Product updates
BiMOS and BiPolar

1700 V 2 x 450 A LoPak1 module
ABB’s LoPak1 is 100% mechanical compatible with Econo-type dual IGBT modules.
- Up to 175 °C junction operation temperature sets a new benchmark and enables customers to utilize higher inverter power per rated ampere.
- 1700 V SPT++ chipset with lowest switching losses, enables operation at higher switching frequencies or more eco-friendly inverters.
- Press-fit auxiliary connection for reliable, fast and cost effective inverter assembly
- Now ready for sampling

3300 V 1800 A HiPak2 module
ABB’s TSPT+ enhanced Trench cell IGBT technology combines the merits of our unique enhanced planar cell with trench IGBT design.
- TSPT+ chipset with lowest losses enable 20% higher current rating
- 20% larger diode area with FCE technology for improved surge current, lower losses and soft recovery behavior
- High-voltage trench cell with excellent dynamic avalanche robustness
- Now ready for sampling

6500 V 1000 A HiPak2 module
The SPT++ enhanced planar cell design of the 2nd generation sets a new benchmark in lowest losses and highest ruggedness.
- Up to 150 °C junction operation temperature enables customers to increase their inverter rating or develop more compact designs.
- SPT++ chipset tuned for an optimal trade-off between switching and conduction losses enabling an optimal IGBT usage.
- Lowest overall losses allow an increase in current density of more than 30%
- Enhanced planar cell offers unrivaled robustness

### Products in the pipeline

<table>
<thead>
<tr>
<th>Part no.</th>
<th>Voltage V</th>
<th>Current A</th>
<th>Housing</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5SNG 0450R170300</td>
<td>1700</td>
<td>2 x 450 A</td>
<td>LoPak1</td>
<td>LoPak phase-leg module</td>
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<tr>
<td>5SNA 1800E330400</td>
<td>3300</td>
<td>1800</td>
<td>HiPak2</td>
<td>HiPak single enhanced Trench IGBT module</td>
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<tr>
<td>5SNA 1000G650300</td>
<td>6500</td>
<td>1000</td>
<td>HiPak2</td>
<td>HiPak single enhanced planar IGBT module</td>
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<tr>
<td>5SDD 75Y8500</td>
<td>8500</td>
<td>7500</td>
<td>Y</td>
<td>Standard rectifier diode</td>
</tr>
</tbody>
</table>
8500 V Standard rectifier diode
ABB’s 6 Inch 8.5 kV diode sets new record standard in its class.
- Lowest on state and switching losses
- Designed for highest surge current performance
- First choice in many demanding applications
- Now ready for sampling

New qualified products

<table>
<thead>
<tr>
<th>Part no.</th>
<th>Voltage V</th>
<th>Current A</th>
<th>Housing</th>
<th>Description</th>
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<tbody>
<tr>
<td>5SDD 50N6000</td>
<td>6000</td>
<td>4210</td>
<td>N</td>
<td>Standard rectifier diode</td>
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<td>5STP 48Y7200</td>
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<td>4840</td>
<td>Y</td>
<td>Phase control thyristor</td>
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<tr>
<td>5STP 27N8500</td>
<td>8500</td>
<td>2450</td>
<td>N</td>
<td>Phase control thyristor</td>
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<tr>
<td>5STP 27Q8500</td>
<td>8500</td>
<td>2630</td>
<td>Q</td>
<td>Phase control thyristor</td>
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<td>5STP 45Y8500</td>
<td>8500</td>
<td>4240</td>
<td>Y</td>
<td>Phase control thyristor</td>
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</tbody>
</table>

Product features

6000 V Standard rectifier diode
- Optimized for line frequency and lowest on-state losses
- Main applications: Drives, metal smelting and trackside supply

8500 V and 7200 V phase control thyristors
- Latest high performance thyristor generation, developed with focus on minimizing the losses and maximizing the power rating
- Addressing demanding high-end industrial applications such as pumped hydro, drives and SVC

Process change notifications

<table>
<thead>
<tr>
<th>Subject</th>
<th>Part no.</th>
<th>PCN issuing date</th>
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<tbody>
<tr>
<td>Change in backside chip metallization</td>
<td>5SMX 12L2512, 5SMX 12M1701, 5SMX 12M3303</td>
<td>2018-09-10</td>
</tr>
<tr>
<td>Change test recipe from breakdown voltage to leakage test</td>
<td>1700 V HiPak modules</td>
<td>2018-09-30</td>
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Phased-out Part no.

<table>
<thead>
<tr>
<th>Part no.</th>
<th>Replacement Part no.</th>
<th>Last deliveries</th>
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<tr>
<td>5SMX 12M3301</td>
<td>5SMX 12M3303</td>
<td>2018-11-01</td>
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