

SiC – photodiode**JEC 0,1 ISS2**

- characteristics :**
- ◆ spectral range 210 ... 380 nm
 - ◆ active area 0,055 mm²
 - ◆ high UV-responsivity 0,13 A/W
 - ◆ TO 18-package
 - ◆ photodiode isolated to package
 - ◆ components are in conformity with RoHS and WEEE

- applications :**
- ◆ UV-measurements only
 - ◆ UV-source control
 - ◆ flame detection

maximum ratings :

reverse voltage 20 V
 operating temperature range -25 °C ... 70 °C
 storage temperature range -40 °C ... 100 °C
 soldering temperature (3s) 260 °C

technical data :

test conditions, as not otherwise specified: $\gamma_a = 25\text{ °C}$, $V_R = 0V$

parameters	test conditions	min.	typ.	max.	unit
active area			0,25 x 0,25		mm ²
spectral range		210		380	nm
maximum of spectral responsivity	$\lambda_{max} = 275\text{ nm}$		0,13		A/W
absolute spectral responsivity	$\lambda = 254\text{ nm}$		0,11		A/W
dark current I_R	$V_R = 1\text{ V}$		1		fA
short current (sunlight)	bright sun cloudy		50 20		nA
capacitance			21		pF

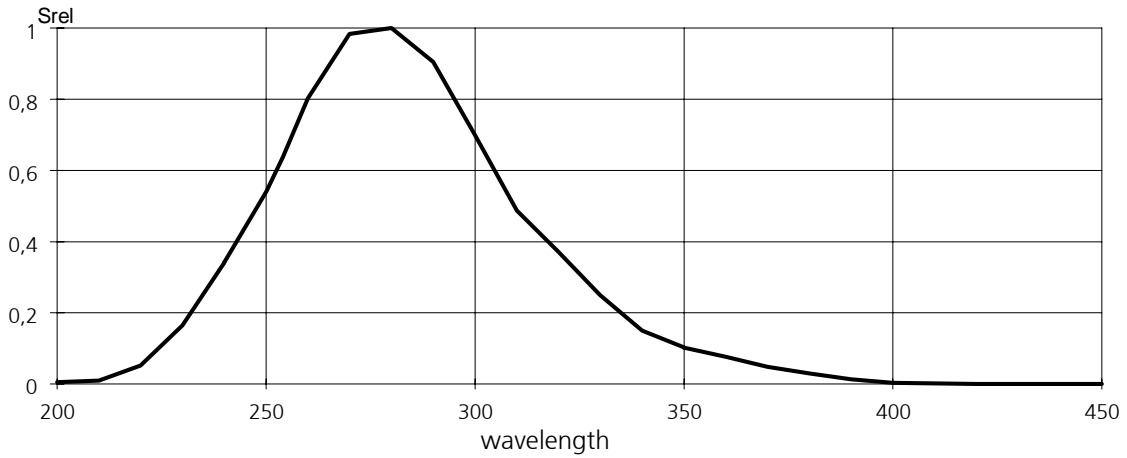
rev. 2 (03/2009)

D
A
T
A

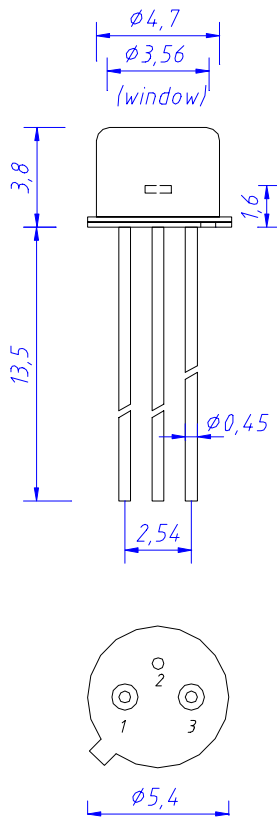
S
H
E
E
T

JEC 0,1 ISS2

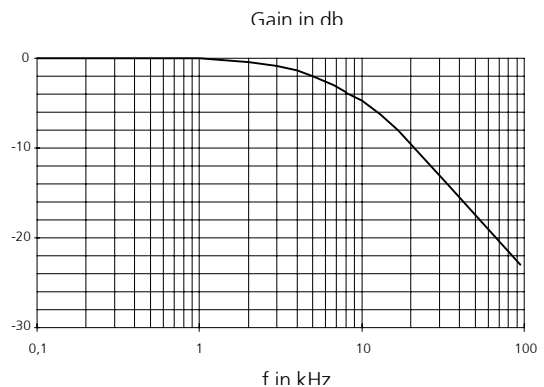
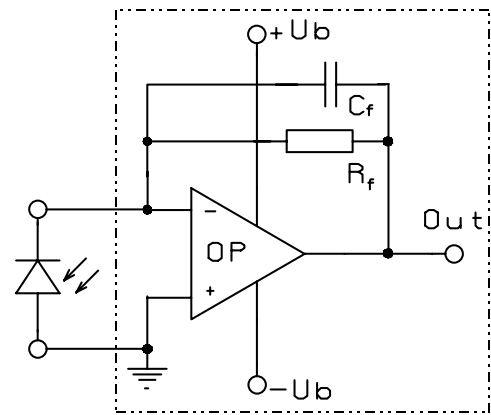
relative spectral responsivity



package dimensions



application example



- 1 cathode
- 2 case
- 3 anode

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 input capacitance of the OPV. The exact value of C_f depends on R_f , used OPV and capacitance of the circuit. A typical value is 1 pF.

The diagram shows dependence of amplitude of the application circuit with OPA 111, $R_f = 50 \text{ M}\Omega$ and $C_f = 0.5 \text{ pF}$.