/ Revised record

A	2022.5.6	All	AOS-AONS66916		
A	2022-6-9	all	Q AEC-Q101 Q 245±5℃ 5±0.5sec 255±5℃ 5±0.5sec		

/ Descriptions

PDFN5×6 N

N-Channel MOSFET in a PDFN5×6 Plastic Package.

/ Features

AEC-Q101

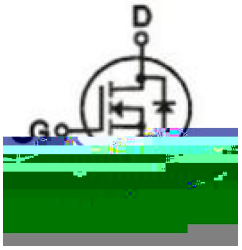
Low $R_{DS(ON)}$ to minimize conductive I_{oss};low Gate Charge for fast switching;Low Thermal resistance; Qualified to AEC-Q101 Standards for High Reliability; HF Product.

/ Applications

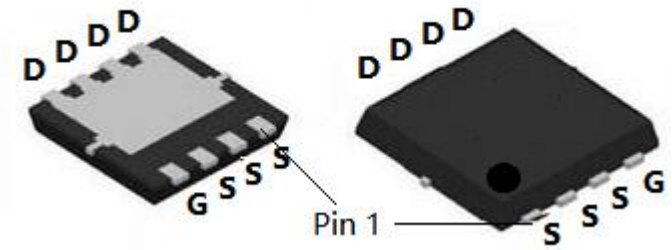
MB/NB/UMPC/VGA Buck -

Battery Management,High Frequency Point-of-Load Synchronous Buck Conventer for MB/NB/UMPC/VGA,Networking DC-DC Power System,Load Switch, Meet the stringent requirements of automotive applications.

/ 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

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See Marking Instructions.

/ Absolute Maximum Ratings(T_a=25)

参数 Parameter		符号 Symbol	数值 Rating	单位 Unit
Drain-Source Voltage		V_{DS}	100	V
Drain Current - Continuous		I_D	168	A
Drain Current – Pulsed		I_{DM}	400	A
Gate-Source Voltage		V_{GS}	±20	V
Power Dissipation		P_D(T_c=25℃)	215	W
Single Pulse Avalanche Energy(L=0.5mH)		E_{AS}	563	mJ
Avalanche Current(L=0.5mH)		I_{AS}	37.5	A
Junction and Storage Temperature Range		T_j, T_{stg}	-55 to 150	℃
Thermal resistance, junction - ambient	t ≤ 10s	$R_{\theta JA}$	20	℃/W
	Steady-State		50	
Thermal resistance, junction - case	Steady-State	$R_{\theta JC}$	0.58	

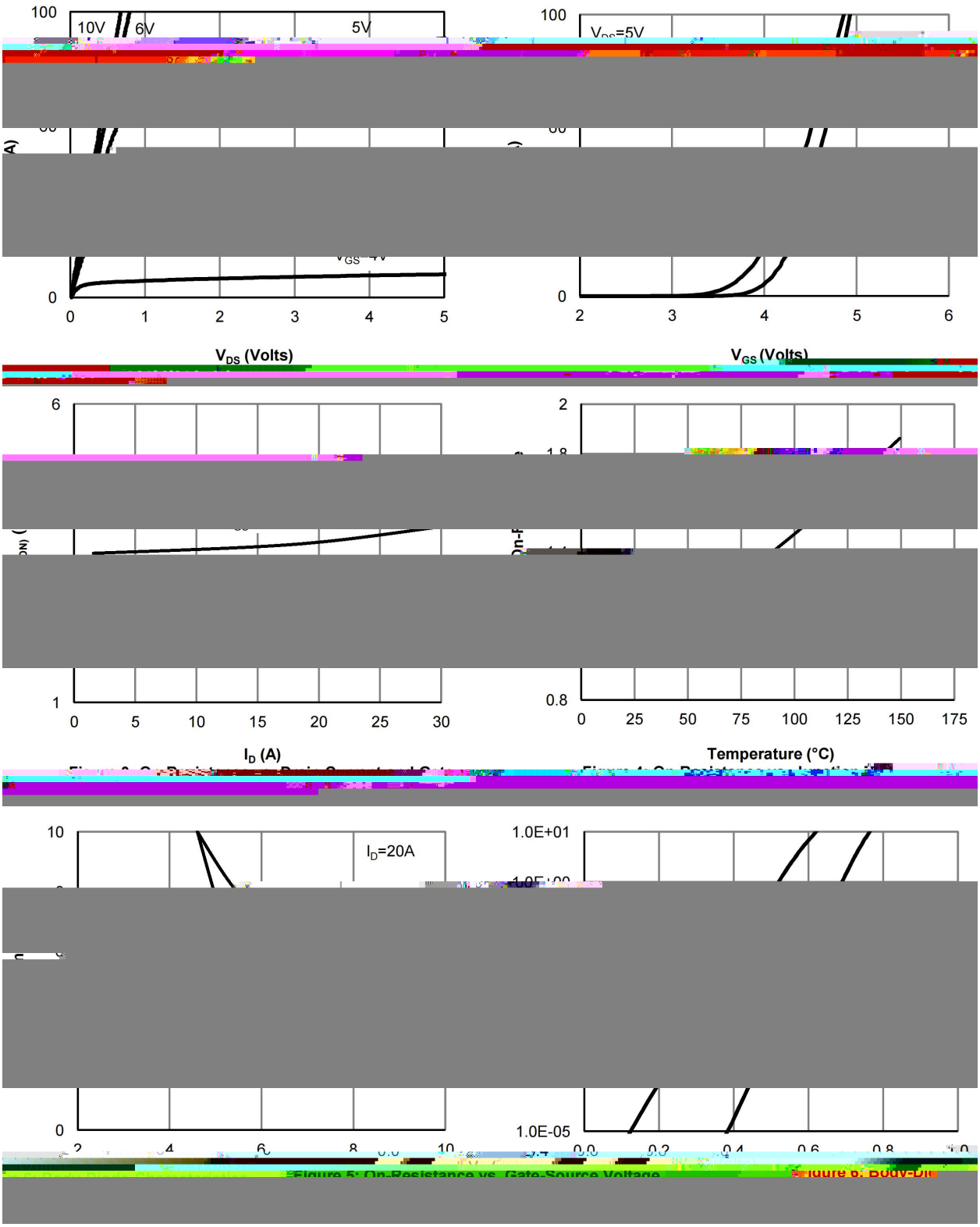
/ Electrical Characteristics(Ta=25)

