

Product Summary

| | | |
|---------------|-----------------|-------|
| $V_{(BR)DSS}$ | $R_{DS(on)TYP}$ | I_D |
| 30V | 8mΩ@10V | 15A |
| | 12mΩ@4.5V | |

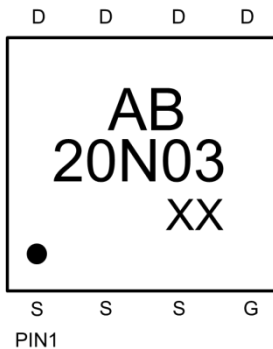
Feature

- High cell density trenching N-ch MOSFETs
- Super low gate charge
- Advanced high cell density Trench technology

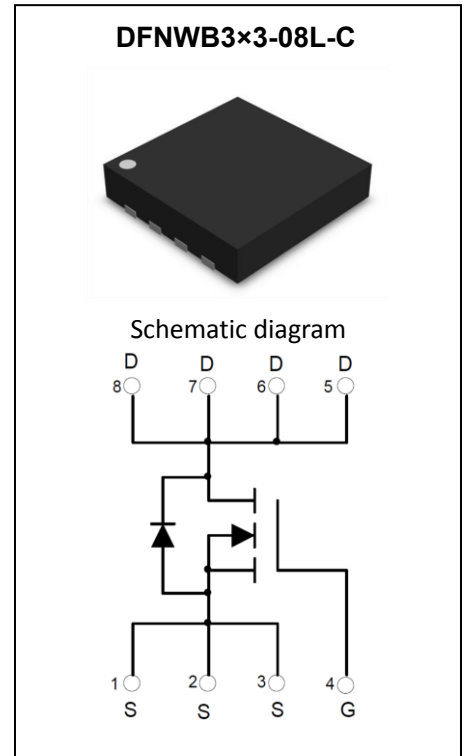
Application

- Battery protection applications
- Load switch

MARKING:



AB20N03= Device code
 Solid dot=Pin1 indicator
 XX=Date Code



ABSOLUTE MAXIMUM RATINGS (T_c=25°C unless otherwise noted)

| Parameter | Symbol | Value | Unit |
|---|---------------------|----------|------|
| Drain-Source Voltage | V_{DS} | 30 | V |
| Gate-Source Voltage | V_{GS} | ±20 | V |
| Continuous Drain Current | $I_D^{(1)}$ | 15 | A |
| Pulsed Drain Current | $I_{DM}^{(1), (2)}$ | 45 | A |
| Power Dissipation | $P_D^{(3)}$ | 3 | W |
| Thermal Resistance from Junction to Ambient | $R_{θJA}$ | 42 | °C/W |
| Junction Temperature | T_J | 150 | °C |
| Storage Temperature | T_{STG} | -55~+150 | °C |

