SiC-Photodiode
JEA0,25 · JEA0,25S · JEA0,25SS

Characteristics :

- large area SiC-photodiode
- active area: 0,25 mm²
- spectral range: 210 … 355 nm
- high UV-responsivity: 0,16 A/W
- hermetically sealed TO-package
- option for isolated assembly of photodiode
- HT-option for extended operating temperature range 150°C
- RoHS, REACH and WEEE conform

Applications :

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

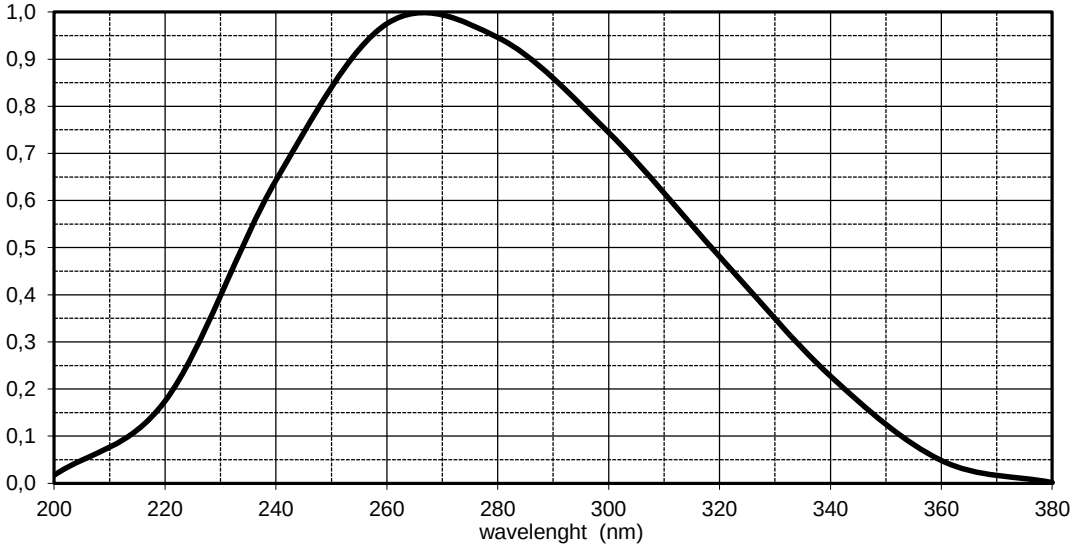
Absolute Maximum Ratings :

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

Versions:

Package	Anode: isolated Cathode: Case	Anode: isolated Cathode: Case	Cathode, Anode : isolated + Case-Ground-Pin	Operating Temperature up to 150 °C
TO5	JEA0,25	JEAC0,25	JEA0,25I	*-HT
TO18	JEA0,25S	JEAC0,25S	JEA0,25ISZ	
TO52	JEA0,25SS	JEAC0,25SS	JEA0,25ISSZ	

Relativ Spectral Responsivity



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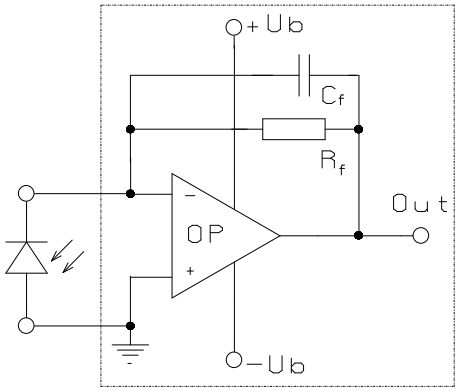
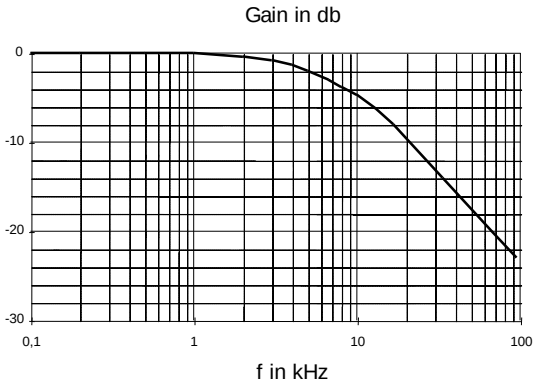
Technical Data :

