PDFN3×3A-8L P MOS

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

$V_{DS}$ (V) = -60V $I_D$ =-23A ($V_{GS}$ = ± 20V)

$R_{DS(ON)}$@-10V ≤ 40mΩ (Typ.36mΩ)

$R_{DS(ON)}$@-4.5V ≤ 50mΩ (Typ.44mΩ)

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

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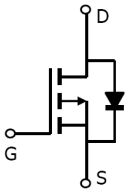
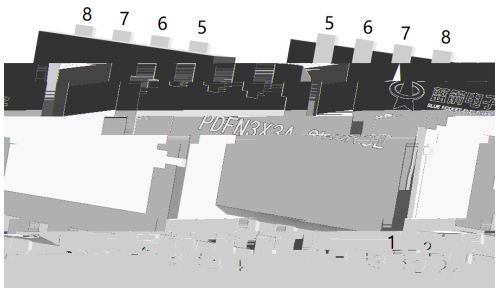
Notebook AC-in load switch,Battery protection charge/discharge, Meet the stringent requirements of automotive applications.



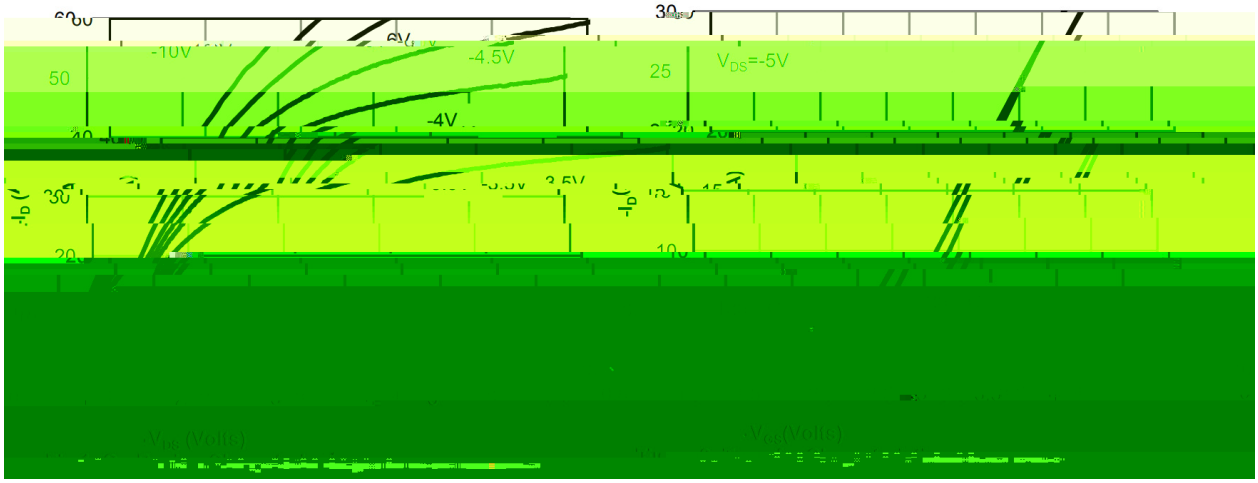

| 出脚 | 定义 |
