



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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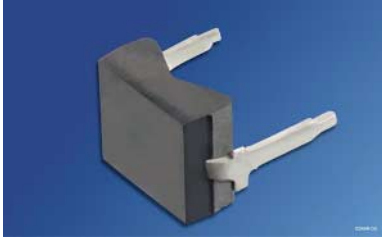
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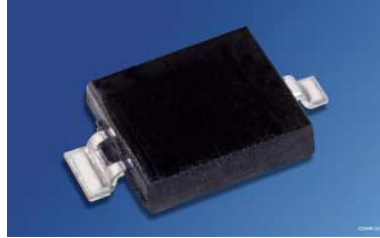


# Si-PIN-Fotodiode mit Tageslichtsperrfilter; in SMT und als Reverse Gullwing Silicon PIN Photodiode with Daylight Filter; in SMT and as Reverse Gullwing

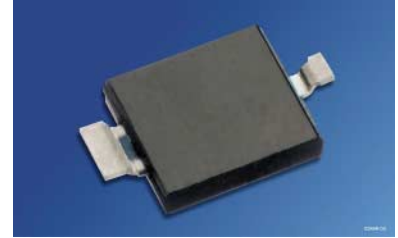
## BPW 34 FA, BPW 34 FAS, BPW 34 FAS (E9087)



BPW 34 FA



BPW 34 FAS



BPW 34 FAS (E9087)

### Wesentliche Merkmale

- Speziell geeignet für den Wellenlängenbereich von 830 nm bis 880 nm
- Kurze Schaltzeit (typ. 20 ns)
- DIL-Plastikbauform mit hoher Packungsdichte
- BPW 34 FAS/(E9087): geeignet für Vapor-Phase Löten und IR-Reflow Löten

### Anwendungen

- IR-Fernsteuerung von Fernseh- und Rundfunkgeräten, Videorecordern, Gerätefernsteuerung
- Lichtschranken für Gleich- und Wechsellichtbetrieb

### Features

- Especially suitable for the wavelength range of 830 nm to 880 nm
- Short switching time (typ. 20 ns)
- DIL plastic package with high packing density
- BPW 34 FAS/(E9087): Suitable for vapor-phase and IR-reflow soldering

### Applications

- IR-remote control of hi-fi and TV sets, video tape recorders, remote controls of various equipment
- Photointerrupters

Typ Type	Bestellnummer Ordering Code
BPW 34 FA	Q62702-P1129
BPW 34 FAS	Q62702-P463
BPW 34 FAS (E9087)	Q62702-P1829

**Grenzwerte**  
**Maximum Ratings**

Bezeichnung Parameter	Symbol Symbol	Wert Value	Einheit Unit
Betriebs- und Lagertemperatur Operating and storage temperature range	$T_{op}; T_{stg}$	- 40 ... + 100	°C
Sperrspannung Reverse voltage	$V_R$ $V_R (t < 2 \text{ min})$	16 32	V V
Verlustleistung, $T_A = 25 \text{ °C}$ Total power dissipation	$P_{tot}$	150	mW

