



SiC-Photodiode JEA2, JEA2S, JEA2SS

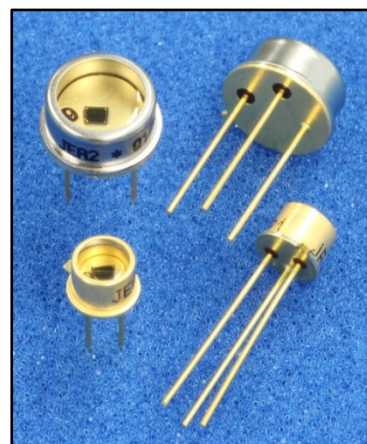
preliminary data sheet

characteristics :

- ◆ large area SiC-photodiode
- ◆ active area: 2,0 mm²
- ◆ 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 :

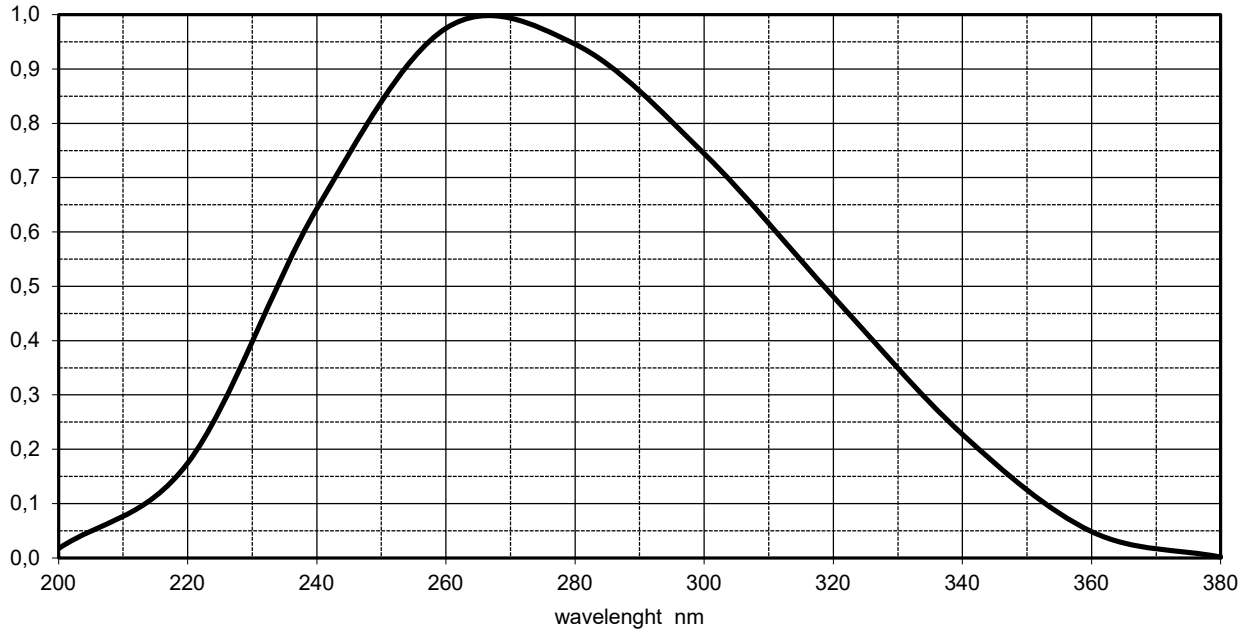
- ◆ reverse voltage 20 V
- ◆ operating temperature range - 40 °C ... 125 °C
- ◆ storage temperature range - 40 °C ... 125 °C
- ◆ soldering temperature (3s) 260 °C

technical data :

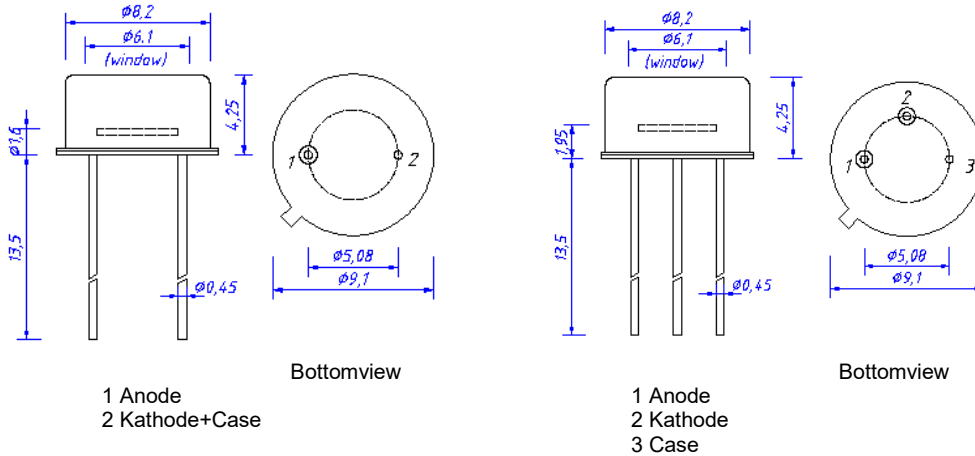
test conditions, as not otherwise specified: T_A = 25 °C , V_R = 0 V