|---|---|
| Pin1 | S |
| Pin2 | S |

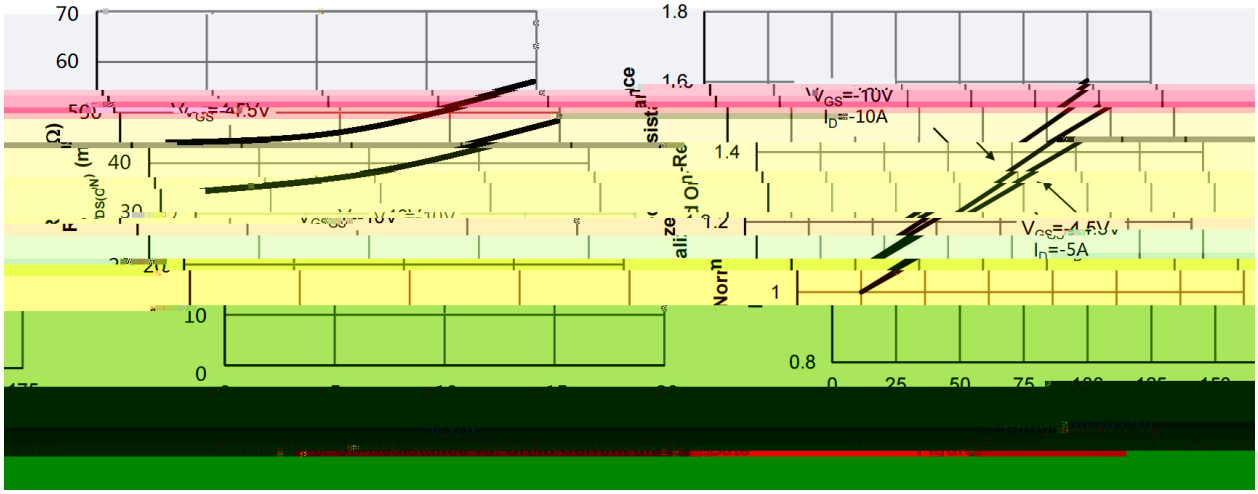
See Marking Instructions.

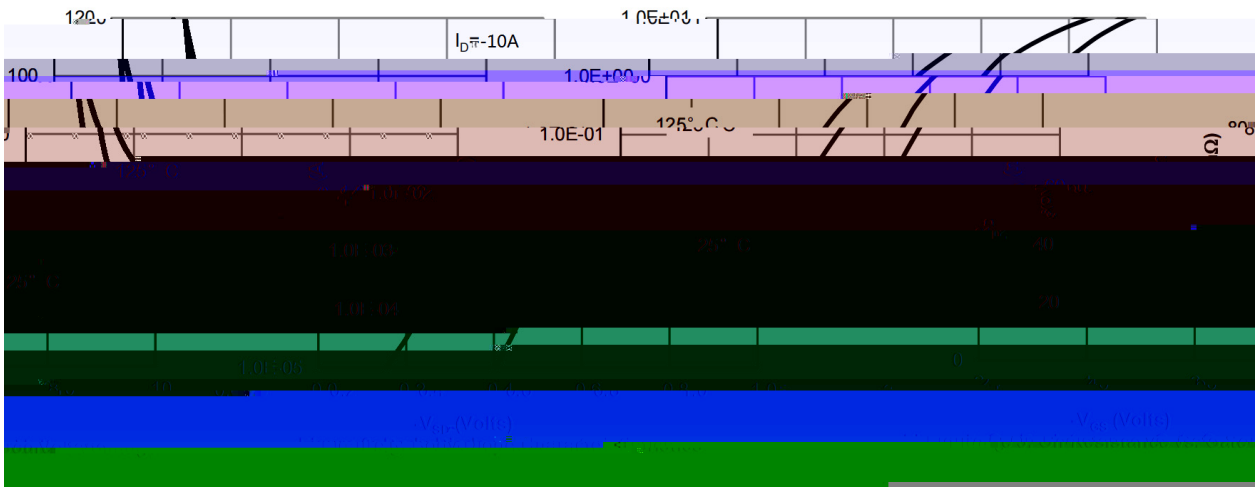
| Parameter | Symbol | Rating | Unit |
|---|---|---|---|
| Drain-Source Voltage | $V_{DSS}$ | -60 | V |
| Gate-Source Voltage | $V_{GSS}$ | ±20 | V |
| Continuous Drain Current | $I_D$ ($T_c$=25°C) | -23 | A |
| Pulsed Drain Current | $I_{DM}$ | -73 | A |
| Avalanche Current | $I_{AS}$ | 17.5 | A |
| Avalanche energy L=0.5mH | $E_{AS}$ | 320 | mJ |
| Power Dissipation for Single Operation | $P_D$ ($T_c$=25 ) | 35 | W |