**Kennwerte ( $T_A = 25 \text{ °C}$ ,  $\lambda = 870 \text{ nm}$ )**  
**Characteristics**

Bezeichnung Parameter	Symbol Symbol	Wert Value	Einheit Unit
Fotostrom Photocurrent $V_R = 5 \text{ V}$ , $E_e = 1 \text{ mW/cm}^2$	$I_p$	50 ( $\geq 40$ )	$\mu\text{A}$
Wellenlänge der max. Fotoempfindlichkeit Wavelength of max. sensitivity	$\lambda_{S \text{ max}}$	880	nm
Spektraler Bereich der Fotoempfindlichkeit $S = 10\%$ von $S_{\text{max}}$ Spectral range of sensitivity $S = 10\%$ of $S_{\text{max}}$	$\lambda$	730 ... 1100	nm
Bestrahlungsempfindliche Fläche Radiant sensitive area	$A$	7.00	$\text{mm}^2$
Abmessung der bestrahlungsempfindlichen Fläche Dimensions of radiant sensitive area	$L \times B$ $L \times W$	$2.65 \times 2.65$	$\text{mm} \times \text{mm}$
Halbwinkel Half angle	$\varphi$	$\pm 60$	Grad deg.
Dunkelstrom, $V_R = 10 \text{ V}$ Dark current	$I_R$	2 ( $\leq 30$ )	nA
Spektrale Fotoempfindlichkeit Spectral sensitivity	$S_\lambda$	0.65	A/W
Quantenausbeute Quantum yield	$\eta$	0.93	<u>Electrons</u> Photon
Leerlaufspannung, $E_e = 0.5 \text{ mW/cm}^2$ Open-circuit voltage	$V_O$	320 ( $\geq 250$ )	mV

## BPW 34 FA, BPW 34 FAS, BPW 34 FAS (E9087)

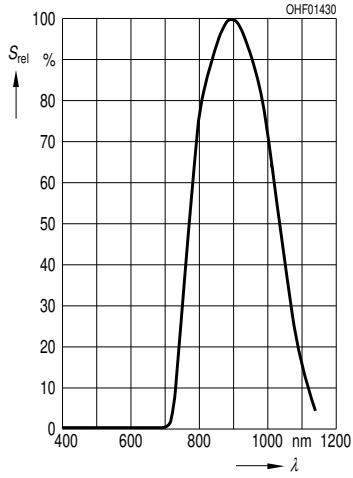
**Kennwerte** ( $T_A = 25\text{ °C}$ ,  $\lambda = 870\text{ nm}$ )

**Characteristics** (cont'd)

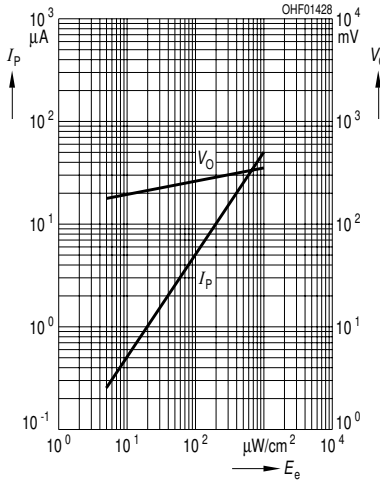
Bezeichnung Parameter	Symbol Symbol	Wert Value	Einheit Unit
Kurzschlußstrom, $E_e = 0.5\text{ mW/cm}^2$ Short-circuit current	$I_{SC}$	23	$\mu\text{A}$
Anstiegs- und Abfallzeit des Fotostromes Rise and fall time of the photocurrent $R_L = 50\ \Omega$ ; $V_R = 5\text{ V}$ ; $\lambda = 850\text{ nm}$ ; $I_p = 800\ \mu\text{A}$	$t_r, t_f$	20	ns
Durchlaßspannung, $I_F = 100\text{ mA}$ , $E = 0$ Forward voltage	$V_F$	1.3	V
Kapazität, $V_R = 0\text{ V}$ , $f = 1\text{ MHz}$ , $E = 0$ Capacitance	$C_0$	72	pF
Temperaturkoeffizient von $V_O$ Temperature coefficient of $V_O$	$TC_V$	-2.6	mV/K
Temperaturkoeffizient von $I_{SC}$ Temperature coefficient of $I_{SC}$	$TC_I$	0.03	%/K
Rauschäquivalente Strahlungsleistung Noise equivalent power $V_R = 10\text{ V}$	$NEP$	$3.9 \times 10^{-14}$	$\frac{\text{W}}{\sqrt{\text{Hz}}}$
Nachweisgrenze, $V_R = 10\text{ V}$ , Detection limit	$D^*$	$6.8 \times 10^{12}$	$\frac{\text{cm} \times \sqrt{\text{Hz}}}{\text{W}}$

