Designers Data Sheet

Part Number/Ordering Information:

SPA513-__-__-__

Finish:

L = Standard Case
SAB = Sand Blasted Case

Screening:

= Not Screened
TX = TX Level
TXV = TXV Level
S = Space Level

Dash Number:

For ordering information, price, and availability- Contact factory.

Screened based on MIL-PRF-19500. Screening flows available on request.

For each dash number, refer to VR (MODULE) rating, schematic, and outline.

MAXIMUM RATINGS

<table>
<thead>
<tr>
<th>CHARACTERISTIC</th>
<th>SYMBOL</th>
<th>VALUE</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peak Repetitive Reverse and DC Blocking Voltage (Module)</td>
<td>VR (MODULE)</td>
<td>SPA513-02: 15, SPA513-03: 17.5, SPA513-04: 20, SPA513-05: 20, SPA513-06 (BR1): 12.5, SPA513-06 (BR2): 10</td>
<td>kV</td>
</tr>
<tr>
<td>Peak Repetitive Reverse and DC Blocking Voltage (Each Bridge)</td>
<td>VR</td>
<td>3.3</td>
<td>kV</td>
</tr>
<tr>
<td>Average Rectified Forward Current (Non-Repetitive, t = 8.3 msec Pulse)</td>
<td>IO</td>
<td>1</td>
<td>A</td>
</tr>
<tr>
<td>Peak Surge Current (Non-Repetitive, t = 8.3 msec Pulse, TA = 25ºC)</td>
<td>IFSM</td>
<td>25</td>
<td>A</td>
</tr>
<tr>
<td>Storage &amp; Operating Temperature Range</td>
<td>TOP &amp; TSTG</td>
<td>-65 to +150</td>
<td>ºC</td>
</tr>
<tr>
<td>Thermal Resistance, Junction to Base</td>
<td>RθJB</td>
<td>2.5</td>
<td>ºC/W</td>
</tr>
</tbody>
</table>

ELECTRICAL CHARACTERISTICS, Each Bridge Leg, @ TA = 25ºC (Unless Otherwise Specified)

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>SYMBOL</th>
<th>MIN</th>
<th>MAX</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instantaneous Forward Voltage Drop (IF = 1.0 A, 300 μsec Pulse Minimum)</td>
<td>VF1</td>
<td>–</td>
<td>7.5</td>
<td>V</td>
</tr>
<tr>
<td>Reverse Leakage (VR = 2.5 kV, 300 μsec Pulse Minimum)</td>
<td>IR1</td>
<td>–</td>
<td>1.0</td>
<td>μA</td>
</tr>
<tr>
<td></td>
<td>IR2</td>
<td>–</td>
<td>50</td>
<td>μA</td>
</tr>
<tr>
<td>Insulation Resistance</td>
<td>RINSUL</td>
<td>SPA513-02, -03, -04: All Terminals to Base @ 15 kV, SPA513-05, -06: All Terminals to Base @ 20 kV</td>
<td>10</td>
<td>–</td>
</tr>
<tr>
<td>Reverse Recovery Time</td>
<td>trr</td>
<td>IF = 0.5 A, IR = 1.0 A, IRR = 0.25 A</td>
<td>–</td>
<td>60</td>
</tr>
</tbody>
</table>

Notes:
1/ For ordering information, price, and availability- Contact factory.
2/ Screened based on MIL-PRF-19500. Screening flows available on request.
3/ For each dash number, refer to VR (MODULE) rating, schematic, and outline.

NOTE: All specifications are subject to change without notification. SCDs for these devices should be reviewed by SSDI prior to release.

DATA SHEET #: PM0012H
Tolerances (Unless Specified):
  .XX ± .03
  .XXX ± .010

SPA513-02 [Diagram]

SPA513-03 [Diagram]
SPA513 Series

SPA513-04

Tolerances (Unless Specified):
- XX ± .03
- XXX ± .010

SPA513-05

Tolerances (Unless Specified):
- XX ± .03
- XXX ± .010

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DATA SHEET #: PM0012H
SPA513 Series

SPA513-06

Tolerances
(Unless Specified):
.XX ± .03
.XXX ± .010

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