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
Drain-Source Breakdown Voltage	BV_{DSS}	I_D=250uA, V_{GS}=0V	100	112		V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=100V, 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	2	2.9	4	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	V_{GS}=10V, I_D=20A		3.5	4.0	mΩ
Diode Forward Voltage	V_{SD}	I_S=1A, V_{GS}=0V			1.2	V
Input Capacitance	C_{iss}	V_{DS}=25V V_{GS}=0V f=1.0MHz		5550		pF
Output Capacitance	C_{oss}			2050		
Reverse Transfer Capacitance	C_{rss}			180		
Gate resistance	R_g	V_{GS}=0V V_{DS}=0V f=1MHz		1.7		Ω
Total Gate Charge	$Q_{g(10V)}$	V_{GS}=10V, V_{DS}=50V, I_D=20A		70		nC
Gate Source Charge	Q_{gs}			20		
Gate Drain Charge	Q_{gd}			10		

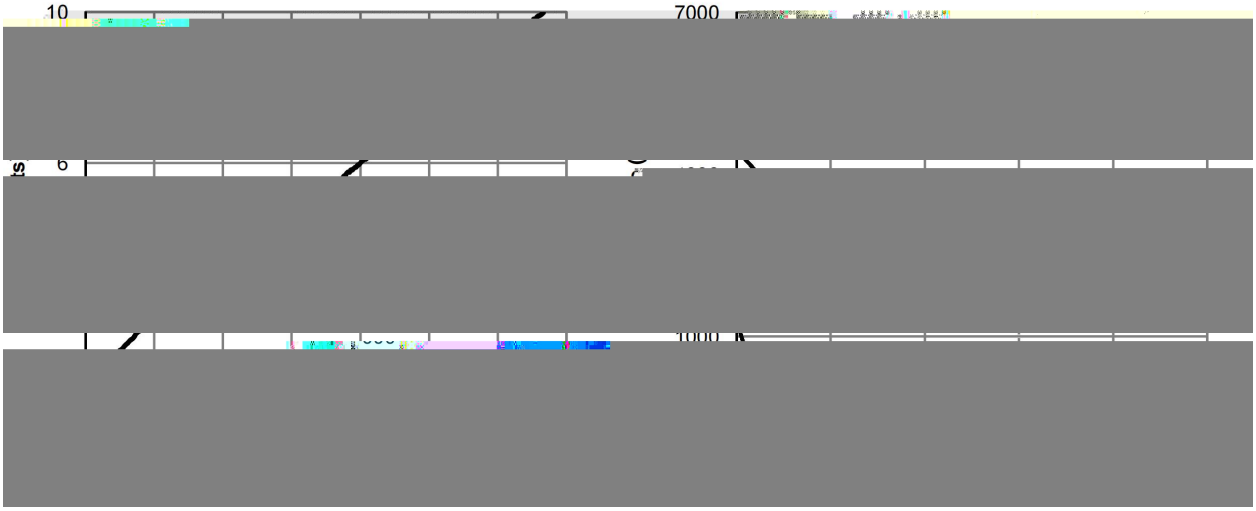
/ Electrical Characteristics(Ta=25)

