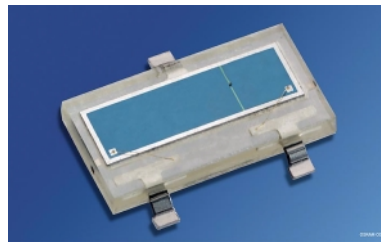
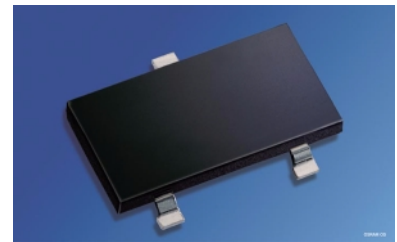


2fach-Silizium-PIN Fotodiode in SMT 2-Chip Silicon PIN Photodiode in SMT

KOM 2125
KOM 2125 FA



KOM 2125



KOM 2125 FA

Wesentliche Merkmale

- Speziell geeignet für Anwendungen im Bereich von 400 nm bis 1100 nm und bei 880 nm (KOM 2125 FA)
- Kurze Schaltzeit (typ. 25 ns)
- geeignet für Vapor-Phase Löten und IR-Reflow-Löten
- SMT-fähig

Anwendungen

- Nachlaufsteuerungen
- Kantenführung
- Industrieelektronik
- „Messen/Steuern/Regeln“

Features

- Especially suitable for applications from 400 nm to 1100 nm and of 880 nm (KOM 2125 FA)
- Short switching time (typ. 25 ns)
- Suitable for vapor-phase and IR-reflow soldering
- Suitable for SMT

Applications

- Follow-up controls
- Edge drives
- Industrial electronics
- For control and drive circuits

Typ Type	Bestellnummer Ordering Code
KOM 2125	Q62702-K0047
KOM 2125 FA	Q62702-P5313

Grenzwerte
Maximum Ratings

Bezeichnung Parameter	Symbol Symbol	Wert Value	Einheit Unit
Betriebs- und Lagertemperatur Operating and storage temperature range	$T_{op}; T_{stg}$	- 40 ... + 80	°C
Sperrspannung Reverse voltage	V_R	60	V
Verlustleistung, $T_A = 25\text{ °C}$ Total power dissipation	P_{tot}	150	mW

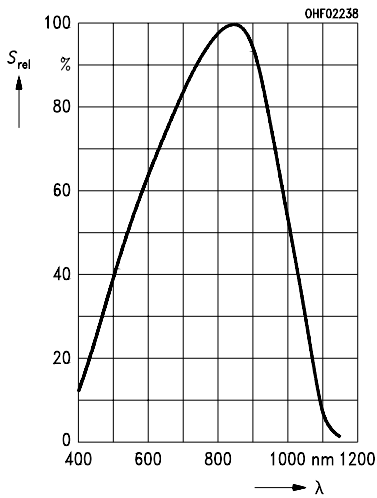
Kennwerte ($T_A = 25\text{ °C}$)
Characteristics ($T_A = 25\text{ °C}$)

Bezeichnung Parameter	Symbol Symbol	Wert Value		Einheit Unit
		KOM 2125	KOM 2125 FA	
Fotostrom Photocurrent $V_R = 5\text{ V}$, Normlicht/standard light A Diode A $T = 2856\text{ K}$, $E_V = 1000\text{ lx}$ Diode B $V_R = 5\text{ V}$, $\lambda = 870\text{ nm}$, $E_e = 1\text{ mW/cm}^2$ Diode A Diode B	I_P I_P	40 (> 30) 100 (> 75) – –	– – 26 (> 20) 70 (> 50)	μA μA
Wellenlänge der max. Fotoempfindlichkeit Wavelength of max. sensitivity	$\lambda_{S\max}$	850	900	nm
Spektraler Bereich der Fotoempfindlichkeit $S = 10\%$ von S_{\max} Spectral range of sensitivity $S = 10\%$ of S_{\max}	λ	400 ... 1100	750 ... 1100	nm
Bestrahlungsempfindliche Fläche Radiant sensitive area	Diode A Diode B	A 4 10	4 10	mm^2
Abmessung der bestrahlungsempfindlichen Fläche Dimensions of radiant sensitive area	Diode A Diode B	$L \times B$ $L \times W$	2×2 2×5	mm × mm mm × mm
Abstand Chipoberfläche zu Vergußoberfläche Distance chip front to case seal	H	0.3	0.3	mm
Halbwinkel Half angle	φ	± 60	± 60	Grad deg.
Dunkelstrom, $V_R = 10\text{ V}$ Dark current	Diode A Diode B	I_R 5 (≤ 30) 10 (≤ 30)	5 (≤ 30) 10 (≤ 30)	nA