**Relative Spectral Sensitivity**

$S_{rel} = f(\lambda)$

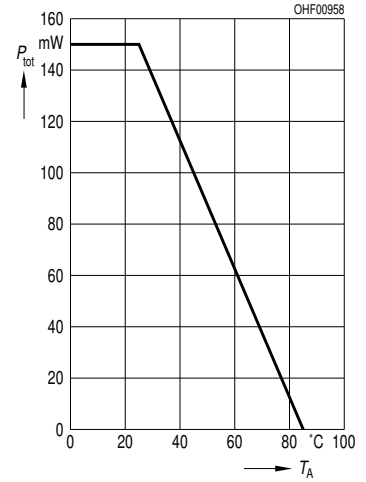


**Photocurrent  $I_P = f(E_e)$ ,  $V_R = 5 V$   
Open-Circuit Voltage  $V_O = f(E_e)$**



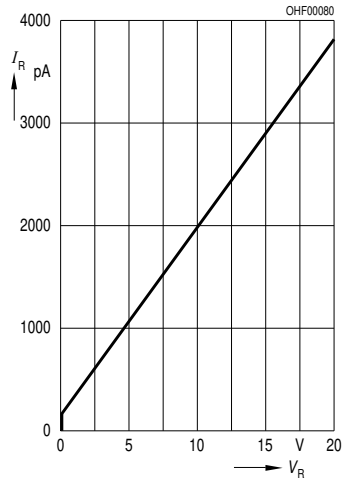
**Total Power Dissipation**

$P_{tot} = f(T_A)$



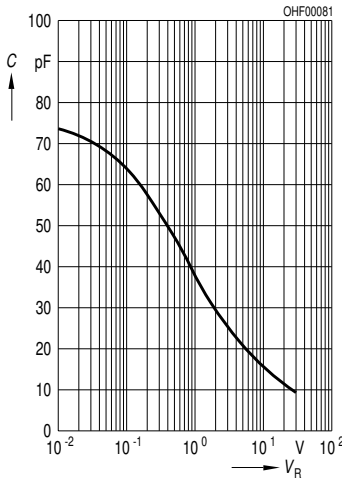
**Dark Current**

$I_R = f(V_R), E = 0$



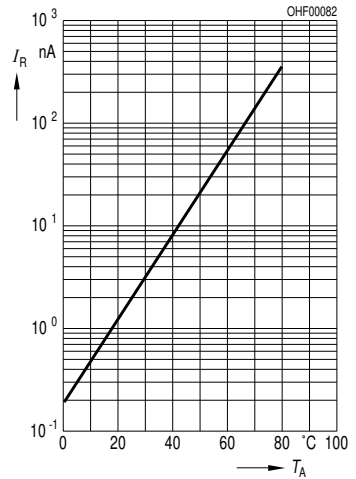
