PDFN5×6 N

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

V_{DS}(V)=40 V I_D=98A

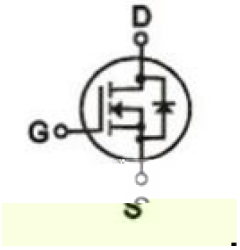
$R_{DS(ON)}$@10V≤3.5mΩ(Typ.3.0mR)

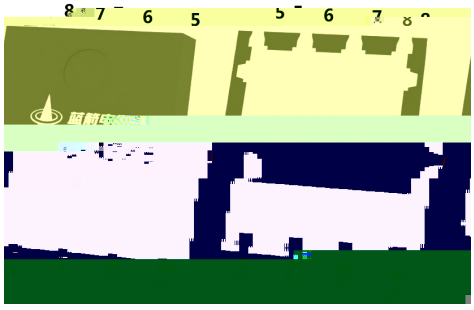
$R_{DS(ON)}$@4.5V≤5.0mΩ(Typ.4.0mR)

AEC-Q101 Qualified to AEC-Q101 Standards for High Reliability, HF Product.

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.





PIN1、2、3： S PIN4：G PIN5、6、7、8：D

See Marking Instructions.

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	40	V
Continuous Drain Current		I_D(Tc=25℃)	98	A
Pulsed Drain Current		I_{DM}	195	A
Gate-Source Voltage		V_{GS}	±20	V
Power Dissipation		P_D(T_c=25℃)	60	W
Avalanche energy(L=0.5mH)		E_{AS}	435	mJ
Avalanche Current(L=0.5mH)		I_{AS}	33	A
Junction and Storage Temperature Range		T_j, T_{stg}	-55 to 150	
Maximum Junction-to-Ambient	t ≤ 10s	$R_{\theta JA}$	22	/ W
	Steady-State		53	
Maximum Junction-to-Case	Steady-State	$R_{\theta JC}$	2.08	

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}=0V I_D=250μA	40	44		V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=40V V_{GS}=0V			1.0	μA
Gate-Body Leakage Current Forward	I					

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-On Delay Time	$t_{d(on)}$	V_{GS}=10V V_{DS}=20V R_L=1Ω R_{GEN}=3Ω		11		ns
Turn-On Rise Time	t_r			11		
Turn-Off Delay Time	$t_{d(off)}$			40		
Turn-Off Fall Time	t_f			10		

