JA Solar modules incorporate innovative power electronics from Tigo Energy to achieve module-level diagnostics, maximum energy harvest through module level DC power optimization, and reduction of arc, fire and safety hazards. Integration of the module optimizer into the junction box enables patented Smart Curve technology, which allows up to 30% longer strings and significant balance-of-system (BOS) savings.

### 320W PERC Smart Module

**JAM60S04 300-320/PR**

**Introduction**

- Safer solar
- More efficient O&M
- Flexible system assembly
- Maximized energy Harvest

### Superior Warranty

- 12-year product warranty
- 25-year linear power output warranty

### Comprehensive Certificates

- IEC 61215, IEC 61730
- ISO 9001: 2015 Quality management systems
- ISO 14001: 2015 Environmental management systems
- OHSAS 18001: 2007 Occupational health and safety management systems

Specifications subject to technical changes and tests. JA Solar reserves the right of final interpretation.

www.jasolar.com

Shanghai JA Solar Technology Co., Ltd.
JA smart system components work together with any inverter to maximize energy harvest. JA smart modules communicate wirelessly through the gateway, allowing users to monitor system performance in real time.

**SYSTEM ARCHITECTURE**

- Hardware voltage clamp prevents over-voltage
- Design up to 30% longer strings
- Fewer combiner boxes, fuses and wiring
- Smaller resistance losses

**SMART CURVE TECHNOLOGY**

Module-integrated smart technology reduces the open circuit voltage range for each module and allows longer strings to be designed. The maximum voltage is set at 320V by JA Solar in the factory.

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**ELECTRICAL PARAMETERS AT STC**

<table>
<thead>
<tr>
<th>TYPE</th>
<th>JAM60S04-300/PR</th>
<th>JAM60S04-305/PR</th>
<th>JAM60S04-310/PR</th>
<th>JAM60S04-315/PR</th>
<th>JAM60S04-320/PR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated Maximum Power (Pmax) [W]</td>
<td>300</td>
<td>305</td>
<td>310</td>
<td>315</td>
<td>320</td>
</tr>
<tr>
<td>Open Circuit Voltage (Voc) [V]</td>
<td>37.32</td>
<td>37.64</td>
<td>37.93</td>
<td>38.26</td>
<td>38.59</td>
</tr>
<tr>
<td>Maximum Power Voltage (Vmp) [V]</td>
<td>32.26</td>
<td>32.57</td>
<td>32.84</td>
<td>33.16</td>
<td>33.48</td>
</tr>
<tr>
<td>Short Circuit Current (Isc) [A]</td>
<td>9.75</td>
<td>9.85</td>
<td>9.91</td>
<td>9.98</td>
<td>10.05</td>
</tr>
<tr>
<td>Module Efficiency [%]</td>
<td>18.3</td>
<td>18.7</td>
<td>19.0</td>
<td>19.3</td>
<td>19.6</td>
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<tr>
<td>Power Tolerance</td>
<td>0~+5W</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Temperature Coefficient of Isc (β_Isc)</td>
<td>-0.060%/°C</td>
<td></td>
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</tr>
<tr>
<td>Maximum Static Load, Front [W]</td>
<td>3600Pa, 1.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum Static Load, Back [W]</td>
<td>1600Pa, 1.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NOCT [°C]</td>
<td>45±2</td>
<td></td>
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</tbody>
</table>

**ELECTRICAL PARAMETERS AT NOCT**

<table>
<thead>
<tr>
<th>TYPE</th>
<th>JAM60S04-300/PR</th>
<th>JAM60S04-305/PR</th>
<th>JAM60S04-310/PR</th>
<th>JAM60S04-315/PR</th>
<th>JAM60S04-320/PR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated Max Power (Pmax) [W]</td>
<td>221</td>
<td>224</td>
<td>228</td>
<td>232</td>
<td>235</td>
</tr>
<tr>
<td>Open Circuit Voltage (Voc) [V]</td>
<td>34.38</td>
<td>34.60</td>
<td>34.89</td>
<td>35.14</td>
<td>35.43</td>
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<tr>
<td>Max Power Voltage (Vmp) [V]</td>
<td>29.89</td>
<td>29.90</td>
<td>30.18</td>
<td>30.42</td>
<td>30.70</td>
</tr>
<tr>
<td>Short Circuit Current (Isc) [A]</td>
<td>7.78</td>
<td>7.86</td>
<td>7.93</td>
<td>7.99</td>
<td>8.05</td>
</tr>
<tr>
<td>Max Power Current (Imp) [A]</td>
<td>7.43</td>
<td>7.50</td>
<td>7.55</td>
<td>7.61</td>
<td>7.66</td>
</tr>
</tbody>
</table>

**OPERATING CONDITIONS**

- Maximum System Voltage: 1000V DC (IEC)
- Operating Temperature: -40°C~85°C
- Maximum Series Fuse: 20A
- Maximum Static Load, Front: 3600Pa, 1.5
- Maximum Static Load, Back: 1600Pa, 1.5
- NOCT: 45±2°C
- Application Class: Class A

**SPECIFICATIONS**

- Cell: Mono
- Weight: 18.2kg±3%
- Dimensions: 1650mm×991mm×35mm
- Cable Cross Section Size: 4mm²
- No. of cells: 60(6x10)
- Junction Box: Tigo smart J-Box IP67
- Connector: PV-KST4(Male), PV-KBT4(Female), PV-ZH-202(NB2h)
- Country of Manufacturer: China/Vietnam

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**Remark:** Electrical data in this catalog do not refer to a single module and they are not part of the offer. They only serve for comparison among different module types.

**Remark:** Customized frame color and cable length available upon request.

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**CHARACTERISTICS**

Current-Voltage Curve JAM60S04-300/PR

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**NOTE:**

- Irradiance 1000W/m², wind speed 1m/s, AM1.5G