**Capacitance**

$C = f(V_R), f = 1 MHz, E = 0$



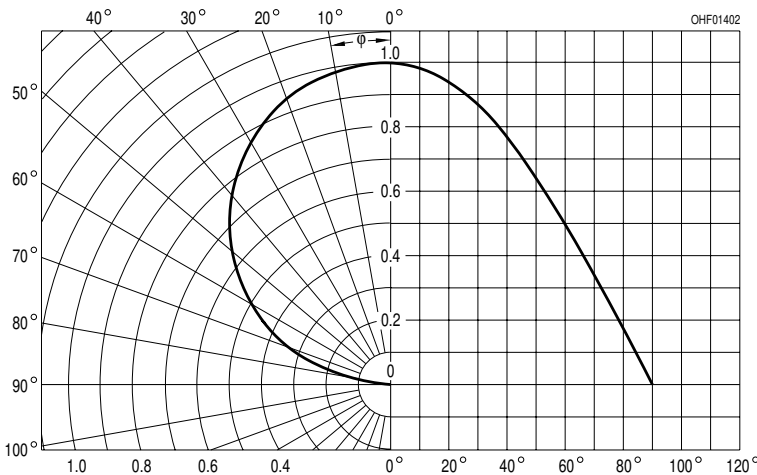
**Dark Current**

$I_R = f(T_A), V_R = 10 V, E = 0$

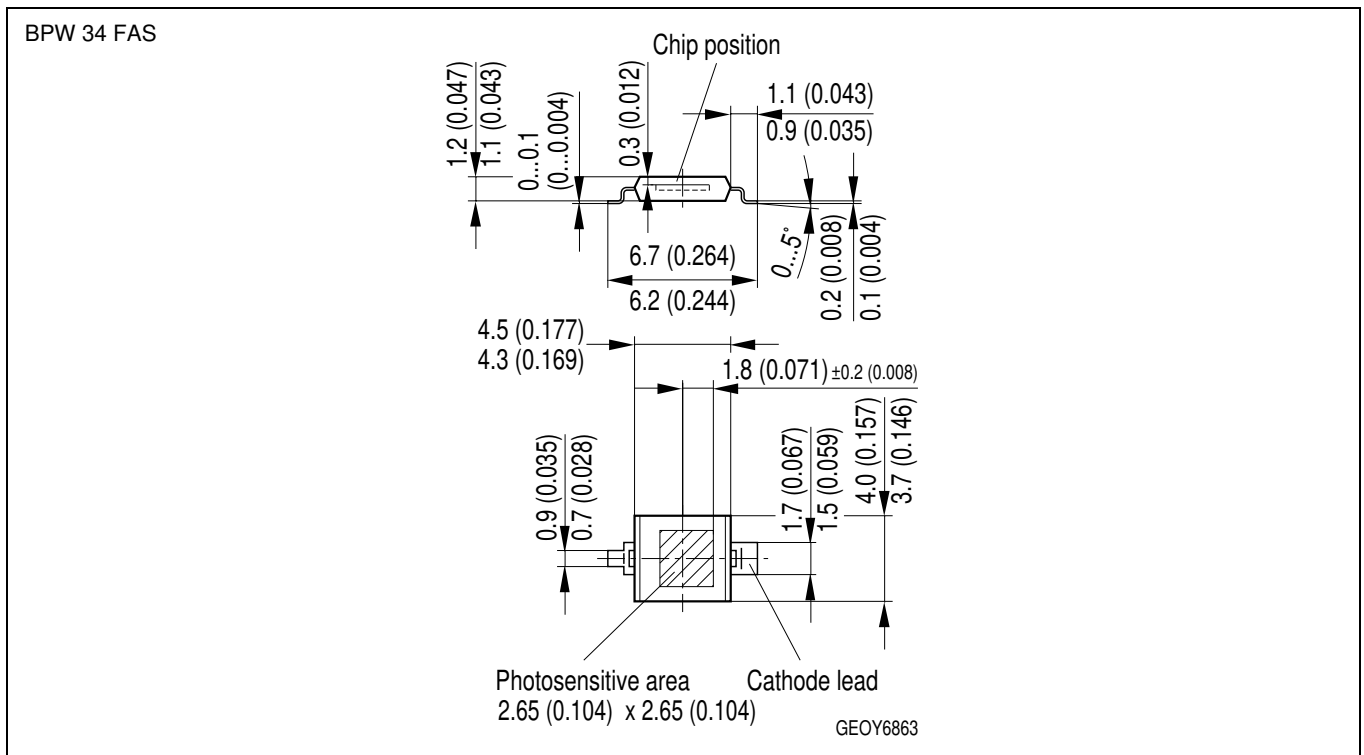
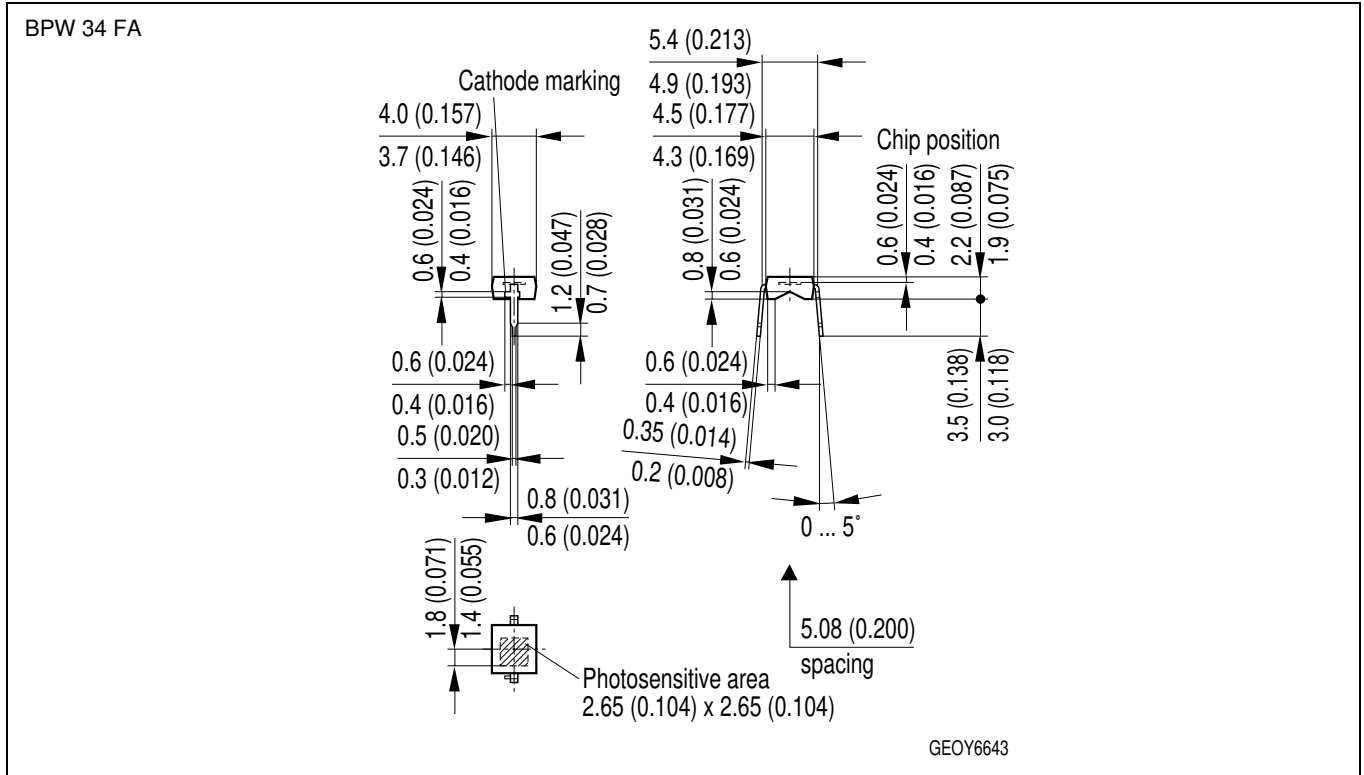


