

/ Descriptions

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

/ Features

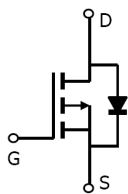
$V_{DS} (V) = -30V$
 $I_D = -45A (V_{GS} = \text{¥} 20V)$
 $R_{DS(ON)} @ -10V \text{ ¨} 7.5mR (Typ. 6.5mR)$
AEC-Q101 III Qualified to AEC-Q101 Standards for High Reliability,
HF Product.

/ Applications

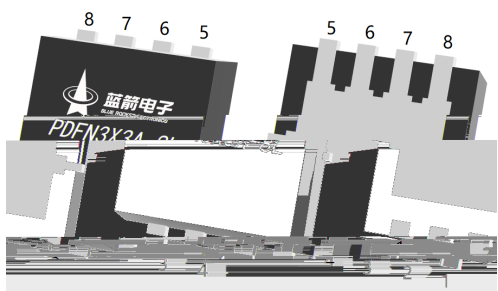
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Notebook AC-in load switch, Battery protection charge/discharge, Meet the stringent requirements of automotive applications.

/ Equivalent Circuit



/ Pinning



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

/ Marking

See Marking Instructions.

BRCS070P03YBQ

Rev.A Oct.-2023



DATA SHEET

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	-30	V
Drain Current - Continuous	$I_D(T_c=25^{\circ}\text{C})$	-45	A
Drain Current – Pulsed	I_{DM}	-126	A
Gate-Source Voltage	V_{GS}	¥ 20	V
Power Dissipation	$P_D(T_c=25^{\circ}\text{C})$	30	W
Single Pulse Avalanche Energy(L=0.5mH)	E_{AS}	360	mJ
Avalanche Current(L=0.5mH)	I_{AS}	-30	A
Junction and Storage Temperature Range	T_j, T_{stg}	-55 to 150	

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-On Delay Time	$t_{d(on)}$	$V_{GS}=-10V$ $V_{DS}=-15V$ $R_L=0.75 \Omega$ $R_{GEN}=3 \Omega$		12.5		ns
Turn-On Rise Time	t_r			19		
Turn-Off Delay Time	$t_{d(off)}$			125		
Turn-Off Fall Time	t_f			67		

/ Electrical Characteristic Curve

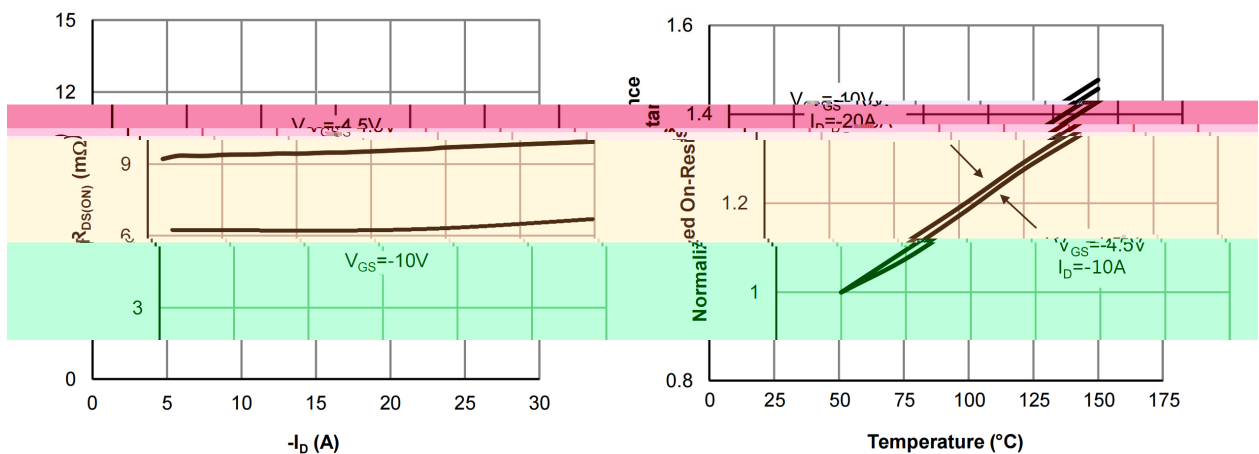
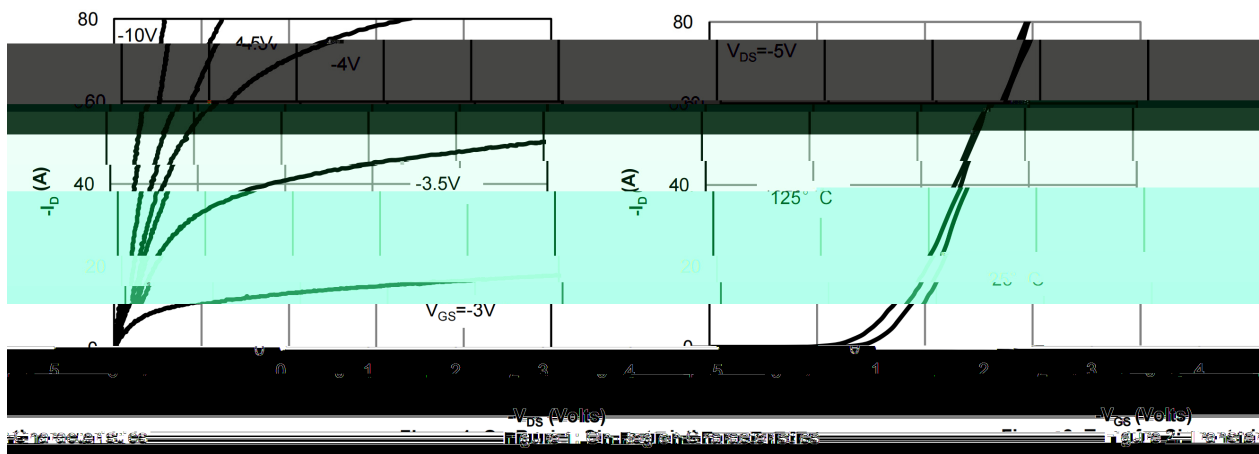