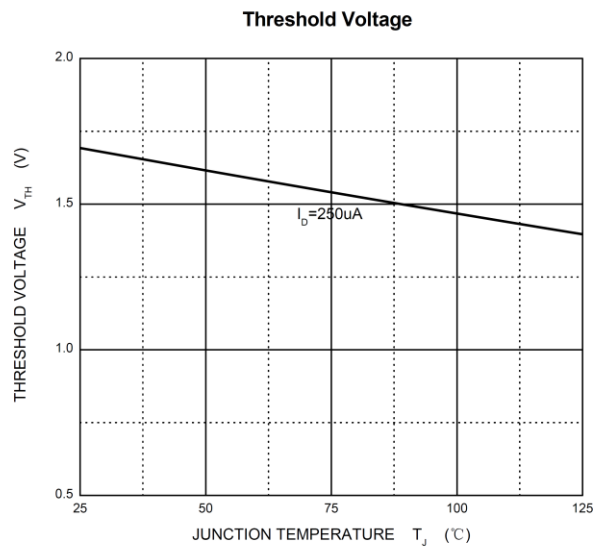
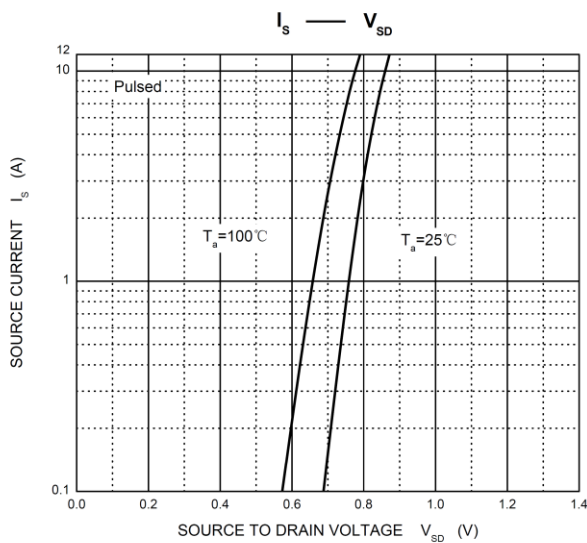
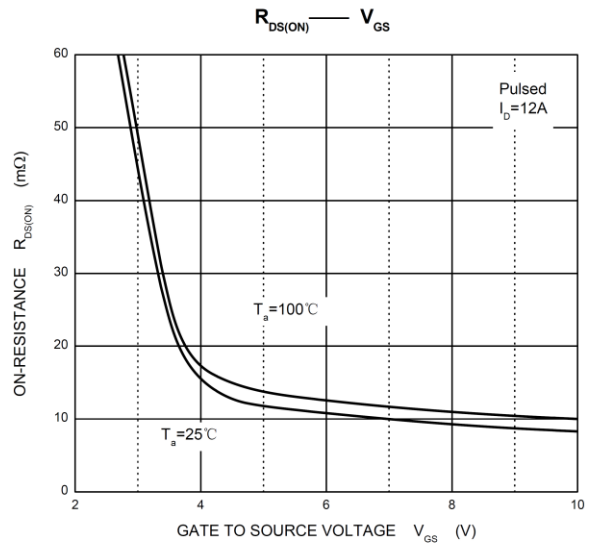
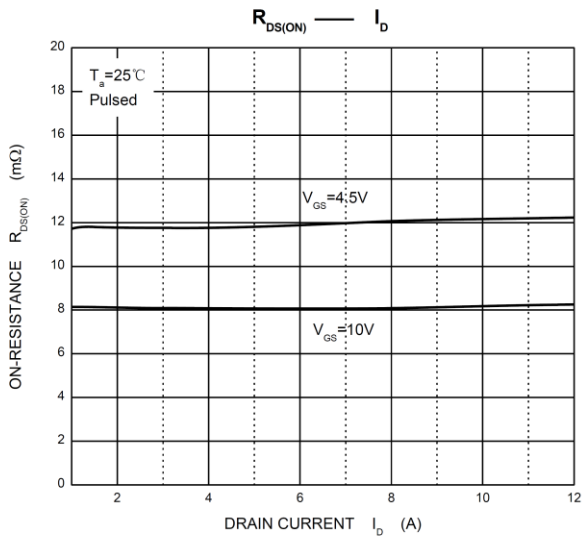
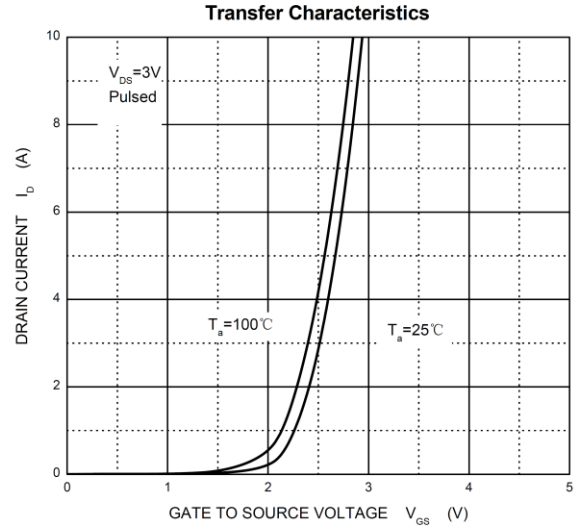
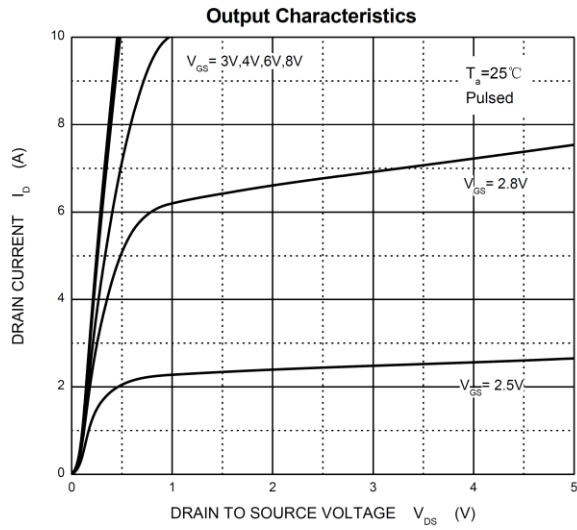
MOSFET ELECTRICAL CHARACTERISTICS ($T_J=25^\circ\text{C}$ unless otherwise noted)

