

PDFN 3 3A-8L

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

$V_{DS} (V) = 30V$

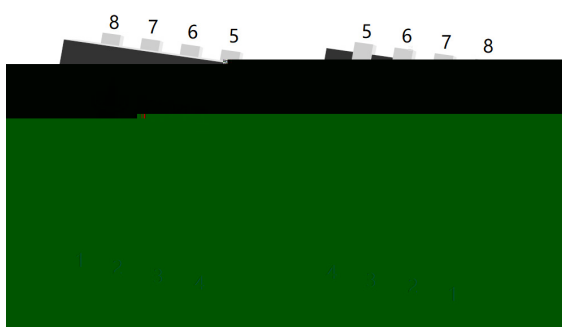
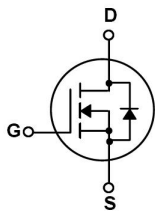
$I_D = 40 A (V_{GS} = 20V)$

$R_{DS(ON)}@10V = 6mR(Typ.4.7mR)$

HF Product.

Qualified to AEC-Q101 Standards for High Reliability,

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

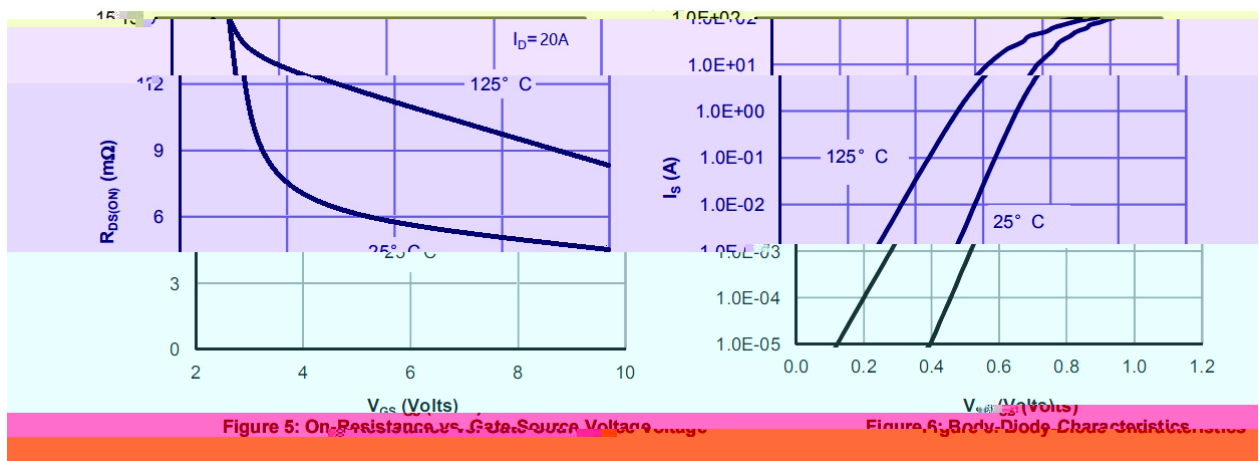
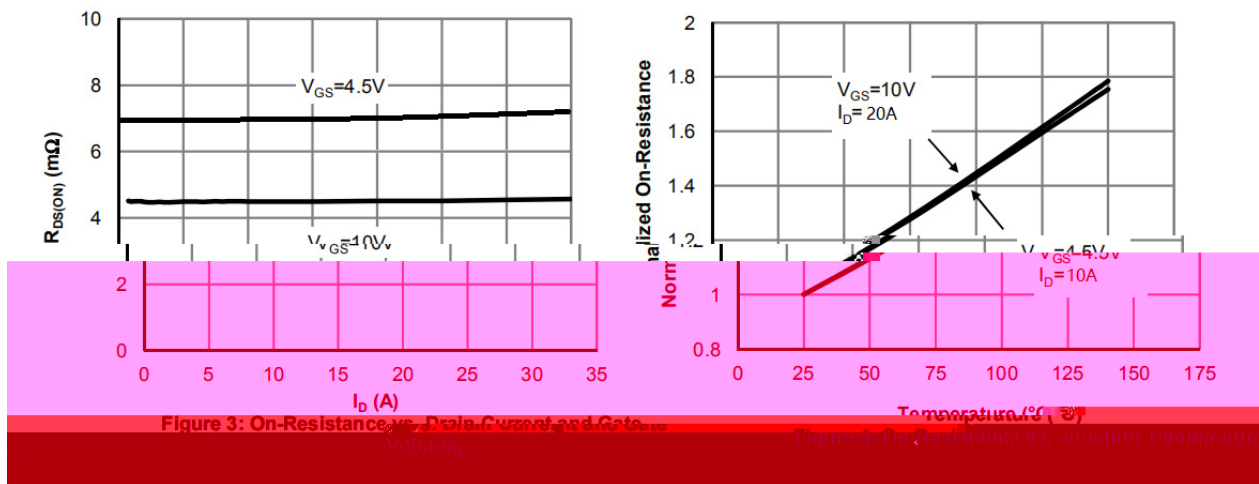
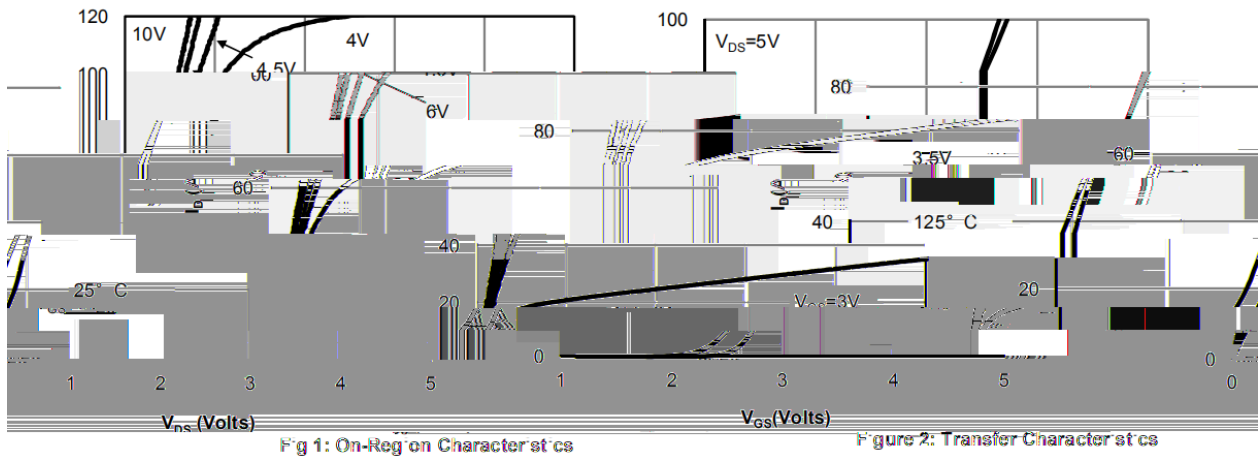


