## / Descriptions

DFN8×8-4L N

Dual N-CHANNEL MOSFET in a DFN8×8-4L Plastic Package.

## / Features

$V_{DS}$(V)=200V $I_D$=9A

$R_{DS(ON)}$@10V<0.45Ω(Typ. 0.4Ω)

$R_{DS(ON)}$@6V<0.6Ω(Typ. 0.5Ω)

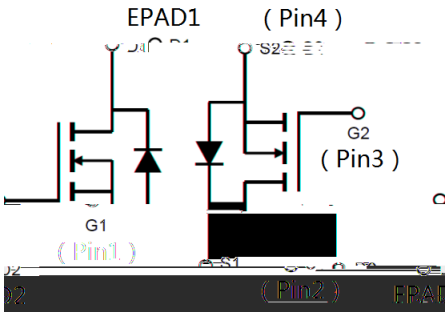
HF Product.

## / Applications

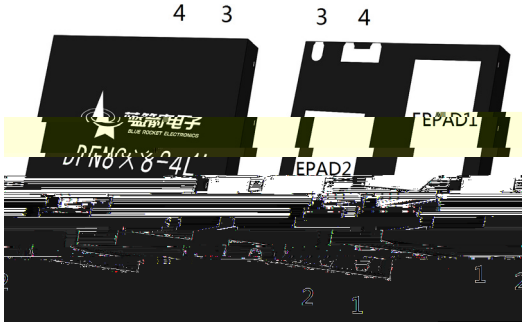
LED

Used in high-frequency switching power supply, electronic ballast, LED power supply and high-speed air duct.

## / Equivalent Circuit




## / Pinning




| | | | | | |
|---|---|---|---|---|---|
| PIN 1 | G1 | PIN 2 | S1 | EPAD1 | D1 |
| PIN 3 | G2 | PIN 4 | S2 | EPAD2 | D2 |

## / Marking

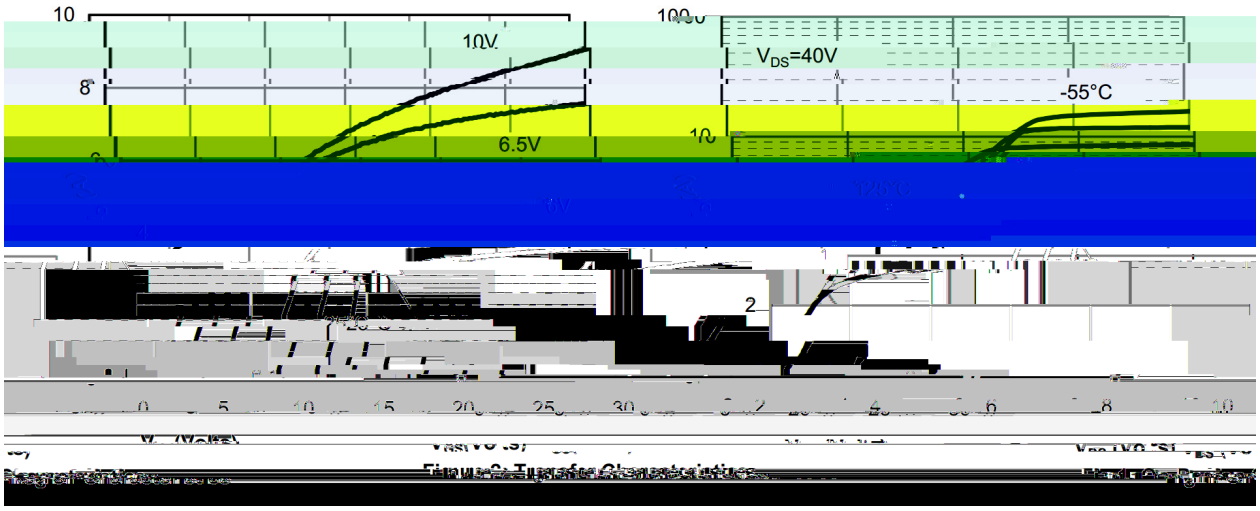
See Marking Instructions.