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

Figure 4: On-Resistance vs. Junction Temperature

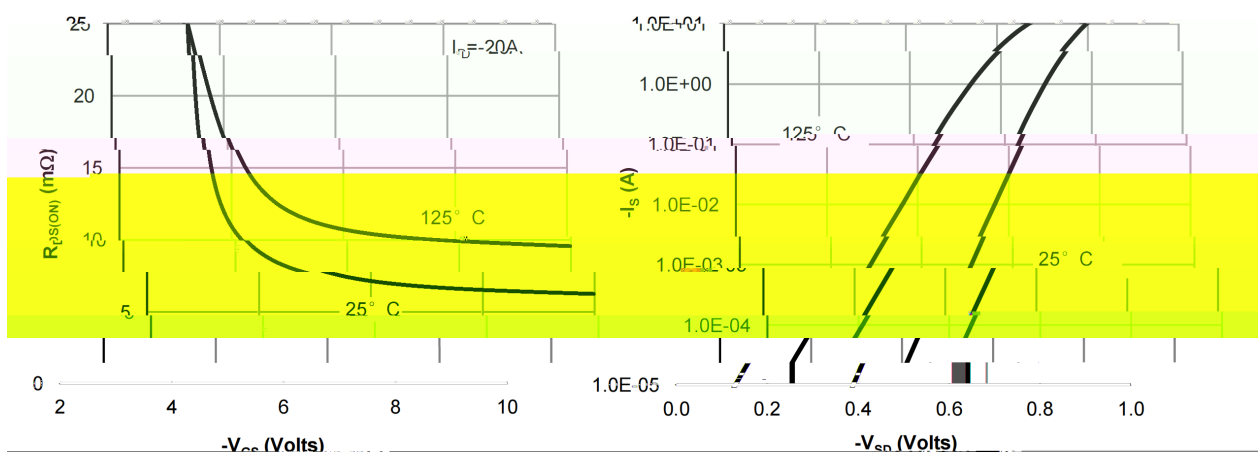