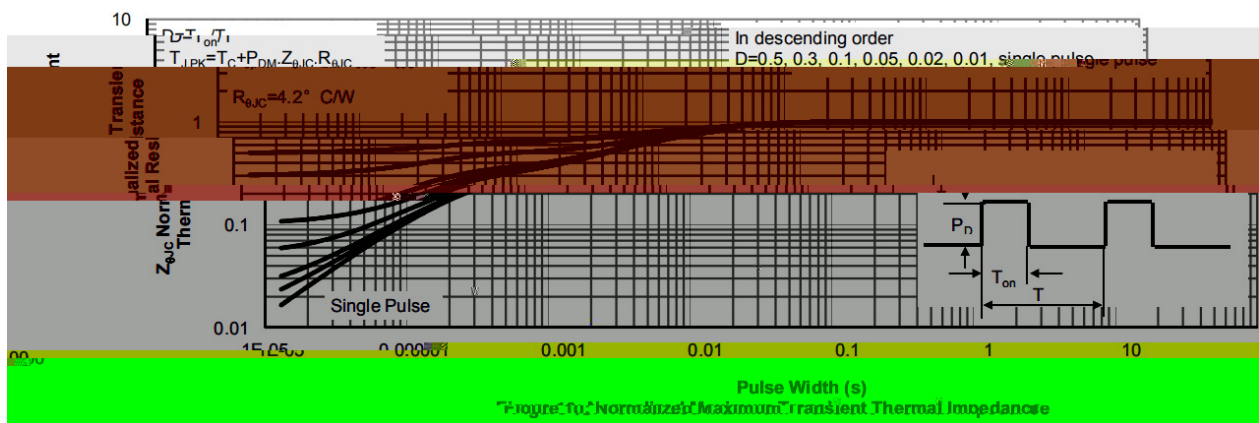
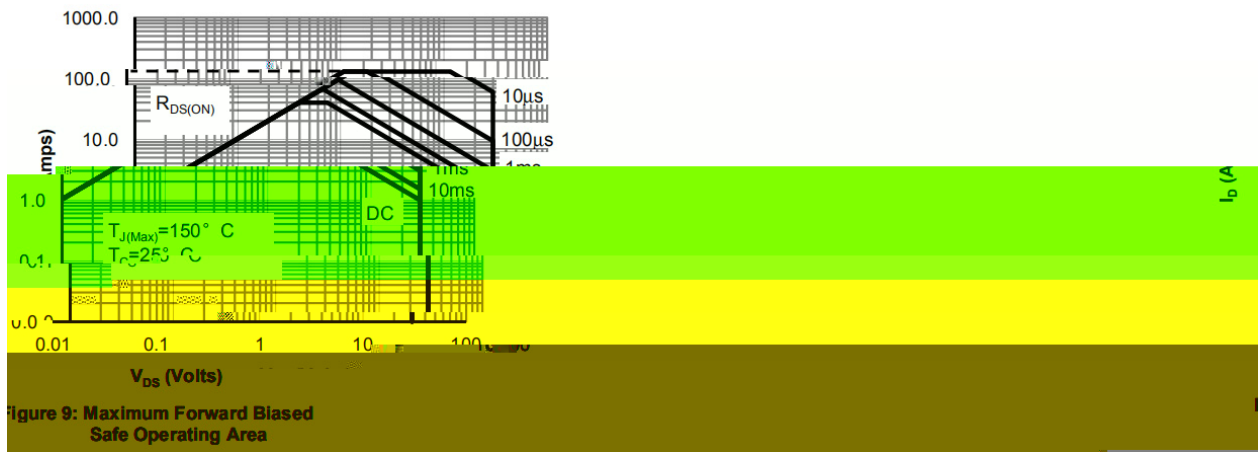
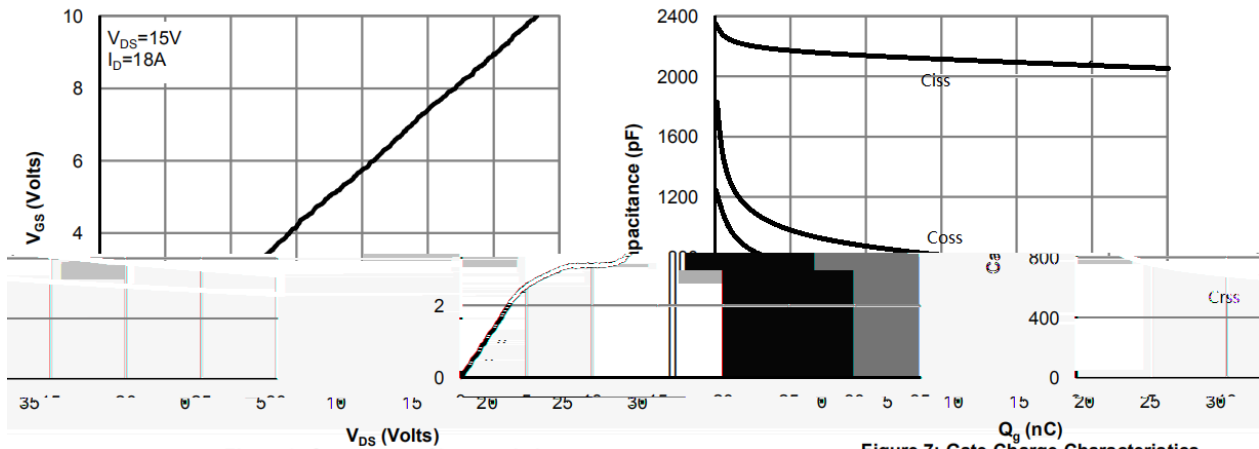
出脚	定义
Pin1	S
Pin2	S
Pin3	S
Pin4	G
Pin5	D
Pin6	D
Pin7	D
Pin8	D

