

## SiC-Photodiode JEA2, JEA2S, JEA2SS

preliminary data sheet

### characteristics :

- ◆ large area SiC-photodiode
- ◆ active area: 2,0 mm<sup>2</sup>
- ◆ spectral range: 215 ... 355 nm
- ◆ high UV-responsivity: 0,15 A/W
- ◆ hermetically sealed TO-package
- ◆ option for isolated assembly of photodiode
- ◆ RoHS and WEE conform

### applications :

- ◆ optical measurements in UV-range
- ◆ control of sterilization lamps
- ◆ flame control



### absolute maximum ratings :

- ◆ reverse voltage 20 V
- ◆ operating temperature range - 40 °C ... 125 °C
- ◆ storage temperature range - 40 °C ... 125 °C
- ◆ soldering temperature (3s) 260 °C

### technical data :

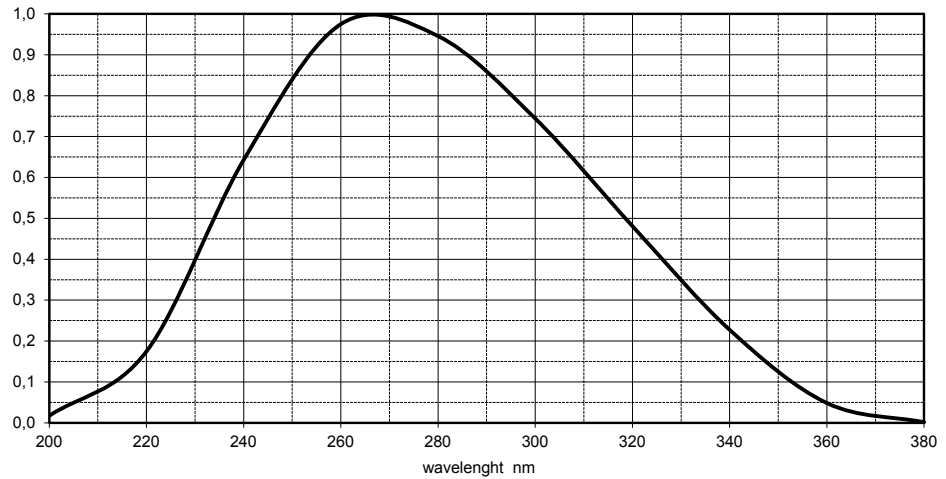
test conditions, as not otherwise specified: T<sub>A</sub> = 25 °C , V<sub>R</sub> = 0 V

parameter	test condition	JEA2 / JEA2I	JEA2S / JEA2IS	JEA2SS / JEA2ISS	unit
active area		1,415x1,415			mm <sup>2</sup>
spectral range	S = 0,1 x S <sub>max</sub>				
λ <sub>min</sub>		215			nm
λ <sub>max</sub>		355			nm
wavelength of peak response		265			nm
peak response S <sub>max</sub>	λ = 265 nm	0,15			A/W
spectral response S <sub>254nm</sub>	λ = 254 nm	0,13			A/W
dark current I <sub>R</sub>	V <sub>R</sub> = 1 V	200			fA
junction capacitance C	f = 10 kHz	400			pF
field of view (FOV)		±45	±35	±40	grade
FOV for isolated assembly		±48	±38	±45	grade
weight		0,8	0,3	0,3	gram
package drawing for direct or isolated assembly		TO39 / TO39(i)	TO18 / TO18(i)	TO52 / TO52(i)	

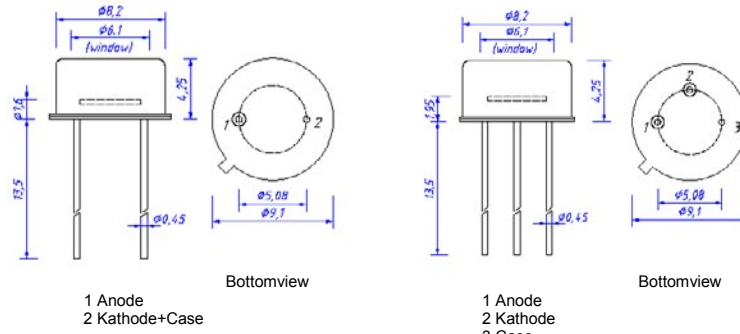
Rev. 0 (10/2014)

**SiC-Photodiode  
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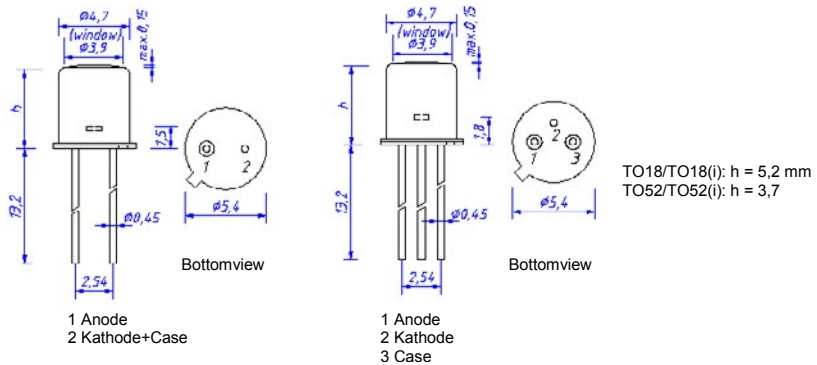
relativ spectral responsivity



package dimension TO39 / TO39(i)

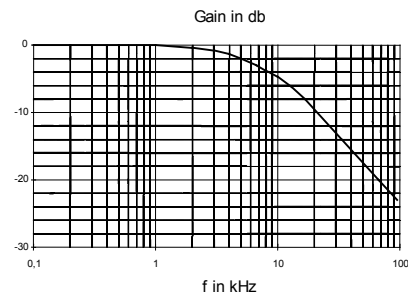
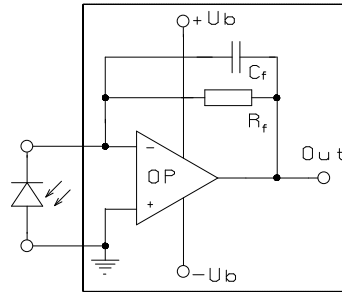


package dimension TO18 / TO18(i) bzw. TO52 / TO52(i)



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**application example**



The application example shows a typical circuit  $R_f$  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  $R_f$ , used OP-amp and capacitance of the circuit. A typical value is 1pF.

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