)Maximum Junction Temperatu55.62 1.6921 0 TD0 Tc0107Fj/T002 Tc.0025 Tw( (T)Tm-.4720e480043 T604 Tm0 T

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Total Gate Charge | $Q_{g(10V)}$ | $V_{GS}$=-10V $V_{DS}$=-30V $I_D$=-6.2A | | 46.5 | | nC |
| Total Gate Charge | $Q_{g(4.5V)}$ | | | 22.7 | | |
| Gate-Source Charge | $Q_{gs}$ | | | 9.1 | | |
| Gate-Drain Charge | $Q_{gd}$ | | | 9.2 | | |
| Turn-on Delay Time | $t_{d(ON)}$ | $V_{GS}$=-10V $V_{DS}$=-30V $R_L$=4.7Ω $R_{GEN}$=3Ω | | 9.8 | | ns |
| Turn-on Rise Time | $t_r$ | | | 6.1 | | |
| Turn-off Delay Time | $t_{d(OFF)}$ | | | 44 | | |
| Turn-off Fall Time | $t_f$ | | | 12.7 | | |


-10V
-4.5V
-4V
$V_{DS}$=-5V
$V_{DS}$(Volts)
$V_{GS}$(Volts)


$V_{GS}$=-4.5V
$V_{GS}$=-10V
$I_D$=-10A
$V_{GS}$=-4.5V
$I_D$=-5A


$I_D$=-10A
1.0E-01
$V_{DS}$(Volts)
$V_{GS}$(Volts)