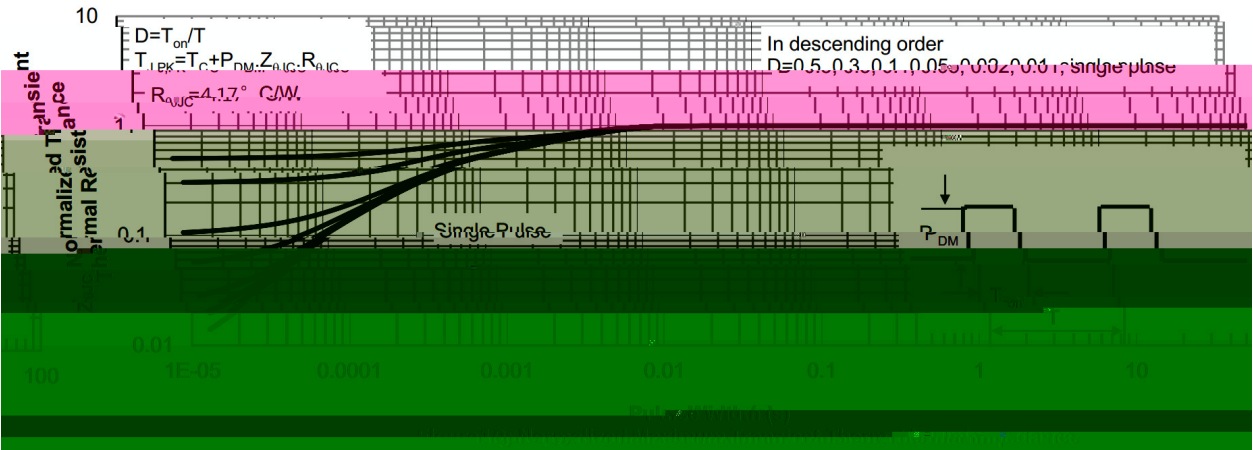
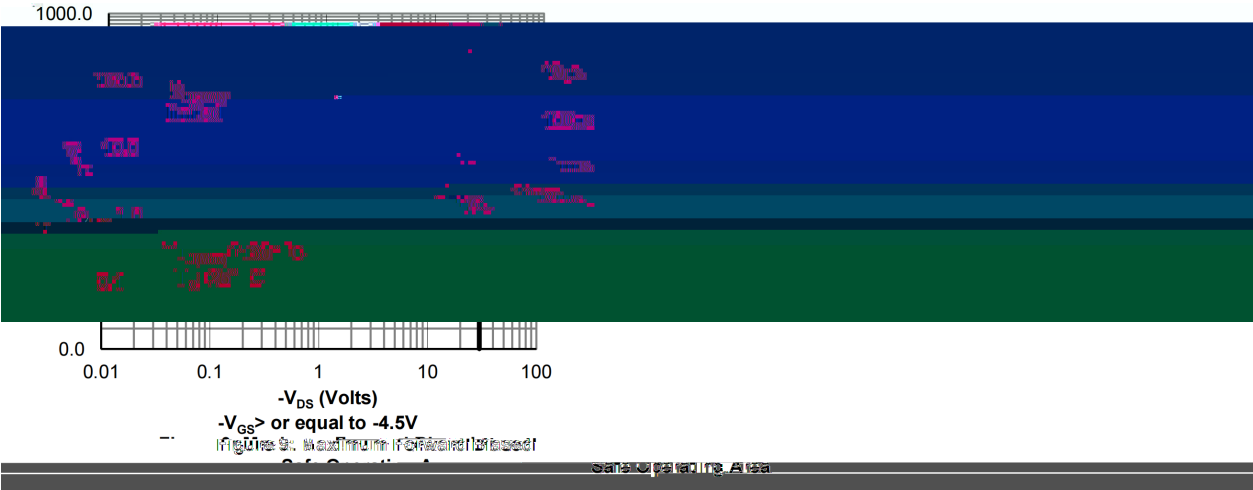
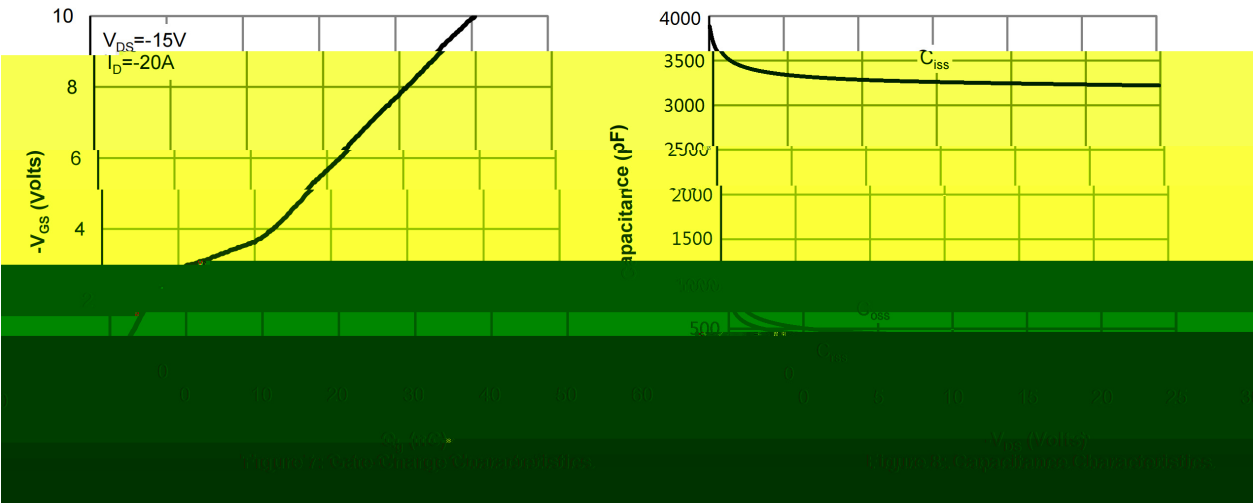


