SiC-quadrant-photodiode
JQC5R

preliminary data sheet

characteristics:

- monolithic SiC-quadrant-photodiode with common cathode
- active area: 4 x 1.25 mm²
- spectral range: 215 ... 360 nm
- high UV responsivity: 0.16 A/W
- hermetically sealed TO39-package
- component is ROHS and WEE conform

applications:

- center detection of laser beams
- high resolution autocollimators
- xy – coordinate measuring machines
- fibre optical acceleration- and angle sensors
- application with need of high position resolution

maximum ratings:

- reverse voltage 20 V
- operating temperature range - 40 °C ... 100 °C
- storage temperature range - 40 °C ... 100 °C
- soldering temperature (3s) 260 °C

technical data:

test conditions, as not otherwise specified: \( T_A = 25 \degree C \), \( V_R = 10 \) V
values are valid for one quadrant, as not otherwise specified!

<table>
<thead>
<tr>
<th>parameter</th>
<th>test condition</th>
<th>min.</th>
<th>typ.</th>
<th>max.</th>
<th>unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>active area</td>
<td></td>
<td>1.25</td>
<td></td>
<td></td>
<td>mm²</td>
</tr>
<tr>
<td>diameter of active area</td>
<td></td>
<td>2.525</td>
<td></td>
<td></td>
<td>mm</td>
</tr>
<tr>
<td>separation gap</td>
<td></td>
<td>32</td>
<td></td>
<td></td>
<td>µm</td>
</tr>
<tr>
<td>maximum of spectral responsivity ( S_{max} ) at ( \lambda_{max} )</td>
<td>( S = 0.1 \times S_{max} )</td>
<td>270</td>
<td></td>
<td></td>
<td>nm</td>
</tr>
<tr>
<td>spectral range</td>
<td>( \lambda_{min} )</td>
<td>215</td>
<td></td>
<td></td>
<td>nm</td>
</tr>
<tr>
<td></td>
<td>( \lambda_{max} )</td>
<td>360</td>
<td></td>
<td></td>
<td>nm</td>
</tr>
<tr>
<td>absolute spectral responsivity</td>
<td>( \lambda = 254 ) nm</td>
<td>0.14</td>
<td></td>
<td></td>
<td>A/W</td>
</tr>
<tr>
<td>dark current ( I_R )</td>
<td>( E = 0 ) lx</td>
<td>100</td>
<td></td>
<td></td>
<td>fA</td>
</tr>
<tr>
<td>risetime ( t_R ) of photo current</td>
<td>( R_L = 50 ) ( \Omega ) ( \lambda = 254 ) nm (</td>
<td>P</td>
<td>= 10 ) µA</td>
<td>tbc</td>
<td></td>
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<td>capacitance</td>
<td>( F = 1 ) MHz ( E = 0 ) lx</td>
<td>250</td>
<td></td>
<td></td>
<td>pF</td>
</tr>
</tbody>
</table>
relative spectral responsivity

![Graph showing relative spectral responsivity vs. wavelength in nm.](image)

package dimension

![Package dimensions diagram.](image)

pin configuration

1. anode quadrant 1
2. anode quadrant 2
3. anode quadrant 3
4. anode quadrant 4
5. cathode & case