| Parameter | Symbol | Test Condition | Min | Type | Max | Unit |
|--|--------------------|---|-----|------|-----------|------------|
| Static Characteristics | | | | | | |
| Drain-source breakdown voltage | $V_{(BR)DSS}$ | $V_{GS} = 0V, I_D = 250\mu A$ | 30 | | | V |
| Zero gate voltage drain current | I_{DSS} | $V_{DS} = 30V, V_{GS} = 0V$ | | | -1 | μA |
| Gate-body leakage current | I_{GSS} | $V_{GS} = \pm 20V, V_{DS} = 0V$ | | | ± 100 | nA |
| Gate threshold voltage | $V_{GS(th)}^{(4)}$ | $V_{DS} = V_{GS}, I_D = 250\mu A$ | 1.0 | 1.7 | 3.0 | V |
| Drain-source on-resistance | $R_{DS(on)}^{(4)}$ | $V_{GS} = 10V, I_D = 12A$ | | 8 | 12 | m Ω |
| | | $V_{GS} = 4.5V, I_D = 10A$ | | 12 | 18 | |
| Forward transconductance | $g_{FS}^{(4)}$ | $V_{DS} = 5V, I_D = 10A$ | 5 | 12 | | S |
| Dynamic characteristics⁽⁵⁾ | | | | | | |
| Input capacitance | C_{iss} | $V_{DS} = 15V, V_{GS} = 0V, f = 1MHz$ | | 1570 | | pF |
| Output capacitance | C_{oss} | | | 320 | | |
| Reverse transfer capacitance | C_{rss} | | | 190 | | |
| Switching Characteristics⁽⁵⁾ | | | | | | |
| Total gate charge | Q_g | $V_{DS} = 15V, V_{GS} = 5V, I_D = 10A$ | | 13.5 | | nC |
| Gate-source charge | Q_{gs} | | | 5.6 | | |
| Gate-drain charge | Q_{gd} | | | 3.7 | | |
| Turn-on delay time | $t_{d(on)}$ | $V_{DD} = 25V, V_{GS} = 10V, R_G = 63\Omega, R_L = 6.7\Omega, I_D = 1A$ | | 31 | | ns |
| Turn-on rise time | t_r | | | 22 | | |
| Turn-off delay time | $t_{d(off)}$ | | | 105 | | |
| Turn-off fall time | t_f | | | 82 | | |
| Diode Characteristics | | | | | | |
| Continuous Source Current | I_S | $V_G = V_D = 0V, \text{ Force Current}$ | | | 15 | A |
| Pulsed Source Current | I_{SM} | | | | 45 | |
| Diode Forward Voltage | $V_{SD}^{(4)}$ | $V_{GS} = 0V, I_S = 10A, T_J = 25^\circ\text{C}$ | | 0.85 | 1.2 | V |