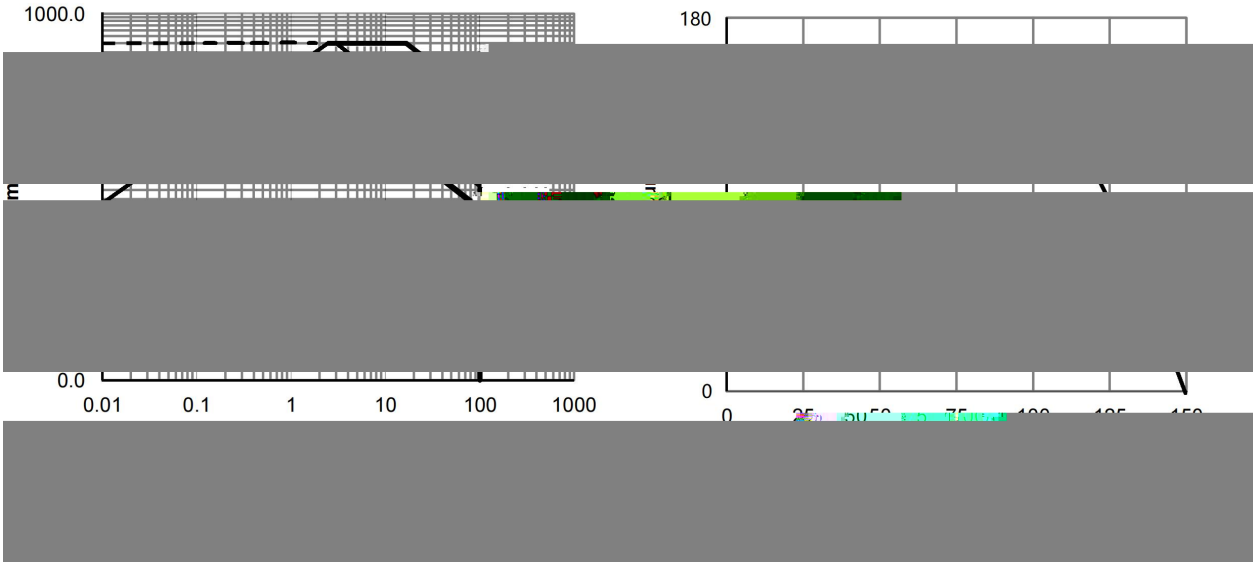
参数 Parameter	符号 Symbol	测试条件 Test Conditions	最小值 Min	典型值 Typ	最大值 Max	单位 Unit
Turn-On Delay Time	$t_{d(on)}$	V_{GS}=10V V_{DS}=50V R_L=2.5Ω R_{GEN}=3Ω		19		ns
Turn-On Rise Time	t_r			8		
Turn-Off Delay Time	$t_{d(off)}$			32		
Turn-Off Fall Time	t_f			11		