/

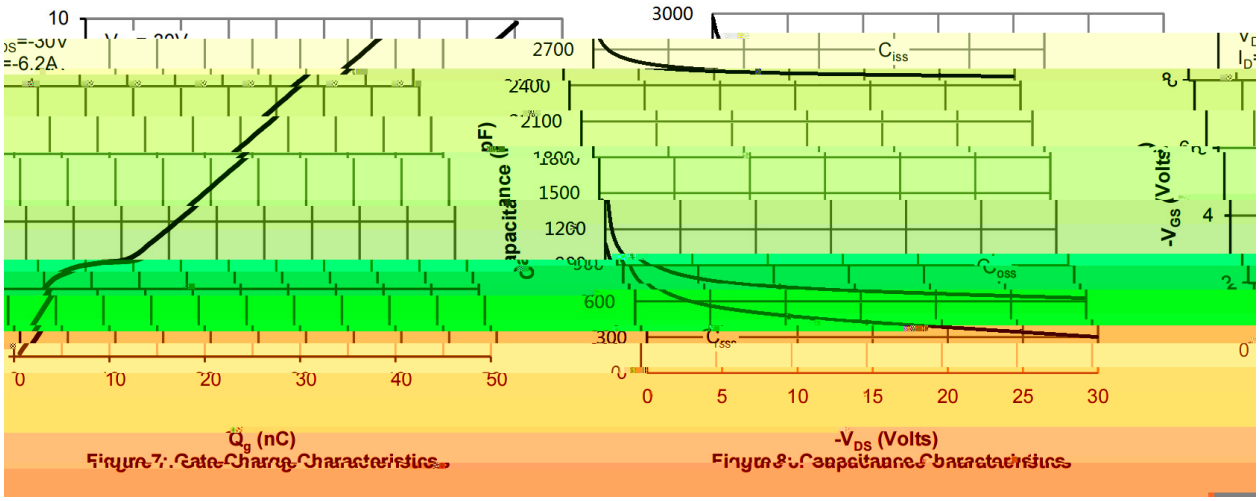



Figure 7: Gate-Charge Characteristics

Figure 8: Capacitance Characteristics

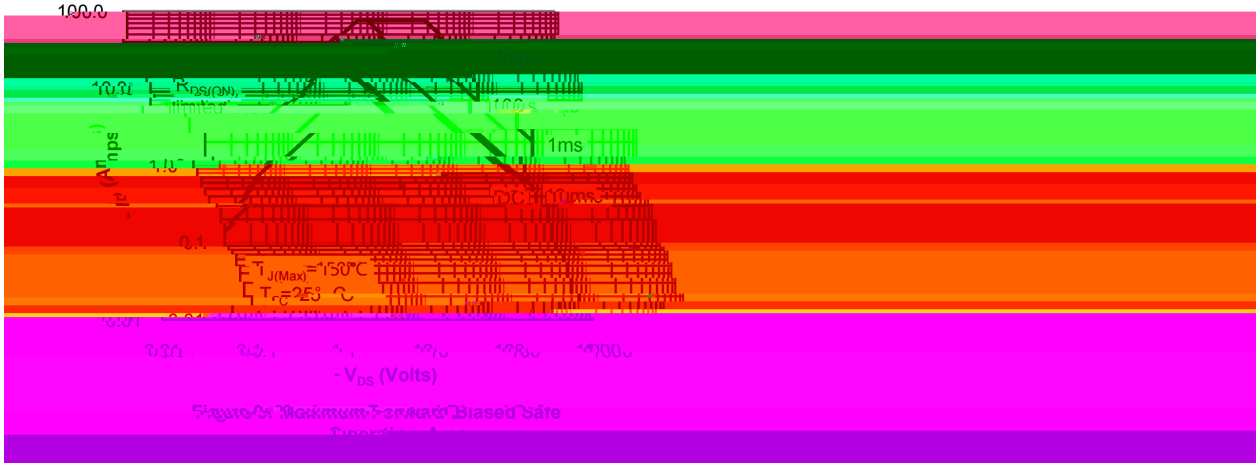
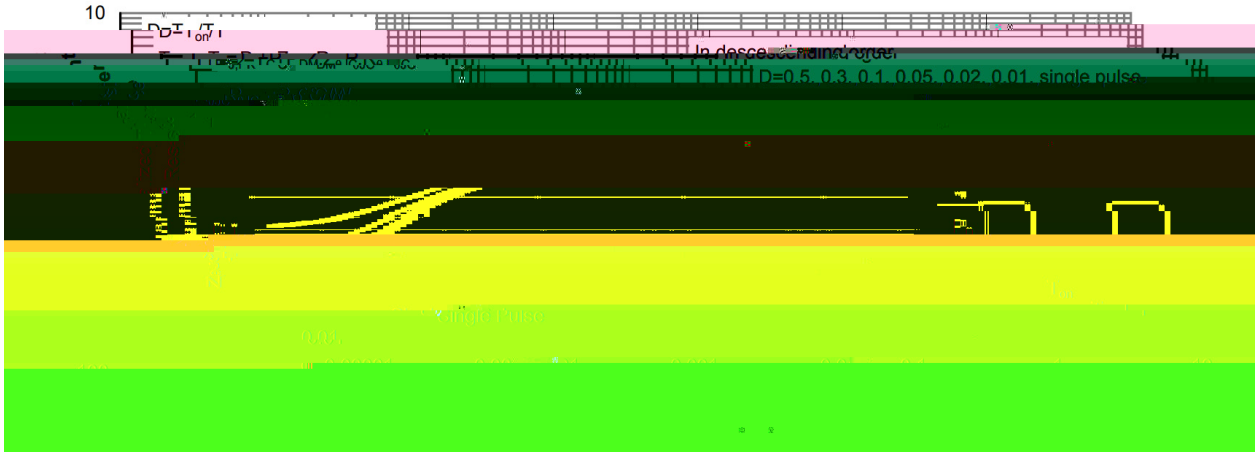
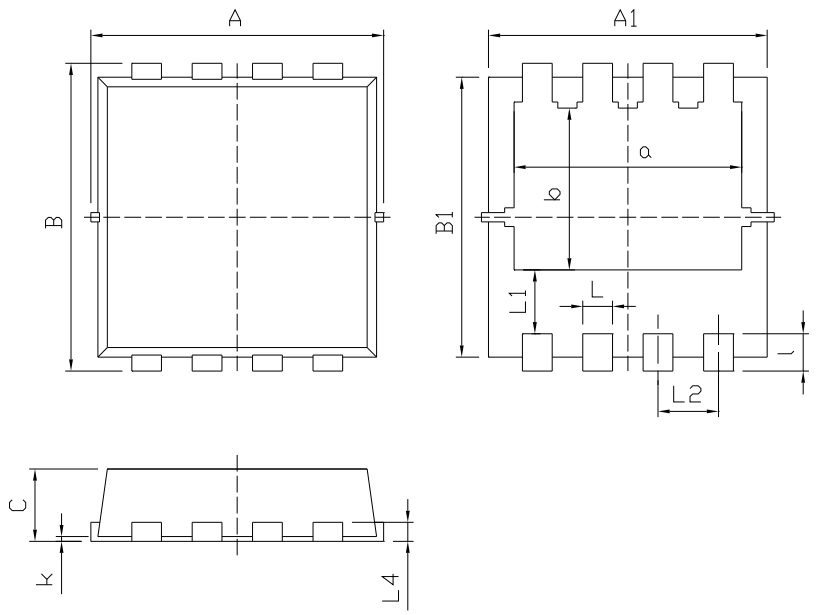