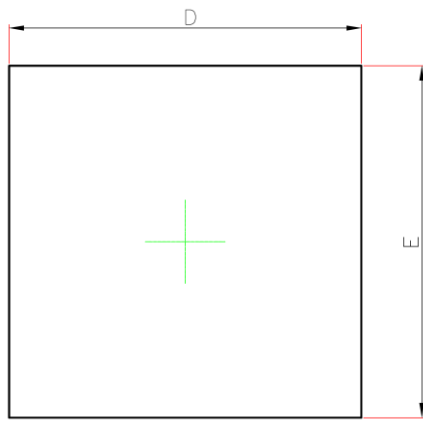
Notes:

1. The data tested by surface mounted on a 1 inch² FR-4 board with 2OZ copper
2. Pulse Test: Pulse Width < 10 μs , Duty Cycle < 0.5%.
3. The power dissipation is limited by 150 $^\circ\text{C}$ junction temperature
4. Pulse Test : Pulse width $\leq 300\mu s$, duty cycle $\leq 0.5\%$.
5. Guaranteed by design, not subject to production testing.
6. The data is theoretically the same as I_D , in real applications, should be limited by total power dissipation.

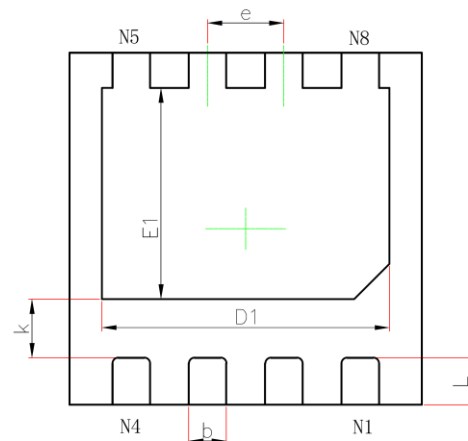
Typical Electrical and Thermal Characteristics



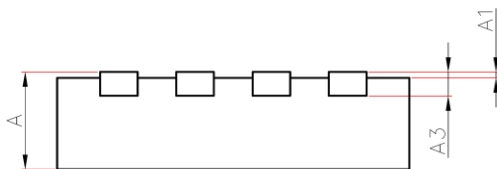
DFNWB3x3-08L-C Package Information



TOP VIEW



BOTTOM VIEW



SIDE VIEW

| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|--------|---------------------------|-------------|----------------------|-------------|
| | Min. | Max. | Min. | Max. |
| A | 0.700/0.800 | 0.800/0.900 | 0.028/0.031 | 0.031/0.035 |
| A1 | 0.000 | 0.050 | 0.000 | 0.002 |
| A3 | 0.203REF. | | 0.008REF. | |
| D | 2.924 | 3.076 | 0.115 | 0.121 |
| E | 2.924 | 3.076 | 0.115 | 0.121 |
| D1 | 2.350 | 2.550 | 0.093 | 0.100 |
| E1 | 1.700 | 1.900 | 0.067 | 0.075 |
| k | 0.450 | 0.550 | 0.018 | 0.022 |
| b | 0.270 | 0.370 | 0.011 | 0.015 |
| e | 0.650TYP. | | 0.026TYP. | |
| L | 0.324 | 0.476 | 0.013 | 0.019 |

单击下面可查看定价，库存，交付和生命周期等信息

[>>GP\(格瑞宝\)](#)