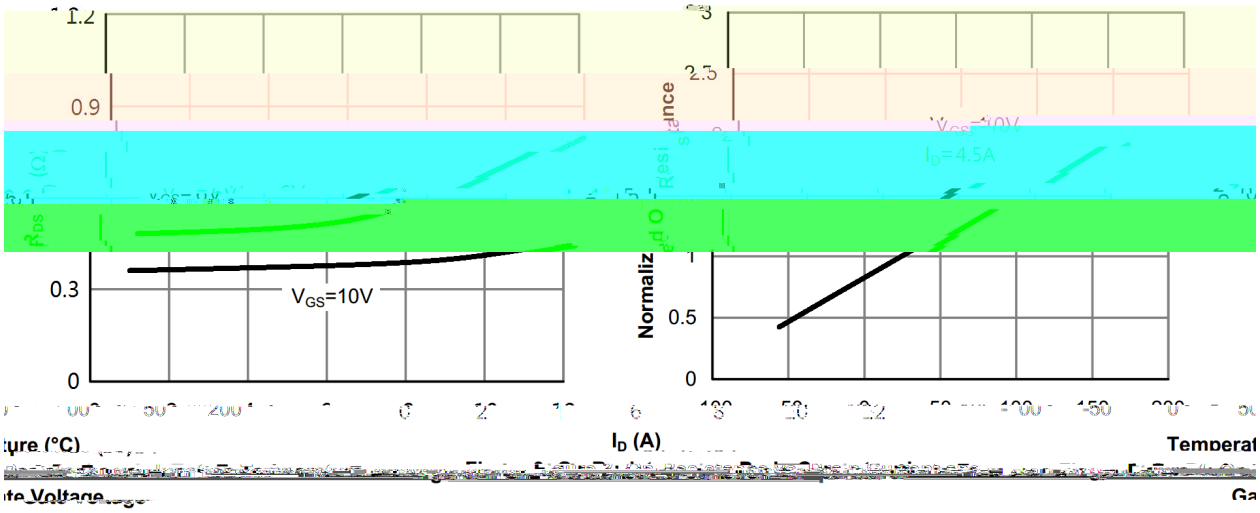
| Parameter | Symbol | Rating | Unit |
|---|---|---|---|
| Drain-Source Voltage | $V_{DSS}$ | 200 | V |
| Drain Current | $I_D$(Tc=25 ) | 9 | A |
| Drain Current - Pulsed | $I_{DM}$ | 28.6 | A |
| Gate-Source Voltage | $V_{GSS}$ | ±20 | V |
| Avalanche Current | $I_{AR}$ | 5 | A |
| Single Pulsed Avalanche Energy | $E_{AS}$ | 166 | mJ |
| Power Dissipation ($T_C$=25 ) | $P_D$ | 70 | W |
| Operating and Storage Temperature Range | $T_J$,$T_{STG}$ | -55 to 150 | |
| Thermal resistance,Junction to Case | $R_{\theta JC}$ | 1.79 | / W |

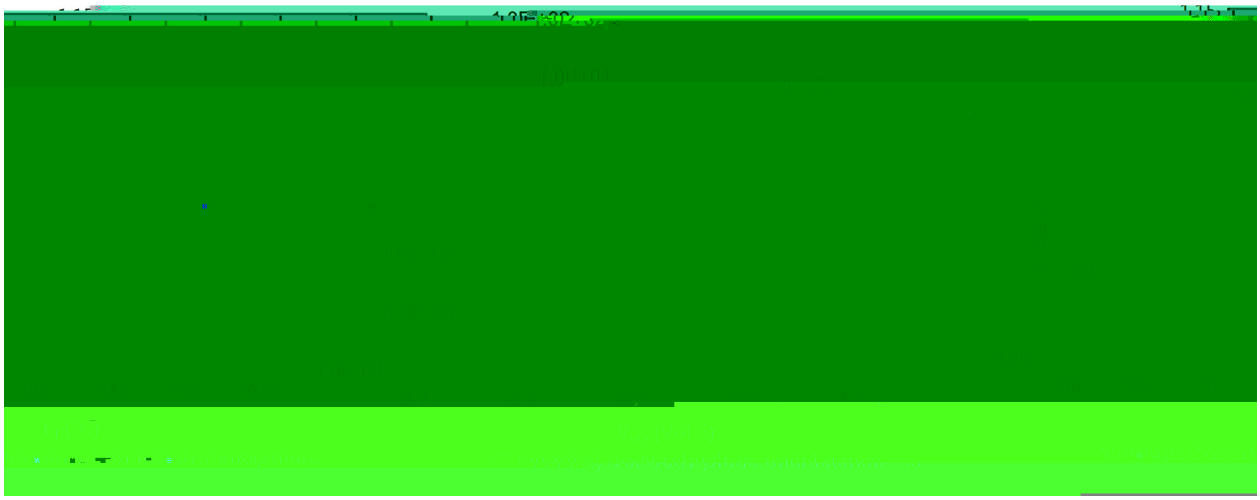
| Parameter | Symbol | Test Conditions | | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|---|
| Drain-Source Breakdown Voltage | $BV_{DSS}$ | $V_{GS}$=0V | $I_D$=250μA | 200 | 230 | | V |
| Zero Gate Voltage Drain Current | $I_{DSS}$ | $V_{DS}$=200V | $V_{GS}$=0V | | | 1 | μA |
| Gate-Body Leakage 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 | 2 | 3 | 4 | V |
| Static Drain-Source On-Resistance | $R_{DS(on)}$ | $V_{GS}$=10V | $I_D$=4.5A | | 0.4 | 0.45 | Ω |
| | $R_{DS(on)}$ | $V_{GS}$=6V | $I_D$=2.5A | | 0.5 | 0.6 | Ω |
| Input Capacitance | $C_{iss}$ | $V_{DS}$=25V f=1.0MHz | $V_{GS}$=0V | | 630 | | pF |
| Output Capacitance | $C_{oss}$ | | | | 270 | | pF |
| Reverse Transfer Capacitance | $C_{rss}$ | | | | 50 | | pF |
| Total Gate Charge | $Q_G$ | | | | | | |

