JA smart 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.

### Introduction

**320W PERC Smart Module**

**JAM60S04 300-320/PR**

**Mono**

- More efficient O&M
- Flexible system assembly
- Maximized energy harvest
- Superior Warranty

**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

**IEC 61215, IEC 61730**

**ISO 9001: 2015 Quality management systems**

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**OHSAS 18001: 2007 Occupational health and safety management systems**

**Safer solar**

**More efficient O&M**

**Flexible system assembly**

**Maximized energy Harvest**

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- 12-year product warranty
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- IEC 61215, IEC 61730
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**SAFETY & RELIABILITY**

- JA Linear Power Warranty
- Industry Warranty

www.jasolar.com

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

Version No. : Global_EN_20200602A

Shanghai JA Solar Technology Co., Ltd.
**SYSTEM ARCHITECTURE**

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

**MESCHANICAL DIAGRAMS**

**SPECIFICATIONS**

- **Cell:** Mono
- **Weight:** 18.2 kg
- **Dimensions:** 1600 mm x 991 mm x 35 mm
- **Cable Cross Section Size:** 4 mm²
- **No. of cells:** 60 (6x10)
- **Junction Box:** Tigo smart J-Box IP67
- **Connector:** Genuine MC4
- **Country of Manufacturer:** China/Vietnam

**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>
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</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>37.84</td>
<td>37.93</td>
<td>38.26</td>
<td>38.59</td>
</tr>
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<td>Maximum Power Voltage (Vmp) [V]</td>
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<td>33.16</td>
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<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>
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<tr>
<td>Module Efficiency [%]</td>
<td>18.3</td>
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<td>19.0</td>
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<tr>
<td>Power Tolerance</td>
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<tr>
<td>Temperature Coefficient of Isc (α_Isc)</td>
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<td>Rated Max Power (Pmax) [W]</td>
<td>221</td>
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<td>228</td>
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<td>235</td>
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<tr>
<td>Open Circuit Voltage (Voc) [V]</td>
<td>34.38</td>
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**OPERATING CONDITIONS**

- **Maximum System Voltage:** 1000V DC (IEC)
- **Operating Temperature:** -40°C~+65°C
- **Maximum Series Fuse:** 20 A
- **Maximum Static Load, Front:** 3600 Pa, 1.5
- **Maximum Static Load, Back:** 1600 Pa, 1.5
- **NOCT:** 45±2°C
- **Application Class:** Class A

**CHARACTERISTICS**

- **Current-Voltage Curve**
  - **JAM60S04-300/PR**
  - **JAM60S04-305/PR**
  - **JAM60S04-310/PR**
  - **JAM60S04-315/PR**
  - **JAM60S04-320/PR**

**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 range is programmable by JA Solar in the factory.

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

**SPECIFICATIONS**

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