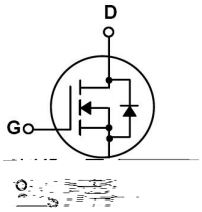
Rev.A Jul.-2022

N-Channel Enhancement Mode Field Effect Transistor in a PDFN3×3A-8L Plastic Package.

V_{DS} (V) = 60V
I_D =24 A (V_{GS} = ±20V)
$R_{DS(ON)}$@10V≤13mR(Typ.11.5mR)

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

These devices are well suited for high efficiency switching DC/DC converters and switch mode power supplies, Meet the stringent requirements of automotive applications.



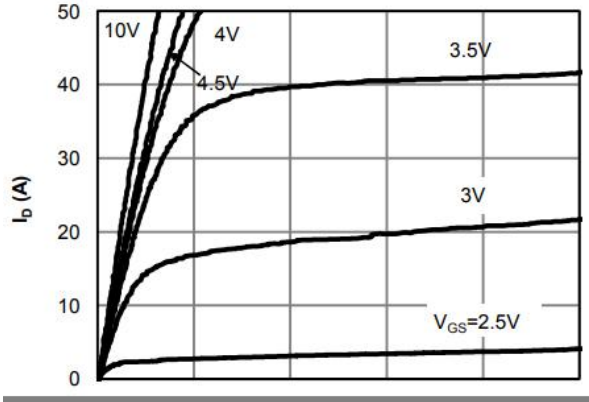
出脚	定义
Pin1	S
Pin2	S
Pin3	S
Pin4	G
Pin5	D
Pin6	D
Pin7	D
Pin8	D

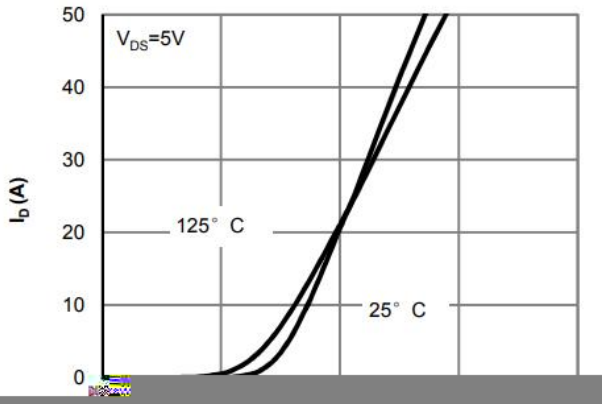
See Marking Instructions.

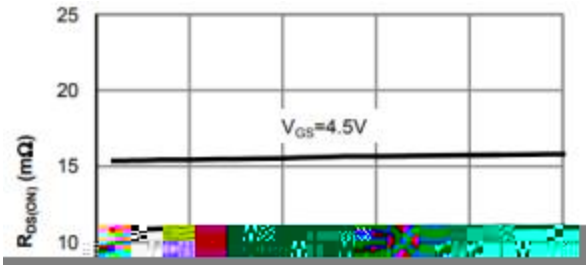
Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DSS}	60	V
Drain Current		I_D(Tc=25℃)	24	A
Drain Current - Pulsed		I_{DM}	90	A
Gate-Source Voltage		V_{GSS}	±20	V
Single Pulsed Avalanche Energy		E_{AS}	70	mJ
Avalanche Current		I_{AS}	20	A
Power Dissipation		P_D(Tc=25℃)	24	W
Operating and Storage Temperature Range		T_J,T_{stg}	-55 to 150	℃
Junction-to-Ambient	t≤10	$R_{\theta JA}$	30	℃/W
Junction-to-Ambient	Steady-State		55	

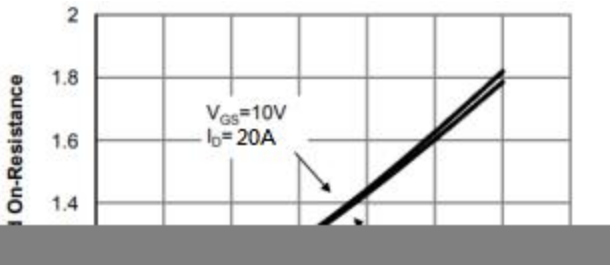
Parameter	Symbol	Test Conditions		Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}=0V	I_D=250μA	60	64		V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=60V	V_{GS}=0V			1	μA
Gate-Body Leakage Current Forward	I_{GSS}	V_{GS}=±20V	V_{DS}=0V			±0.1	μA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS}	I_D=250μA	1.0	1.6	2.5	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	V_{GS}=10V	I_D=20A		11.5	13	mΩ
		V_{GS}=4.5V	I_D=10A		15.5	18	mΩ
Drain-Source Diode Forward Voltage	V_{SD}	V_{GS}=0V	I_S=1A			1.2	V
Input Capacitance	C_{iss}	V_{DS}=25V f=1.0MHz	V_{GS}=0V		1010		pF
Output Capacitance	C_{oss}				250		
Reverse Transfer Capacitance	C_{rss}				280		
Gate resistance	R_g	V_{GS}=0V f=1MHz	V_{DS}=0V		1.5		Ω
Total Gate Charge	$Q_{g(10V)}$	V_{GS}=10V I_D=13A	V_{DS}=30V		13.5		nC
Total Gate Charge	$Q_{g(4.5V)}$				6.5		
Gate Source Charge	Q_{gs}				2.5		
Gate Drain Charge	Q_{gd}				3.0		