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Turn-On Delay Time | $t_{d(on)}$ | $V_{DS}$=100V $I_D$=9.0A<br>$R_G$=25Ω | | 15 | | ns |
| Turn-On Rise Time | $t_r$ | | | 33 | | |
| Turn-Off Delay Time | $t_{d(off)}$ | | | 40 | | |
| Turn-Off Fall Time | $t_f$ | | | 30 | | |
| Drain-Source Diode Forward Voltage | $V_{SD}$ | $V_{GS}$ = 0 V, $I_S$ = 9.0A | | | 1.4 | V |
| Reverse Recovery Time | $t_{rr}$ | $V_{GS}$ = 0V, $I_S$ = 9.0A,<br>$dI_F/dt$ = 100 A/μG S | | | | |

## / Electrical Characteristic Curve

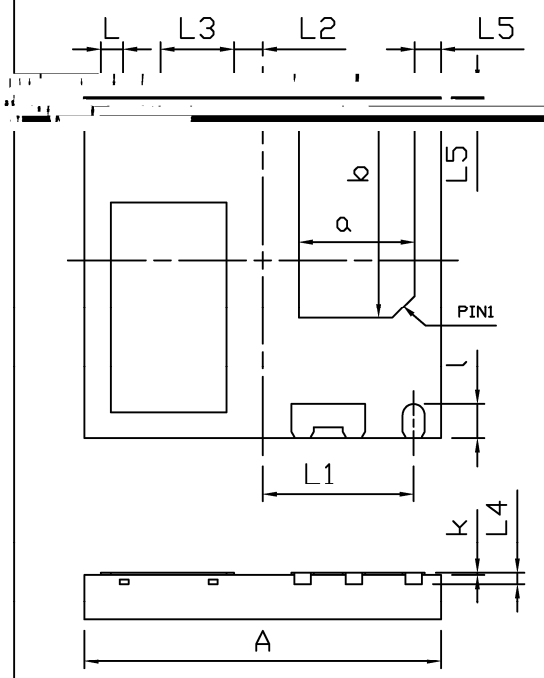


## / Package Dimensions

DFN8X8-4L Unit:mm




| Dimensions In | | | |
|---|---|---|---|
| A | 7.90 | 8.00 | 8.10 |
| B | 7.90 | 8.00 | 8.10 |
| C | 0.95 | 1.00 | 1.10 |
| L | 0.45 | 0.50 | 0.55 |
| L1 | – | 3.385 | – |
| L2 | – | 0.645 | – |
| L3 | 1.55 | 1.65 | 1.75 |
| L4 | 0.153 | 0.203 | 0.253 |
| L5 | – | 0.59 | – |
| a | 2.50 | 2.60 | 2.70 |
| b | 4.61 | 4.71 | 4.81 |
| K | 0.00 | – | 0.05 |
| l | 0.675 | 0.775 | 0.875 |