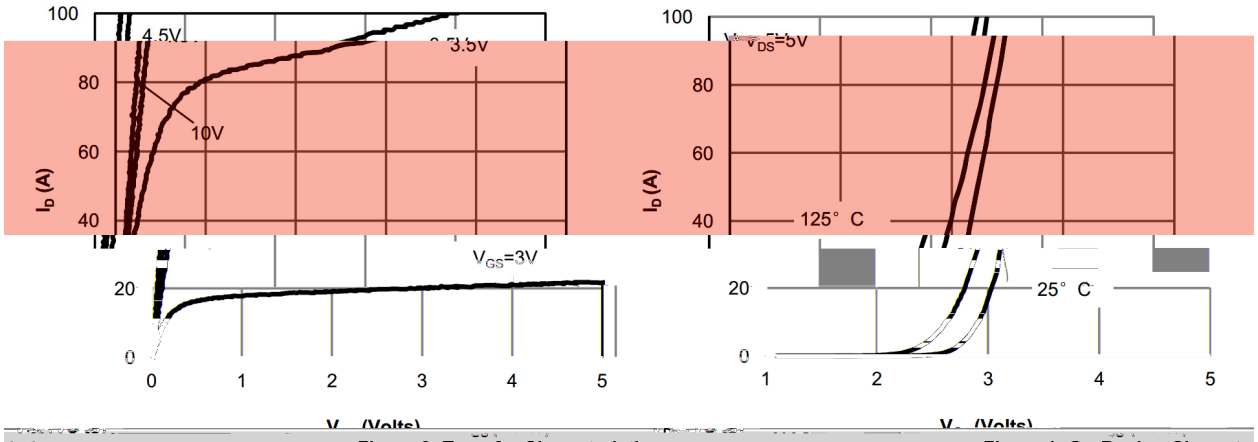


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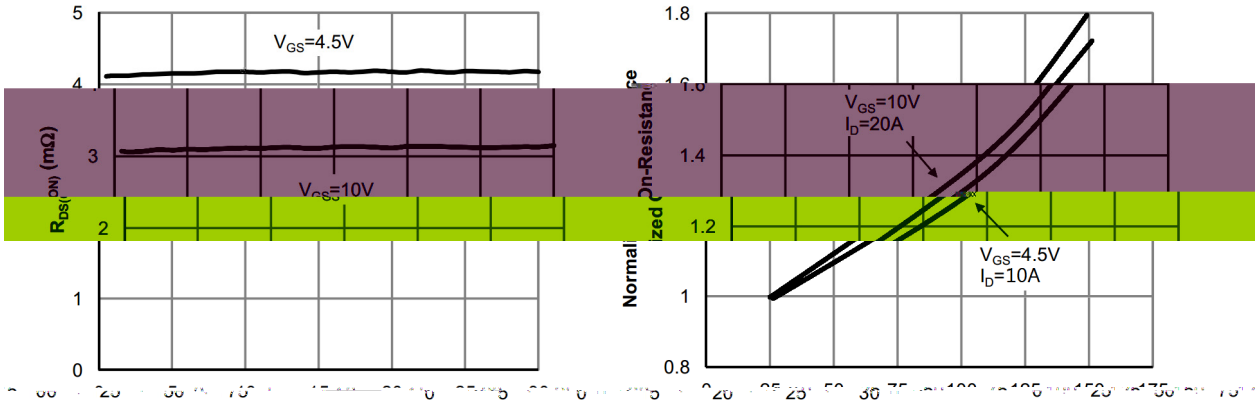
Figure 2: Transfer Characteristics

Figure 1: On-Region Characte

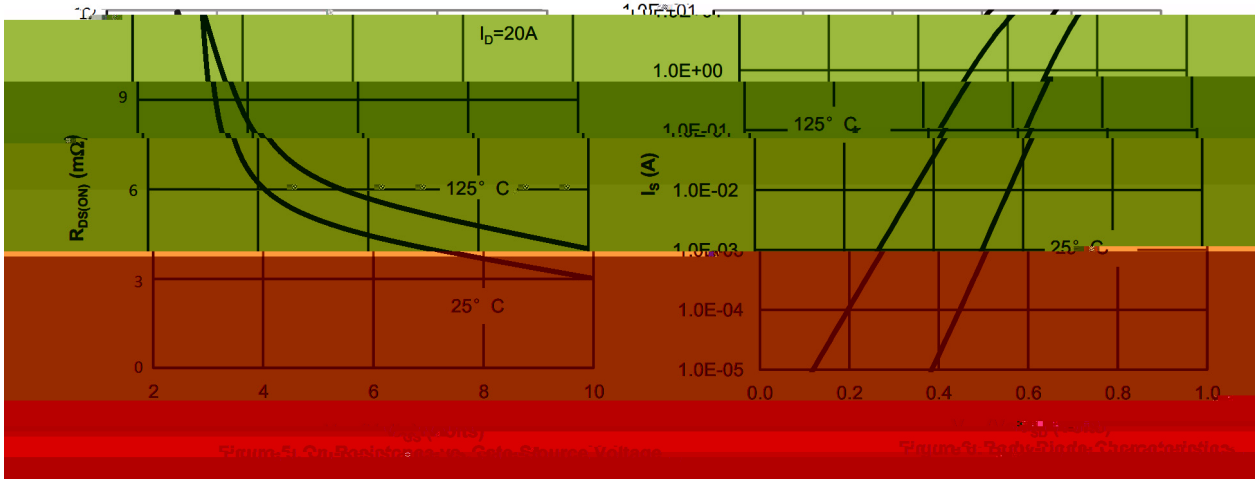


rature (°C)
istance vs. Junction Temperature

I_D (A)