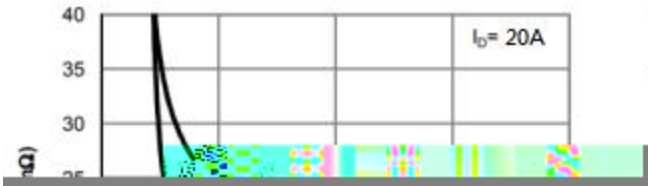
Turn-


10V
4V
4.5V
3.5V
3V
V_{GS}=2.5V
I_D (A)
50
40
30
20
10
0

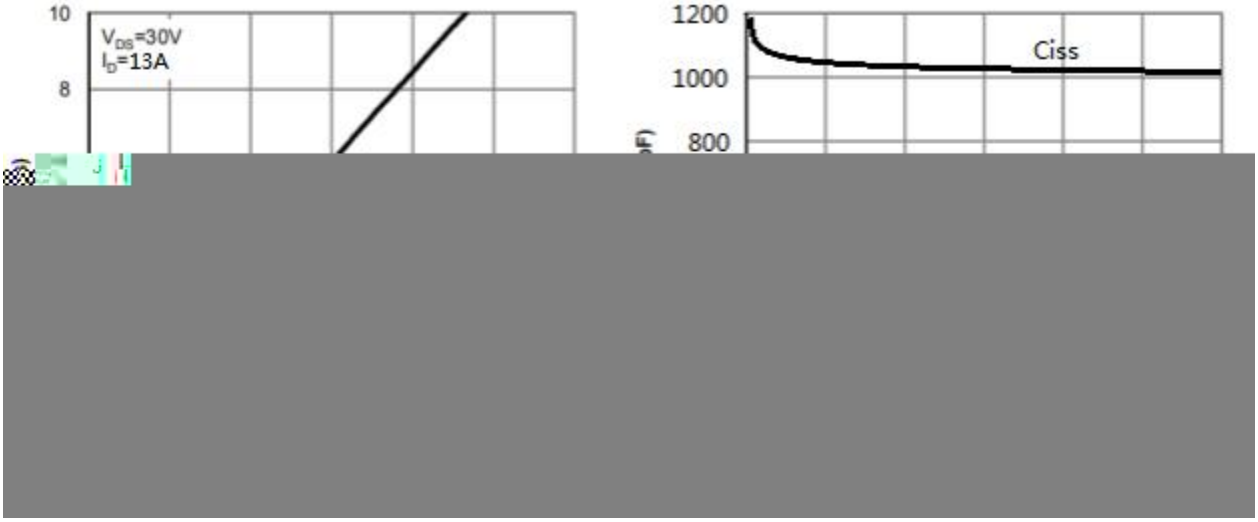

V_{DS}=5V
125° C
25° C
I_D (A)
50
40
30
20
10
0

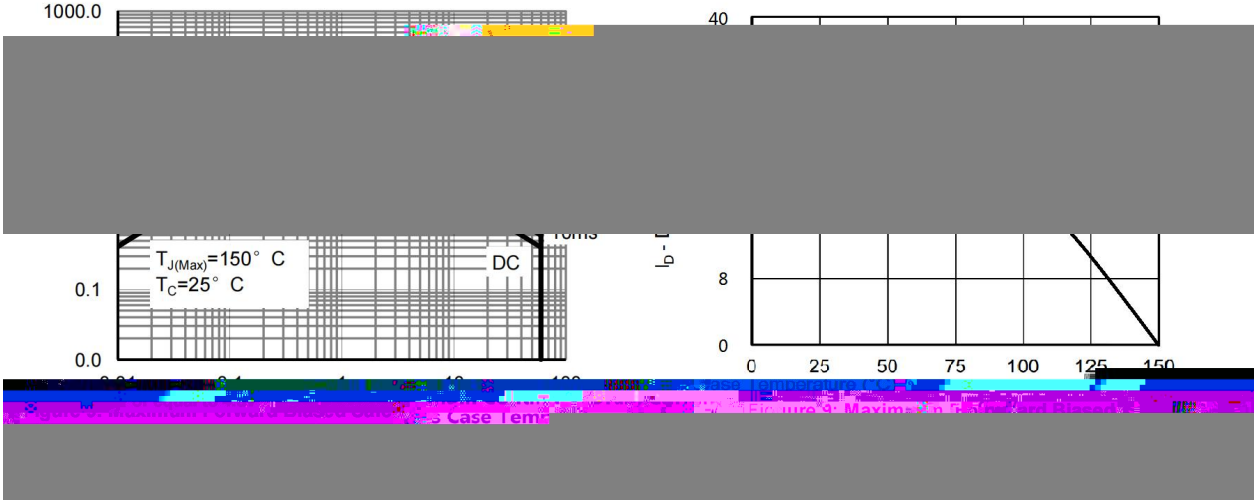

V_{GS}=4.5V
$R_{DS(ON)}$ (mΩ)
25
20
15
10


V_{GS}=10V
I_D= 20A
2
1.8
1.6
1.4


I_D= 20A
40
35
30


1.0E+01
1.0E+00

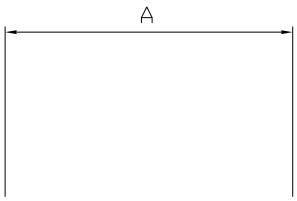

10
8
V_{DS}=30V
I_D=13A
1200
1000
800
Ciss


1000.0
0.1
0.0
$T_{J(Max)}$=150° C
T_C=25° C
DC
40
8
0
0
25
50
75
100
125
150


10
0.1
Single Pulse
P_{DM}

PDFN3X3A-8L

Unit:mm



Rev.00 20201

BR Q
120N06
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Q

120N06

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Note:

BR:	Company Code
Q:	Automobile halogen-free product Code
120N06:	Product Type Code
****:	Lot No. Code, code change with Lot No