Bourns Announces the Release of the Insulated Gate Bipolar Transistor (IGBT) Discrete Solution

**Model BID Series**

*Riverside, California – August 5, 2022 –* Bourns, Inc., a leading manufacturer and supplier of electronic components, is pleased to introduce the Model BID Series Insulated Gate Bipolar Transistor (IGBT) Discrete Solution. By combining technology from a MOSFET gate and a bipolar transistor, the Bourns® IGBT Discrete BID Series creates a component designed for high voltage and high current applications. This device uses advanced Trench-Gate Field-Stop technology to provide greater control of the dynamic characteristics, which, in turn, results in a lower Collector-Emitter Saturation Voltage ($V_{CE(sat)}$) and fewer switching losses. In addition, due to the thermally efficient TO-252, TO-247 and TO-247N packages, the devices can provide a lower thermal resistance $R_{th(j-c)}$, making them suitable IGBT solutions for Switch-Mode Power Supplies (SMPS), Uninterruptible Power Sources (UPS), and Power Factor Correction (PFC) applications.

The material characteristics of the devices, their features and potential applications are provided below*.

<table>
<thead>
<tr>
<th>Model</th>
<th>Photo</th>
<th>Package</th>
<th>Feature</th>
<th>$V_{CES}$ (V)</th>
<th>$I_C$ @ $T=100 , ^\circ C$ (A)</th>
<th>Typ. $V_{CE(sat)}$ @ $I_C, V_{ge}=15 , V$ (V)</th>
<th>$I_F$ @ $T=100 , ^\circ C$ (A)</th>
<th>Operating Junction Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIDD05N60T</td>
<td><img src="image" alt="BIDD05N60T" /></td>
<td>TO-252</td>
<td>Medium Speed</td>
<td>600</td>
<td>5</td>
<td>1.5</td>
<td>—</td>
<td>-55 °C to +150 °C</td>
</tr>
<tr>
<td>BIDW20N60T</td>
<td><img src="image" alt="BIDW20N60T" /></td>
<td>TO-247</td>
<td>Medium Speed</td>
<td>600</td>
<td>20</td>
<td>1.7</td>
<td>20</td>
<td>-55 °C to +150 °C</td>
</tr>
<tr>
<td>BIDW30N60T</td>
<td><img src="image" alt="BIDW30N60T" /></td>
<td>TO-247</td>
<td>Medium Speed</td>
<td>600</td>
<td>30</td>
<td>1.65</td>
<td>30</td>
<td>-55 °C to +150 °C</td>
</tr>
<tr>
<td>BIDW50N65T</td>
<td><img src="image" alt="BIDW50N65T" /></td>
<td>TO-247</td>
<td>Medium Speed</td>
<td>650</td>
<td>50</td>
<td>1.65</td>
<td>50</td>
<td>-55 °C to +150 °C</td>
</tr>
<tr>
<td>BIDNW30N60H3</td>
<td><img src="image" alt="BIDNW30N60H3" /></td>
<td>TO-247N</td>
<td>High Speed</td>
<td>600</td>
<td>30</td>
<td>1.65</td>
<td>12</td>
<td>-55 °C to +150 °C</td>
</tr>
</tbody>
</table>

*T$_C$ = 25 °C Unless otherwise specified

~ continued on page 2 ~
Model BIDD05N60T
Features
- 600 V, 5 A, low Collector-Emitter Saturation Voltage (VCE(sat))
- Trench-Gate Field-Stop technology
- Optimized for conduction
- Robust
- RoHS compliant*

Applications
- SMPS
- UPS
- PFC

Model BIDW20N60T
Features
- 600 V, 20 A, low Collector-Emitter Saturation Voltage (VCE(sat))
- Trench-Gate Field-Stop technology
- Optimized for conduction
- Low switching loss
- RoHS compliant*

Applications
- SMPS
- UPS
- PFC
- Stepper motors

Model BIDW30N60T
Features
- 600 V, 30 A, low Collector-Emitter Saturation Voltage (VCE(sat))
- Trench-Gate Field-Stop technology
- Optimized for conduction
- RoHS compliant*

Applications
- SMPS
- UPS
- PFC
- Induction heating

Model BIDW50N65T
Features
- 650 V, 50 A, low Collector-Emitter Saturation Voltage (VCE(sat))
- Trench-Gate Field-Stop technology
- Optimized for conduction
- RoHS compliant*

Applications
- SMPS
- UPS
- PFC
- Inverters

Product data sheets with detailed specifications can be viewed on the Bourns website at [www.bourns.com/products/IGBT](http://www.bourns.com/products/IGBT).

If you have questions or need additional information, please feel free to contact [Bourns Customer Service / Inside Sales](mailto:BournsCustomerService@bourns.com).