Figure 3: On-Resistance vs. Drain Current and Gate Voltage

Tempe
Figure 4: On-Res



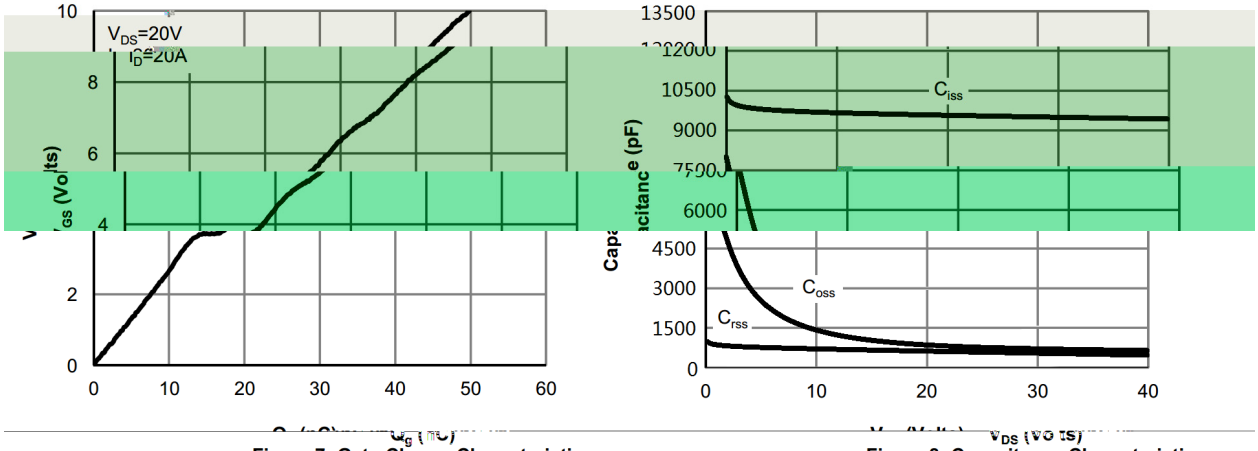
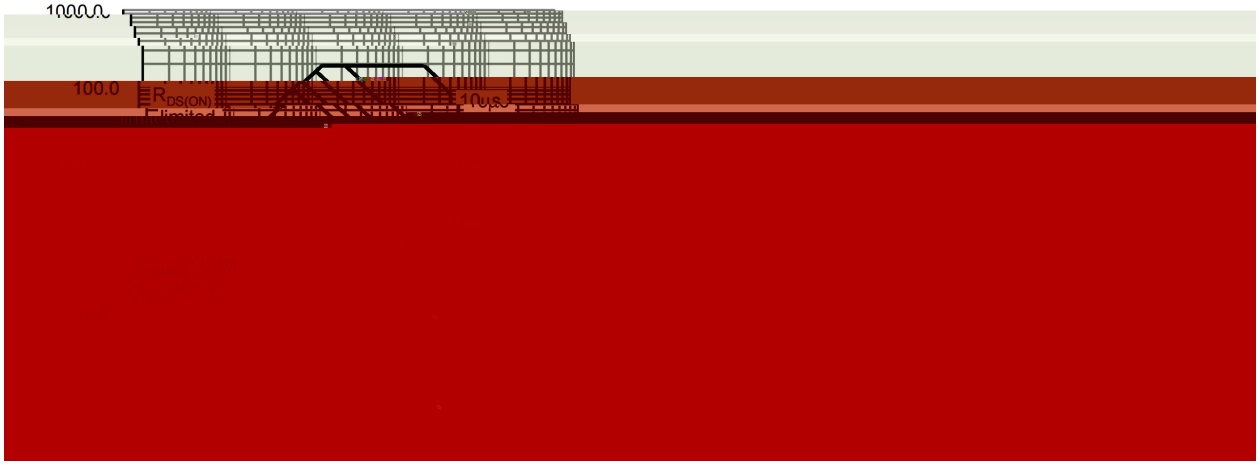