test conditions, as not otherwise specified: T_A = 25 °C , V_R = 0 V

Parameter	Test condition	JEA0,25 JEAC0,25 JEA0,25I	JEA0,25S JEAC0,25S JEA0,25ISZ	JEA0,25SS JEAC0,25SS JEA0,25ISSZ	Unit
active area		0,55 x 0,55			mm^2
spectral range λ_{min} λ_{max}	S = 0,1 x S_{max}	 210 355			 nm nm
wavelenght of peak response		265			nm
peak response S_{max}	λ = 265 nm	0,16			A/W
spectral response S_{254nm}	λ = 254 nm	0,144			A/W
dark current I_R	V_R = 1 V	10			fA
junction capacitance C_j	f = 10 kHz	75			pF
field of view (FOV)		±45	±35	±40	degree
FOV for isolated assembly		±48	±38	±45	degree
weight		0,8	0,3	0,3	gram
package drawing for direct or isolated assembly		TO39 / TO39 iso.	TO18 / TO18 iso.	TO52 / TO52 iso.	

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 opamp. The exact value of C_f depends on R_f, used opamp and capacitance of the circuit. A typical value is 1pF.
The chart shows dependence of amplitude of the application circuit with opamp = AD795, R_f = 10 MΩ and C_f = 1pF.

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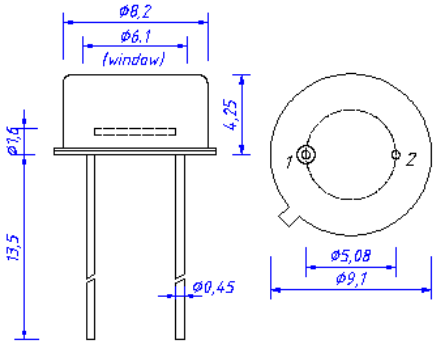
Case Dimensions:

TO39

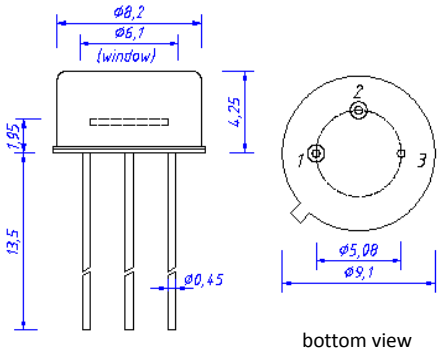


bottom view

JEA0,25: pin 1: anode
pin 2: cathode + case

JEAC0,25: pin 1: cathode
pin 2: anode + case

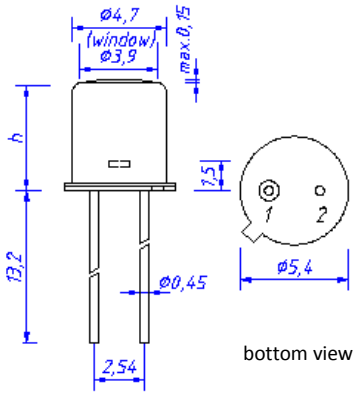
TO39 isolated



bottom view

JEA0,25I: pin 1: anode
pin 2: cathode
pin 3: case

TO18 / TO52

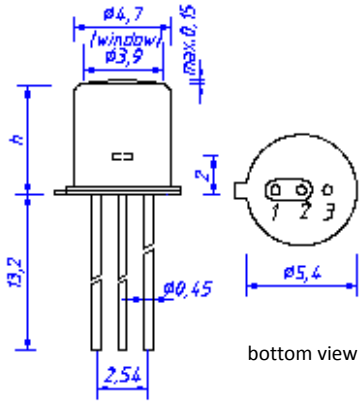


bottom view

JEA0,25S/SS: pin 1: anode
pin 2: cathode + case

JEAC0,25S/SS: pin 1: cathode
pin 2: anode + case

TO18 isolated / TO52 isolated



bottom view

TO18: h = 5,2 mm
TO52: h = 3,7 mm

JEA0,25ISZ/JEA0,25ISSZ: pin 1: anode
pin 2: cathode
pin 3: case

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