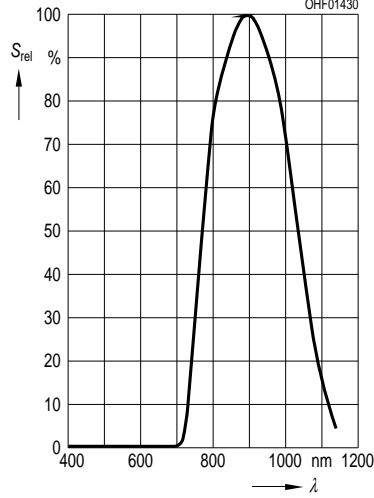
Kennwerte ($T_A = 25\text{ °C}$)Characteristics ($T_A = 25\text{ °C}$) (cont'd)

Bezeichnung Parameter	Symbol Symbol	Wert Value		Einheit Unit
		KOM 2125	KOM 2125 FA	
Leerlaufspannung Open-circuit voltage $E_V = 1000\text{ lx}$, Normlicht/standard light A $E_e = 1\text{ mW/cm}^2$, $\lambda = 850\text{ nm}$	V_O V_O	350 (> 300) –	– 350 (> 300)	mV mV
Kurzschlussstrom Short-circuit current Normlicht/standard light A $T = 2856\text{ K}$, $E_V = 1000\text{ lx}$ $\lambda = 870\text{ nm}$, $E_e = 1\text{ mW/cm}^2$	Diode A Diode B I_{SC} Diode A Diode B I_{SC}	38 95 – –	– – 24 66	μA μA
Anstiegszeit/Abfallzeit Rise and fall time $R_L = 50\ \Omega$; $V_R = 5\text{ V}$; $\lambda = 850\text{ nm}$; $I_P = 800\ \mu\text{A}$	Diode A Diode B t_r, t_f	18 25	18 25	ns
Durchlassspannung, $I_F = 100\text{ mA}$; $E = 0$ Forward voltage	V_F	1.0	1.0	V
Kapazität Capacitance $V_R = 0\text{ V}$; $f = 1\text{ MHz}$; $E = 0$	Diode A Diode B C_0	40 100	40 100	pF
Temperaturkoeffizient von V_O Temperature coefficient of V_O	TC_V	– 2.6	– 2.6	mV/K
Temperaturkoeffizient von I_P Temperature coefficient of I_P Normlicht/standard light A $\lambda = 850\text{ nm}$	TC_I	0.18 –	– 0.2	%/K
Rauschäquivalente Strahlungsleistung Noise equivalent power $V_R = 10\text{ V}$	Diode A Diode B NEP	6.4×10^{-14} 9.1×10^{-14}	6.4×10^{-14} 9.1×10^{-14}	$\frac{\text{W}}{\sqrt{\text{Hz}}}$
Nachweisgrenze, $V_R = 10\text{ V}$ Detection limit	Diode A Diode B D^*	3.1×10^{12} 3.5×10^{12}	3.1×10^{12} 3.5×10^{12}	$\frac{\text{cm} \times \sqrt{\text{Hz}}}{\text{W}}$