**Directional Characteristics**

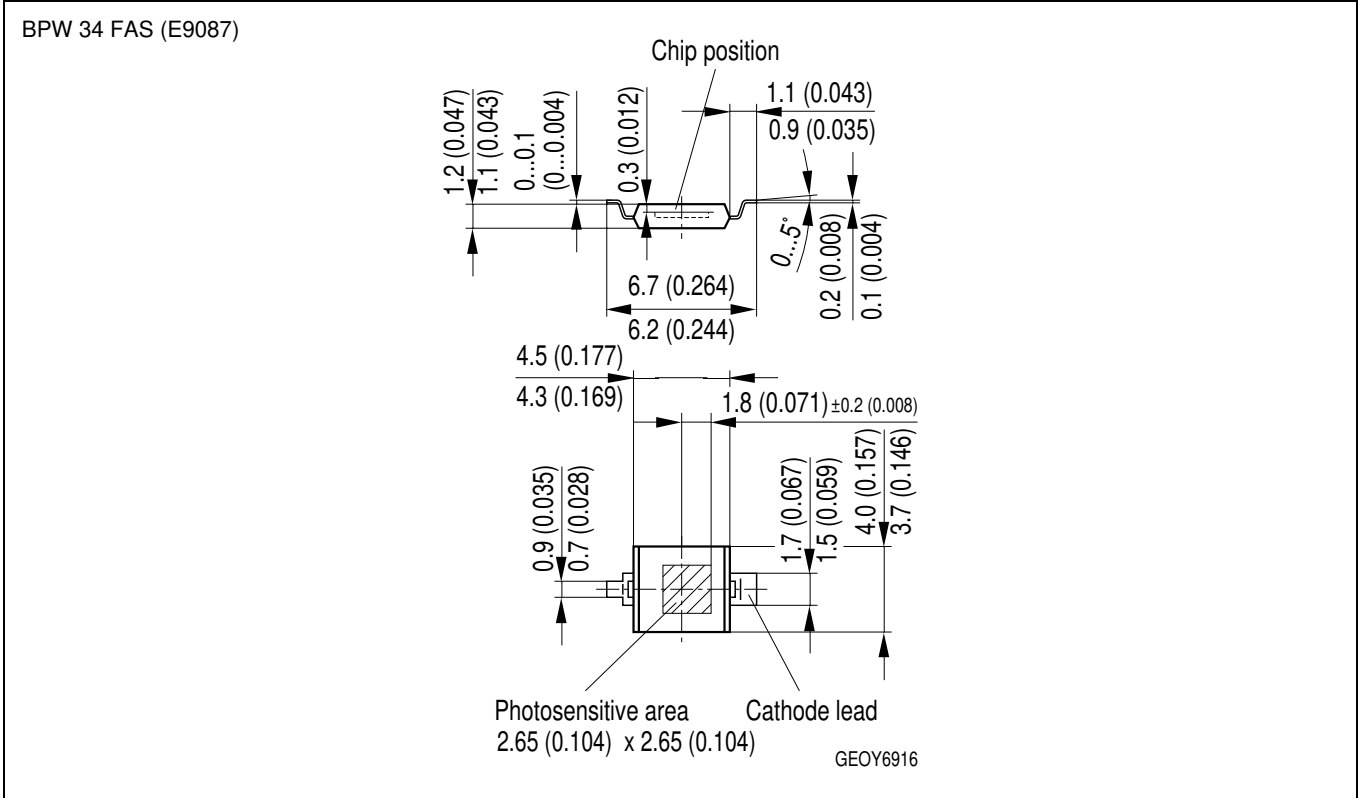
$S_{rel} = f(\phi)$



Maßzeichnung  
Package Outlines



Maße werden wie folgt angegeben: mm (inch) / Dimensions are specified as follows: mm (inch).



Maße werden wie folgt angegeben: mm (inch) / Dimensions are specified as follows: mm (inch).

Published by OSRAM Opto Semiconductors GmbH & Co. OHG  
Wernerwerkstrasse 2, D-93049 Regensburg

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**Packing**

Please use the recycling operators known to you. We can also help you – get in touch with your nearest sales office. By agreement we will take packing material back, if it is sorted. You must bear the costs of transport. For packing material that is returned to us unsorted or which we are not obliged to accept, we shall have to invoice you for any costs incurred.

**Components used in life-support devices or systems must be expressly authorized for such purpose!** Critical components <sup>1</sup>, may only be used in life-support devices or systems <sup>2</sup> with the express written approval of OSRAM OS.

<sup>1</sup> A critical component is a component used in a life-support device or system whose failure can reasonably be expected to cause the failure of that life-support device or system, or to affect its safety or effectiveness of that device or system.

<sup>2</sup> Life support devices or systems are intended (a) to be implanted in the human body, or (b) to support and/or maintain and sustain human life. If they fail, it is reasonable to assume that the health of the user may be endangered.