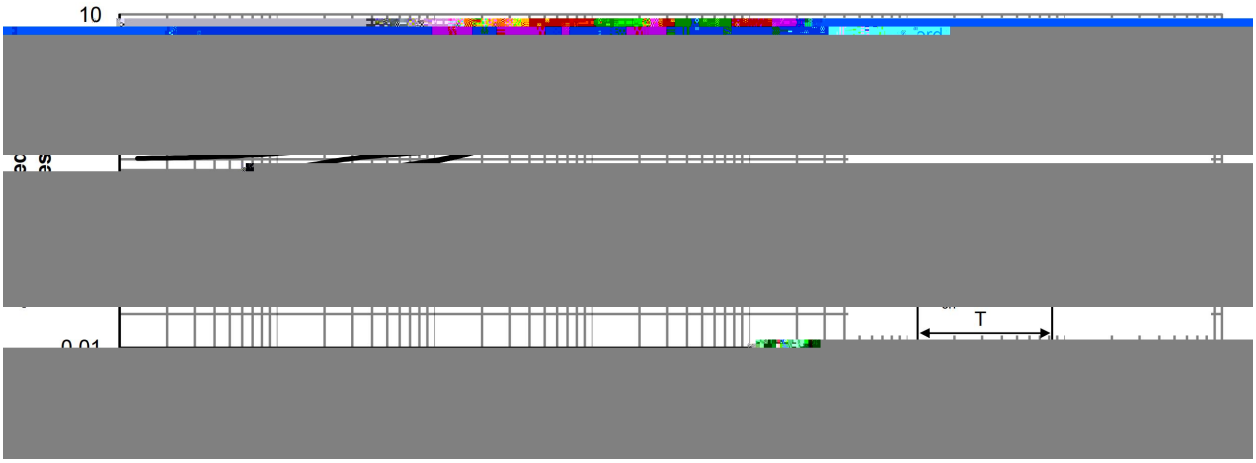
/ Electrical Characteristic Curve



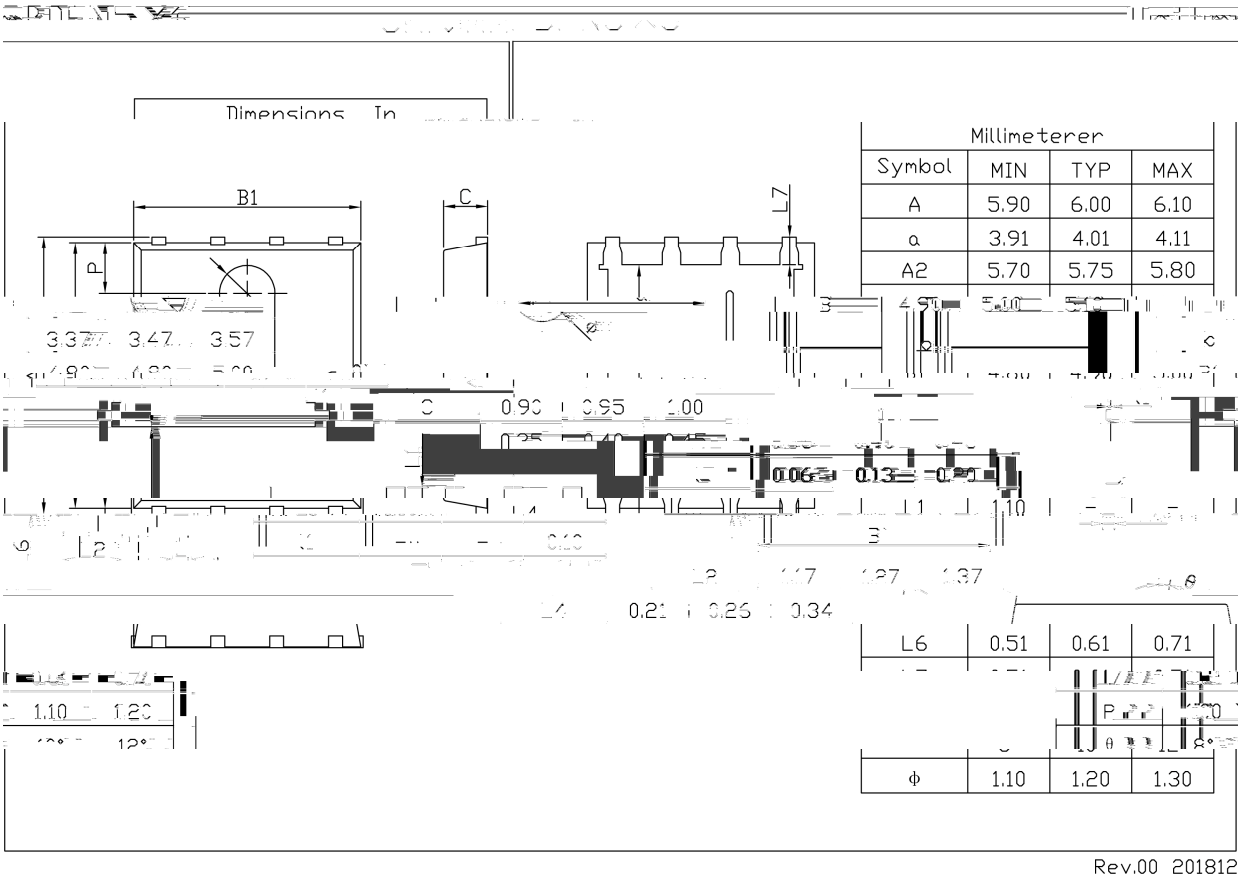
/ Electrical Characteristic Curve



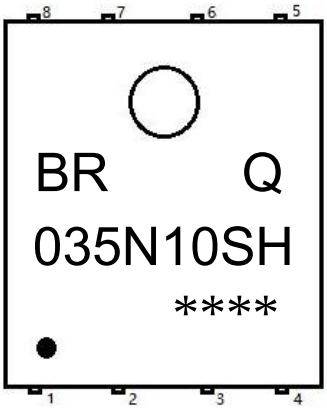




/ Package Dimensions



/ Marking Instructions



说明：

BR：	为公司代码
Q：	为汽车无卤产品标识
035N10SH：	为为产品型号
****：	为生产批号代码，随生产批号变化

Note:

BR:	Company Code
Q:	Automobile halogen-free product Code
035N10SH:	Product Type
****:	Lot No. Code, code change with Lot No

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

Note:

1	150	200	60 120sec;	1.Preheating:150~200℃, Time:60~120sec.
2	255±5		5±0.5sec;	2.Peak Temp.:255±5℃, Duration:5±0.5sec.
3		2	10℃/sec.	3. Cooling Speed: 2~10℃/sec.

/ Resistance to Soldering Hea)))

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