See Marking Instructions.

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	30	V
Drain Current		$I_D(T_C=25^\circ\text{C})$	40	A
Drain Current - Pulsed		I_{DM}	130	A
Gate-Source Voltage		V_{GS}	± 20	V
Single Pulsed Avalanche Energy		E_{AS}	211	mJ
Avalanche Current		I_{AS}	23	A
Power Dissipation		$P_D(T_C=25^\circ\text{C})$	29	W
Operating and Storage Temperature Range		T_J, T_{stg}	-55 to 150	
Junction-to-Ambient	$t \leq 10$	$R_{\theta JA}$	40	/W
Junction-to-Ambient	Steady-State		75	
Junction-to-Case	Steady-State	$R_{\theta JC}$	4.2	

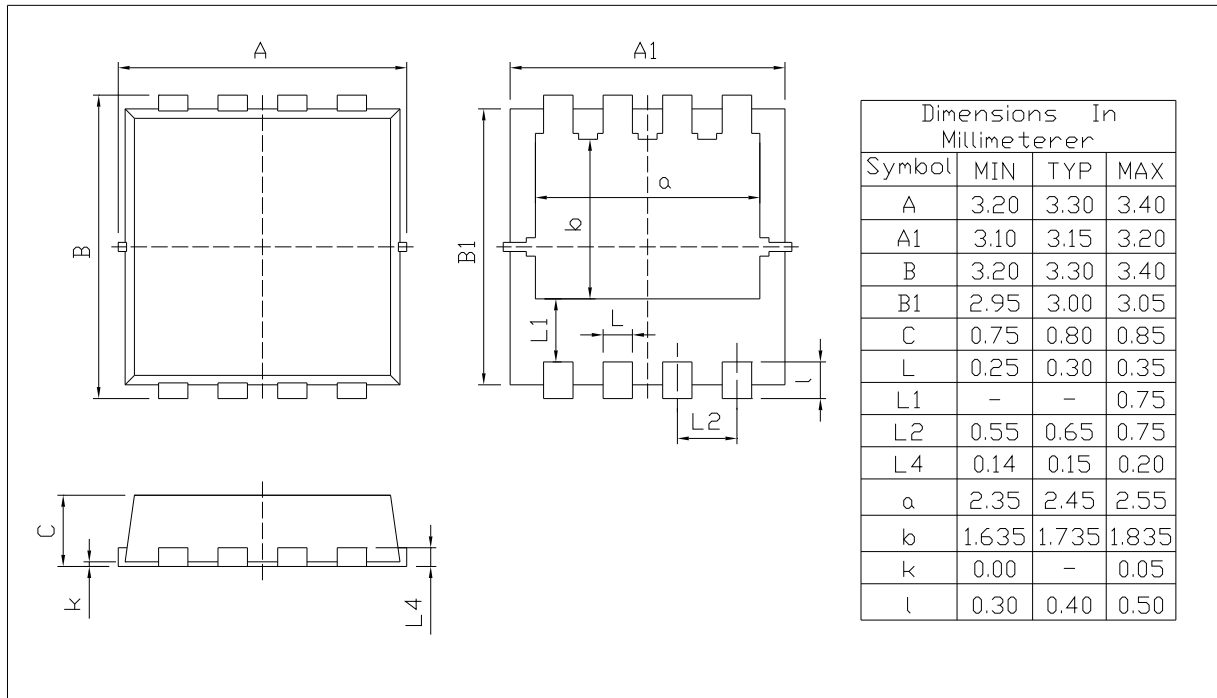
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V$ $I_D=250\mu A$	30	32		V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=30V$ $V_{GS}=0V$			1	μA
Gate-Body Leakage Current Forward	I_{GSS}	$V_{GS}=\pm 20V$ $V_{DS}=0V$			± 0.1	μA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=250\mu A$	1.0	1.8	2.5	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10V$ $I_D=20A$		4.7	6	$m\Omega$
		$V_{GS}=4.5V$ $I_D=10A$		7.1	9	$m\Omega$
Drain-Source Diode Forward Voltage	V_{SD}	$V_{GS}=0V$ $I_S=10A$		0.75	1.2	V
Input Capacitance	C_{iss}	$V_{DS}=25V$ $V_{GS}=0V$ $f=1.0MHz$		2090		pF
Output Capacitance	C_{oss}			790		
Reverse Transfer Capacitance	C_{rss}			634		
Gate resistance	R_g	$V_{GS}=0V$ $V_{DS}=0V$ $f=1MHz$		1.9		Ω
Total Gate Charge	$Q_{g(10V)}$	$V_{GS}=10V$ $V_{DS}=15V$ $I_D=18A$		33		nC
Total Gate Charge	$Q_{g(4.5V)}$			16		
Gate Source Charge	Q_{gs}			5.2		
Gate Drain Charge	Q_{gd}			6.2		
Turn-On Delay Time	$t_{d(on)}$	$V_{DD}=10V$ $V_{DS}=15V$ $R_L=0.83\Omega$ $R_{GEN}=3\Omega$		6		ns
Turn-On Rise Time	t_r			4		
Turn-Off Delay Time	$t_{d(off)}$			33		
Turn-Off Fall Time	t_f			7.5		