Figure 7: Gate-Charge Characteristics

Figure 8: Capacitance Characteristics



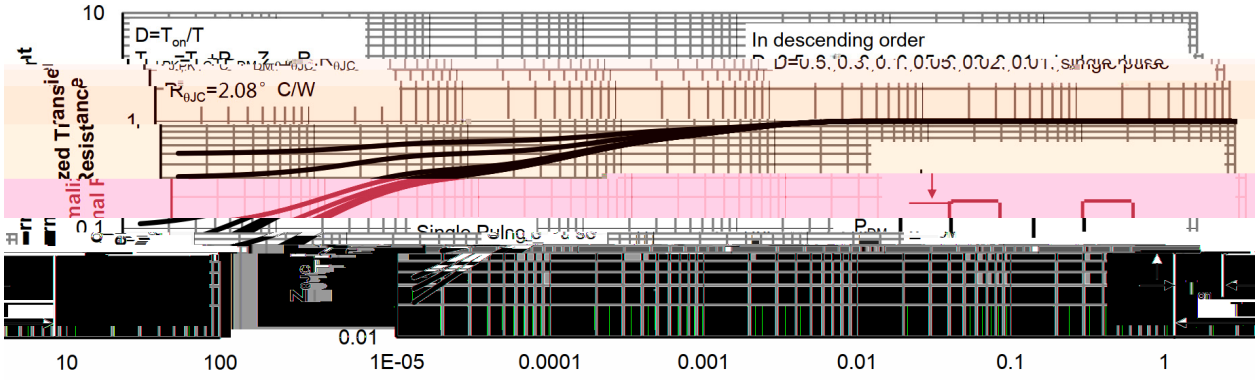
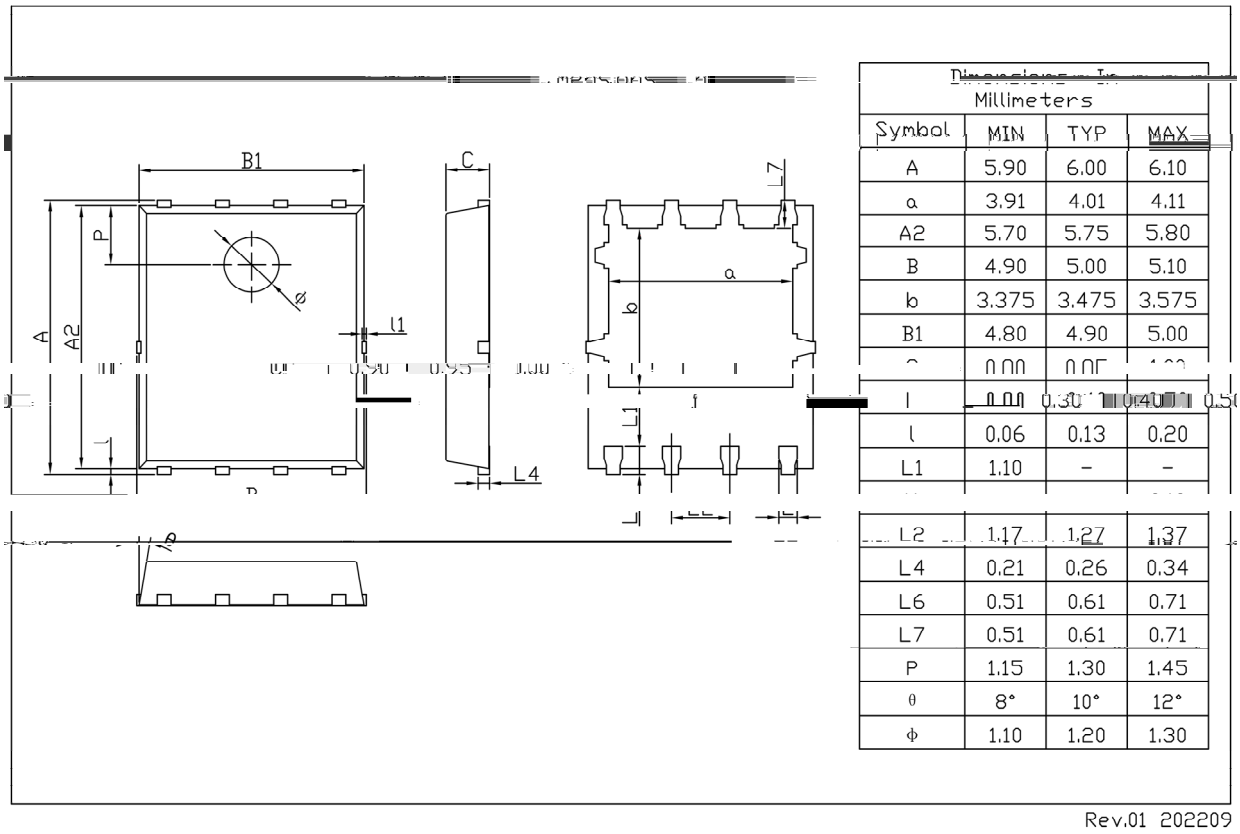


