The first eight bipolar transistors are now available in the PowerDI³333 package. With four NPN (DXTN07xxxxFG) and a complimentary set of 4 PNP transistors (DXTP07xxxxFG).

Having breakdown capability ranging up to 100V and current handling to 3A, these transistors can perform many functions including linear or LDO regulation, gate driving of MOSFETs or IGBTs and load switches across a multitude Industrial and consumer applications.

Improving power density was a major consideration to develop these products with the aim to offer the package as an alternative to SOT223 bringing very similar power dissipation in a footprint approximately one third the size.

The extended operating temperature range to +175°C will also be beneficial in applications required to operate in elevated ambient temperatures.

**The Diodes Advantage**

The DXTN07xxxxFG and DXTP07xxxxFG are the worlds first bipolar transistors offered in the PowerDI³3333 package.

- **Small form factor, thermally efficient package**
  Takes only 30% of the PCB area required by a SOT223 transistor
  Enables higher power density system design

- **Protruding leads with wettable flanks**
  Applicable to reflow soldering techniques
  Allows the optical inspection of solder joints without the need for x-ray

- **Devices qualified to +175°C**
  Useable in high temperature environments

- **Low Profile Package**
  Maximum package height of 0.85mm

**Applications**

Various Power Management functions:
- Linear regulation
- LDO regulation
- Gate driving of MOSFETs and IGBTs
- Load switches
- Motor drive

*PowerDI is a registered trademark of Diodes Incorporated.*
Product Information


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<tr>
<th>Part Number</th>
<th>$V_{CEO}$ (V)</th>
<th>$I_{C}$ (A)</th>
<th>$I_{CM}$ (A)</th>
<th>$P_{D}$ (W)</th>
<th>$I_{Q}$</th>
<th>$V_{CE}$ (V)</th>
<th>$f_{T}$, Min. (MHz)</th>
<th>$R_{ON,SAT}$ (mΩ)</th>
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PCB Footprint Comparisons

To Replace SOT223 for new designs

Min PCB Area for PowerDI3333 = 13mm² compared to 46.5mm² for SOT223
70% area saving

Thermal Comparisons

Power Dissipation on Min Copper FR4 PCB

25mm x 25mm 2oz Copper FR4 PCB