On Rise Time	t_r			5		
Turn-Off Delay Time	$t_{d(off)}$			87		
Turn-Off Fall Time	t_f			20		

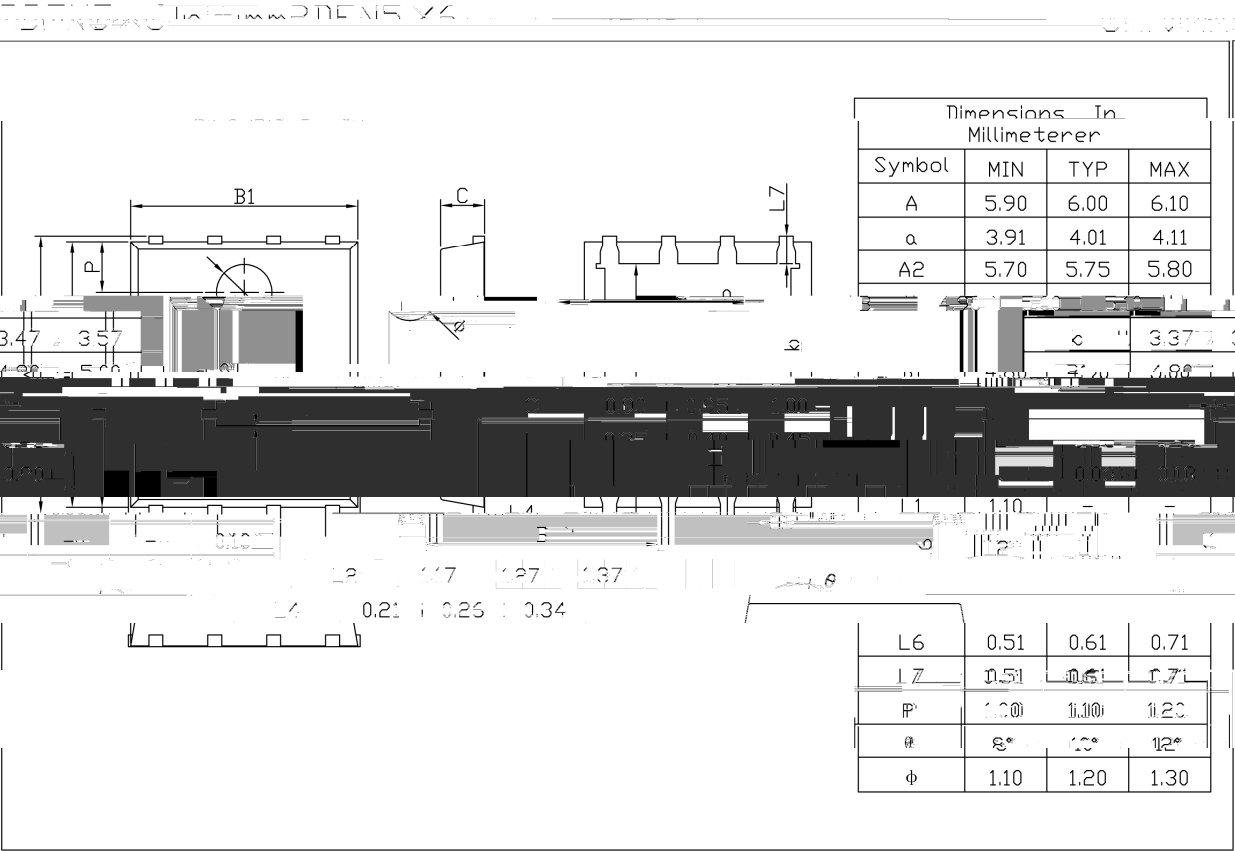
/ Electrical Characteristic Curve



/ Electrical Characteristic Curve

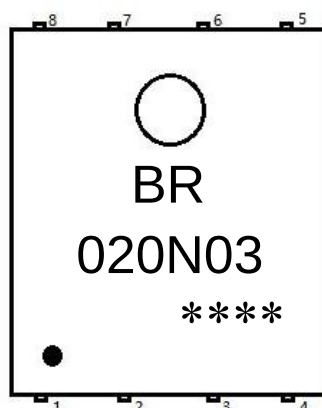


/ Package Dimensions



Rev.00 201812

/ Marking Instructions



说明：

BR： 为公司代码

020N03： 为为产品型号

****： 为生产批号代码，随生产批号变化

Note：

BR： Company Code

020N03： Product Type

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

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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 Conditions

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

/ REEL

Package Type
封装形式

Units 包装数量