

## Product Overview

### FCP7N60: Power MOSFET, N-Channel, SUPERFET<sup>®</sup>, Easy Drive, 600 V, 7 A, 600 mΩ , TO-220

For complete documentation, see the data sheet.

SuperFET<sup>®</sup> MOSFET is Fairchild Semiconductor's first generation of high voltage super-junction (SJ) MOSFET family that is utilizing charge balance technology for outstanding low on-resistance and lower gate charge performance. This technology is tailored to minimize conduction loss, provide superior switching performance, dv/dt rate and higher avalanche energy. Consequently, SuperFET MOSFET is very suitable for the switching power applications such as PFC, server/telecom power, FPD TV power, ATX power and industrial power applications.

### Features

- 650V @T<sub>J</sub> = 150°C
- Typ. R<sub>DS(on)</sub> = 530mΩ
- Ultra low gate charge ( Typ. Q<sub>g</sub> = 23nC )
- Low effective output capacitance ( Typ. C<sub>oss,eff</sub> = 60pF )
- 100% avalanche tested
- RoHS compliant

### Applications

- This product is general usage and suitable for many different applications.

### Part Electrical Specifications

| Product | Compliance | Status | Chan-<br>nel<br>Polar-<br>ity | Confi-<br>gura-<br>tion | V <sub>SS</sub> <sup>(BR)D</sup><br>Min<br>(V) | V <sub>GS</sub><br>Max<br>(V) | V <sub>GS(th)</sub><br>Max<br>(V) | I <sub>D</sub><br>Max<br>(A) | P <sub>D</sub><br>Max<br>(W) | R <sub>DS(on)</sub><br>Max<br>@<br>V <sub>GS</sub> =<br>2.5 V<br>(mΩ) | R <sub>DS(on)</sub><br>Max<br>@<br>V <sub>GS</sub> =<br>4.5 V<br>(mΩ) | R <sub>DS(on)</sub><br>Max<br>@<br>V <sub>GS</sub> =<br>10 V<br>(mΩ) | Q <sub>g</sub><br>Typ<br>@<br>V <sub>GS</sub> =<br>4.5 V<br>(nC) | Q <sub>g</sub><br>Typ<br>@<br>V <sub>GS</sub> =<br>10 V<br>(nC) | C <sub>iss</sub><br>Typ<br>(pF) | Pack-<br>age<br>Type |
|---------|------------|--------|-------------------------------|-------------------------|--|-------------------------------|-----------------------------------|------------------------------|------------------------------|---|---|--|--|---|---------------------------------|----------------------|
| FCP7N60 | Pb-free    | Active | N-<br>Chan-<br>nel            | Singl-<br>e             | 600  | ±30                           | 5                                 | 7                            | 83                           | -   | -   | 600  | -  | 23  | 710                             | TO-<br>220-3         |

For more information please contact your local sales support at [www.onsemi.com](http://www.onsemi.com).

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