parameter	test condition	JEA2 / JEA2I	JEA2S / JEA2IS	JEA2SS / JEA2ISS	unit
active area		1,415x1,415			mm ²
spectral range	S = 0,1 x S _{max}				
λ _{min}		215			nm
λ _{max}		355			nm
wavelength of peak response		265			nm
peak response S _{max}	λ = 265 nm	0,15			A/W
spectral response S _{254nm}	λ = 254 nm	0,13			A/W
dark current I _R	V _R = 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)	

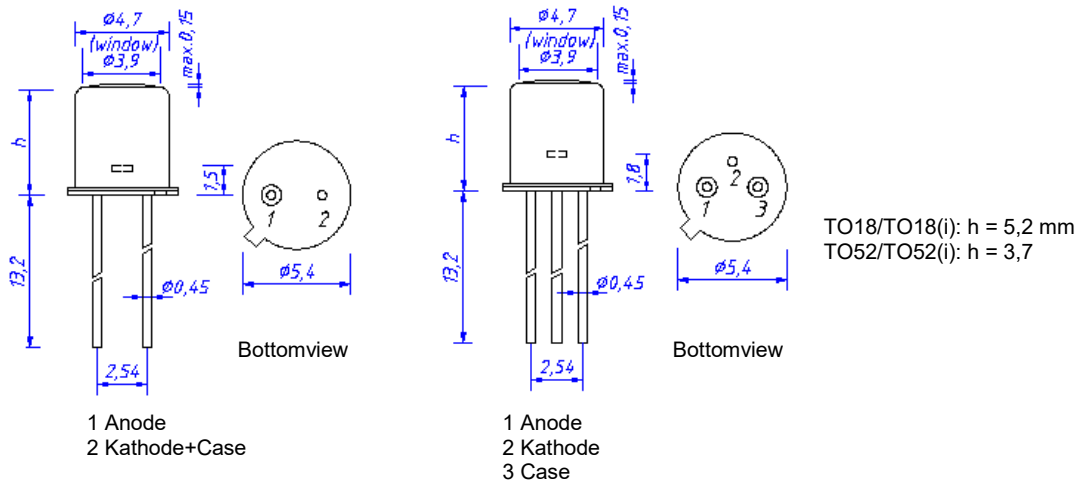
relativ spectral responsivity



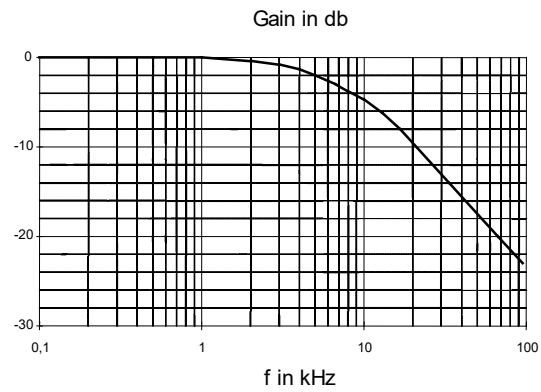
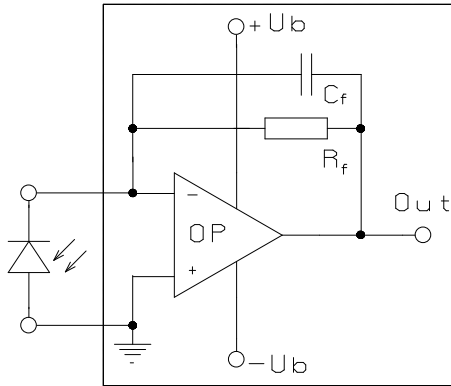
package dimension TO39 / TO39(i)



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



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 $C_f = 1\text{pF}$.