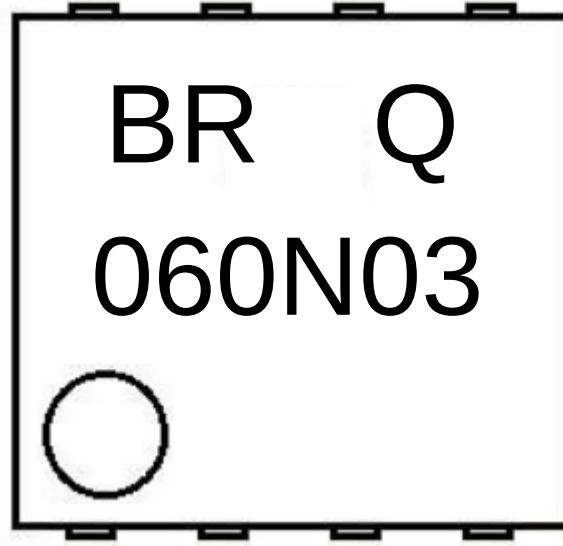


PDFN3X3A-8L

Unit:mm



Rev.00 202011



BR

Q

060N03

Note:

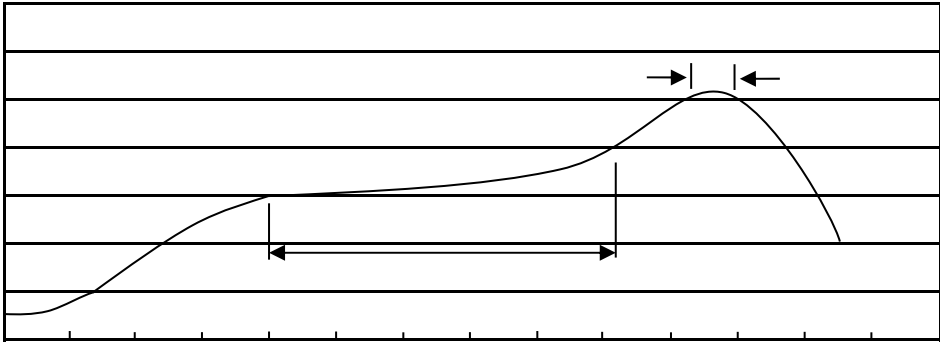
BR: Company Code

Q: Automobile halogen-free product Code

060N03: Product Type Code

***: 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.

260 5

10 1 sec.

Temp.:260 5

Time:10 1 sec

/ REEL

Package Type	Units					Dimension (unit mm ³)		
	Units/Reel	Reels/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Reel	Inner Box	Outer Box
PDFN3×3A-8L	5,000	2	10,000	6	60,000	13 ×12	360×360×50	380×335×366