Figure 5: On-Resistance vs. Gate-Source Voltage

Figure 6: Body Diode Characteristics

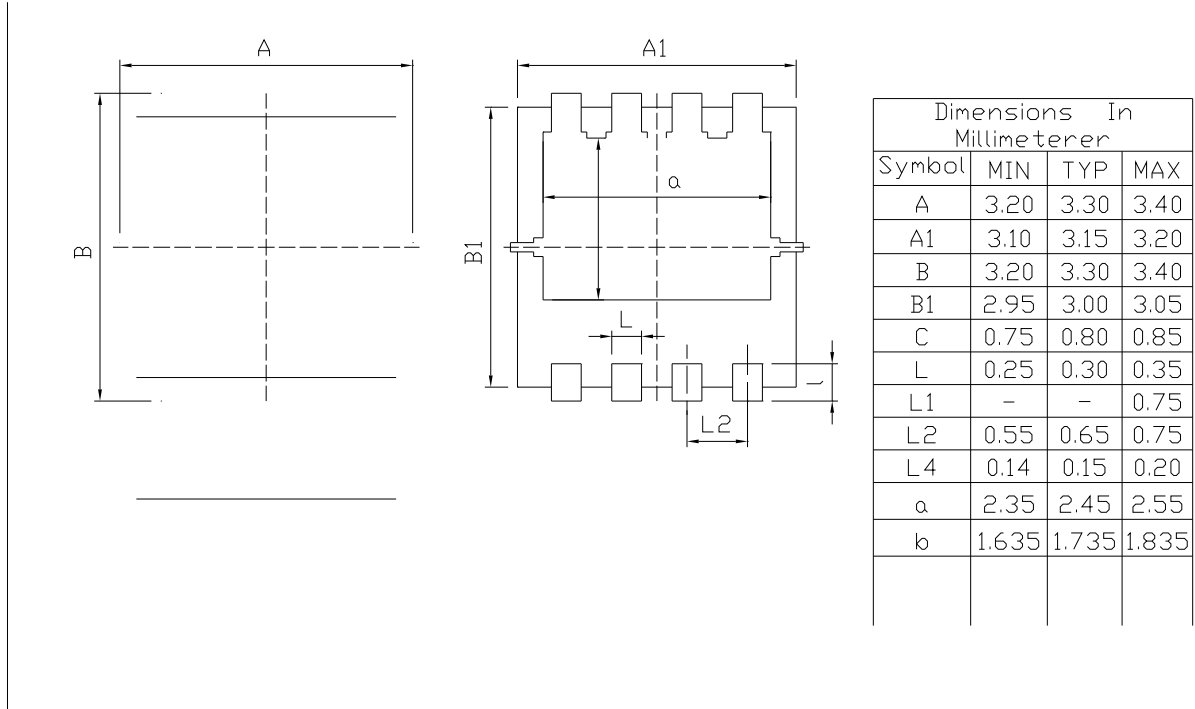
/ Electrical Characteristic Curve



/ Package Dimensions

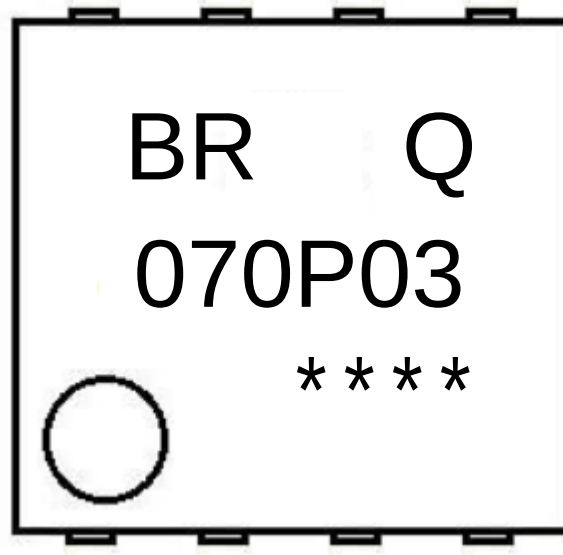
PDFN3X3A-8L

Unit:mm



Rev.00 202011

/ Marking Instructions



BR

Q

070P03

Note:

BR: Company Code

Q: Automobile halogen-free product Code

070P03: 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. | |

/ Resistance to Soldering Heat Test Conditions

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

/ 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