Figure 10: Normalized Maximum Transient Thermal Impedance

PDFN5×6 Unit:mm



Dimensions In Millimeters			
Symbol	MIN	TYP	MAX
A	5.90	6.00	6.10
a	3.91	4.01	4.11
A2	5.70	5.75	5.80
B	4.90	5.00	5.10
b	3.375	3.475	3.575
B1	4.80	4.90	5.00
[illegible]	[illegible]	[illegible]	[illegible]
l	[illegible]	0.30	[illegible]
l	0.06	0.13	0.20
L1	1.10	–	–
[illegible]	[illegible]	[illegible]	[illegible]
L2	1.17	1.27	1.37
L4	0.21	0.26	0.34
L6	0.51	0.61	0.71
L7	0.51	0.61	0.71
P	1.15	1.30	1.45
θ	8°	10°	12°
Φ	1.10	1.20	1.30

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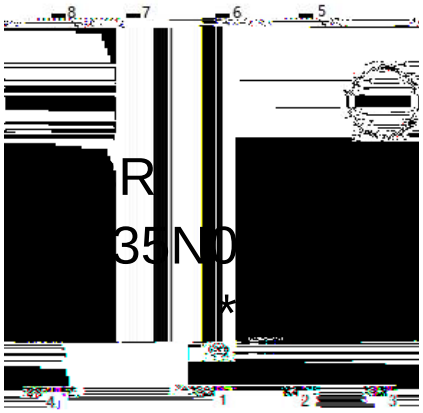

BR

Q

035N04S

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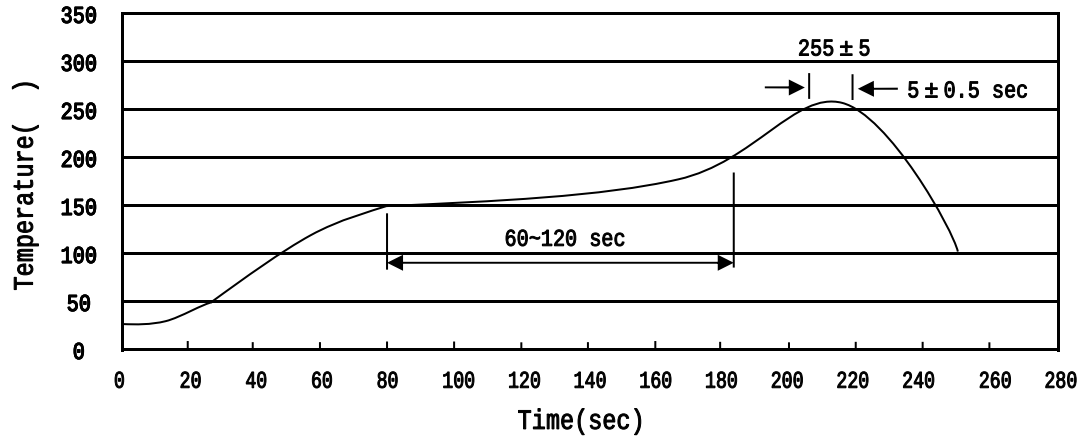
Note

BR	Company Code
Q:	Automobile halogen-free product Code
035N04S	Product Type Code
****:	Lot No. Code, code change with Lot No



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.

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

/ REEL

Package Type	Units					Dimension		(unit mm³)
	Units/Reel /	Reels/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Reel	Inner Box	Outer Box
PDFN5×6	5,000	2	10,000	6	60,000	13''×12	360×360×50	380×335×366