Figure 9: Maximum Forward Biased Safe Operating Area



PDFN3X3A-8L

Unit:mm




| Dimensions In Millimeterer | | | |
|---|---|---|---|
| Symbol | MIN | TYP | MAX |
| A | 3.20 | 3.30 | 3.40 |
| A1 | 3.10 | 3.15 | 3.20 |
| B | 3.20 | 3.30 | 3.40 |
| B1 | 2.95 | 3.00 | 3.05 |
| C | 0.75 | 0.80 | 0.85 |
| L | 0.25 | 0.30 | 0.35 |
| L1 | - | - | 0.75 |
| L2 | 0.55 | 0.65 | 0.75 |
| L4 | 0.14 | 0.15 | 0.20 |
| a | 2.35 | 2.45 | 2.55 |
| b | 1.635 | 1.735 | 1.835 |
| k | 0.00 | - | 0.05 |
| l | 0.30 | 0.40 | 0.50 |

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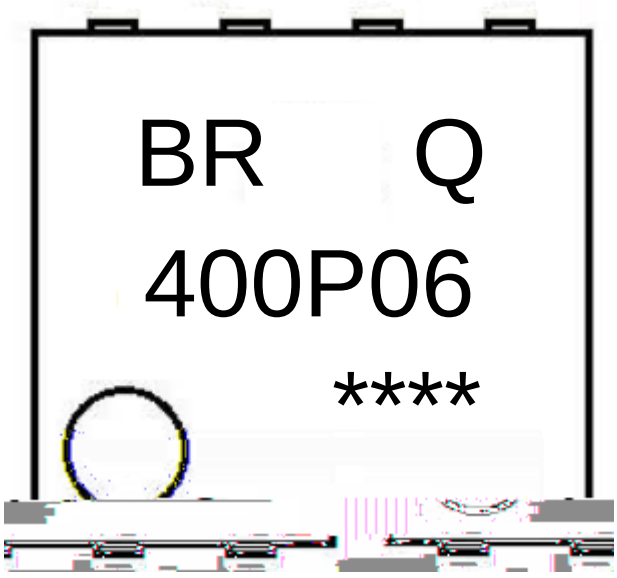


BR

Q

400P06

****

Note:

| | |
|---|---|
| BR: | Company Code |
| Q: | Automobile halogen-free product Code |
| 400P06: | Product Type Code |
| ****: | Lot No. Code, code change with Lot No |

Rev.A Aug.-2024