Product Overview

FDP12N50NZ: Power MOSFET, N-Channel, UniFET™ II, 500 V, 11.5 A, 520 mΩ, TO-220

For complete documentation, see the data sheet.

UniFET™ II MOSFET is a high voltage MOSFET family based on advanced planar stripe and DMOS technology. This advanced MOSFET family has the smallest on-state resistance among the planar MOSFET, and also provides superior switching performance and higher avalanche energy strength. In addition, internal gate-source ESD diode allows UniFET II MOSFET to withstand over 2kV HBM surge stress. This device family is suitable for switching power converter applications such as power factor correction (PFC), flat panel display (FPD) TV power, ATX and electronic lamp ballasts.

Features
- \( R_{DSS(on)} = 460\text{mΩ} \) (Typ.)@ \( V_{GS} = 10\text{V} \), \( I_D = 5.75\text{A} \)
- Low gate charge (Typ. 23nC)
- Low Crss (Typ. 14pF)
- 100% avalanche tested
- ESD improved capability
- RoHS compliant

Applications
- This product is general usage and suitable for many different applications.
- LCD / LED / PDP TV
- Lighting
- Uninterruptible Power Supplies

Part Electrical Specifications

<table>
<thead>
<tr>
<th>Product</th>
<th>Pricing ($/Unit)</th>
<th>Compliance</th>
<th>Status</th>
<th>Channel Polarity</th>
<th>Configuration</th>
<th>( V_{GS(th)} ) Max (V)</th>
<th>( I_D ) Max (A)</th>
<th>( P_D ) Max (W)</th>
<th>( R_{DS(on)} ) Max @ ( V_{GS} = 2.5\text{V} ) (mΩ)</th>
<th>( R_{DS(on)} ) Max @ ( V_{GS} = 4.5\text{V} ) (mΩ)</th>
<th>( R_{DS(on)} ) Max @ ( V_{GS} = 10\text{V} ) (mΩ)</th>
<th>( Q_g ) Typ @ ( V_{GS} = 4.5\text{V} ) (nC)</th>
<th>( Q_g ) Typ @ ( V_{GS} = 10\text{V} ) (nC)</th>
<th>( Ciss ) Typ (pF)</th>
<th>Packag e Type</th>
</tr>
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<tbody>
<tr>
<td>FDP12N50NZ</td>
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<td>23</td>
<td>945</td>
<td>TO-220-3</td>
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