SiC-Photodiode with integrated filter
JEA0,1C-S; JEA0,1BC-S; JEA0,1B-S

Characteristics:
- Small area SiC-photodiode
- Active area: 0.1 mm²
- Filter option for UVC-, UVB- and UVBC-range
- More options on request
- Option for isolated assembly (-ISZ)
- Hermetically sealed TO18-package
- RoHS, REACH und WEEE conform

Applications:
- Optical measurement in UV-range
  With limited spectral range
- Control of sterilization lamps
- Flame control
- Sun light measurement

Absolute maximum ratings:
- Reverse voltage: 10 V
- Operating temperature range: -40 °C ... 125 °C
- Storage temperature range: -40 °C ... 125 °C
- Soldering temperature (3s): 260 °C

Technical data:
Test conditions, as not otherwise specified: \( T_A = 25 \, ^\circ\text{C} \), \( V_R = 0 \, \text{V} \)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Test Condition</th>
<th>JEA0,1C-S</th>
<th>JEA0,1BC-S</th>
<th>JEA0,1B-S</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active area</td>
<td></td>
<td>0.365x0.365</td>
<td></td>
<td></td>
<td>mm²</td>
</tr>
<tr>
<td>Spectral range</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \lambda_{\text{min}} )</td>
<td></td>
<td>S = 0,1 * ( S_{\text{max}} )</td>
<td>225</td>
<td>228</td>
<td>265</td>
</tr>
<tr>
<td>( \lambda_{\text{max}} )</td>
<td></td>
<td>280</td>
<td>322</td>
<td>322</td>
<td></td>
</tr>
<tr>
<td>Wavelength of peak response</td>
<td></td>
<td>265</td>
<td>275</td>
<td>300</td>
<td>nm</td>
</tr>
<tr>
<td>Peak response ( S_{\text{max}} )</td>
<td></td>
<td>0,18</td>
<td>0,19</td>
<td>0,12</td>
<td>A/W</td>
</tr>
<tr>
<td>Dark current ( I_R )</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>fA</td>
</tr>
<tr>
<td>Junction capacity ( C )</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>pF</td>
</tr>
<tr>
<td>Field of view (FOV)</td>
<td>±25</td>
<td>±25</td>
<td>±25</td>
<td></td>
<td>Grad</td>
</tr>
<tr>
<td>Weight</td>
<td>0,4</td>
<td>0,4</td>
<td>0,4</td>
<td></td>
<td>Gramm</td>
</tr>
</tbody>
</table>
SiC-Photodiode with integrated filter
JE0,1C-S; JEA0,1BC-S; JEA0,1B-S

relative spectral responsivity

Package dimension (h=5,2 mm)
direct assembly (model –S)

isolated assembly (model –ISZ)

1 Anode
2 Cathode+Case

1 Anode
2 Kathode
3 Case
The chart shows dependence of amplitude of the application circuit with OP-amp = AD795, \( R_f = 10 \, \text{M}\Omega \) and \( C_f = 1\text{pF} \).

The application example shows a typical circuit \( R_i \) is responsible for the gain of the circuit. \( C_f \) compensates the reverse junction capacitance of the photodiode and the input capacitance of the OP-amp. The exact value of \( C_f \) depends on \( R_i \), used OP-amp and capacitance of the circuit. A typical value is \( 1\text{pF} \).

The chart shows dependence of amplitude of the application circuit with OP-amp = AD795, \( R_f = 10 \, \text{M}\Omega \) and \( C_f = 1\text{pF} \).