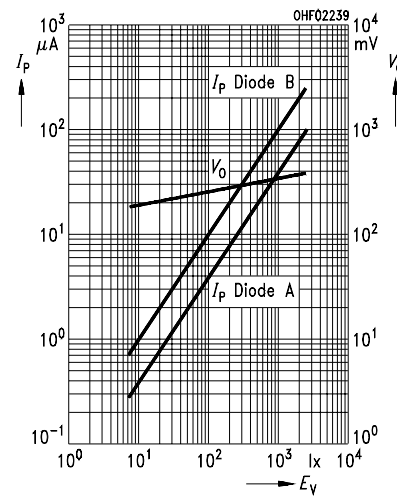
Relative Spectral Sensitivity
KOM 2125, $S_{rel} = f(\lambda)$



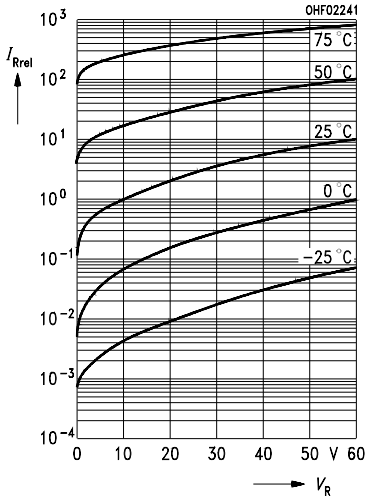
Relative Spectral Sensitivity
KOM 2125 FA, $S_{rel} = f(\lambda)$



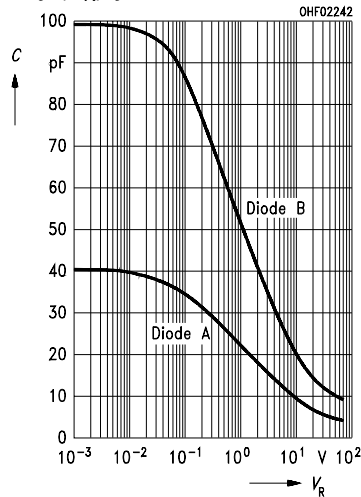
Photocurrent $I_P = f(E_V)$, $V_R = 5 V$
Open-Circuit Voltage $V_O = f(E_V)$



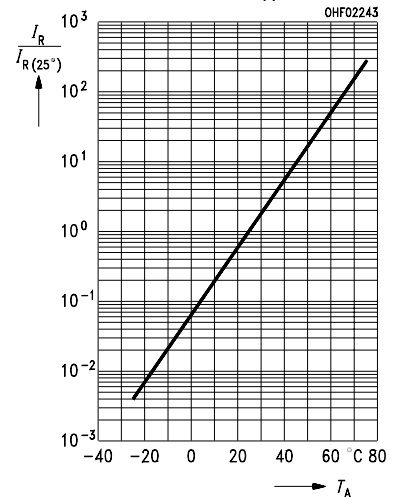
Dark Current, $I_R = f(V_R)$, $E = 0$
normalized to 10 V/25 °C



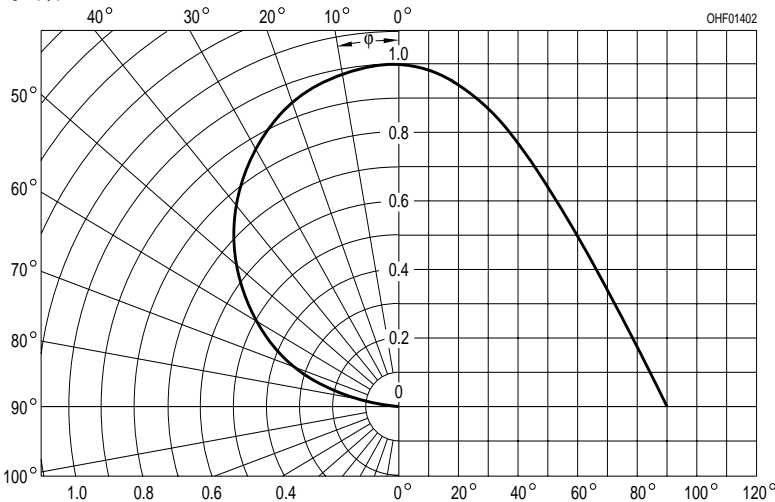
Capacitance
 $C = f(V_R)$, $f = 1 MHz$, $E = 0$



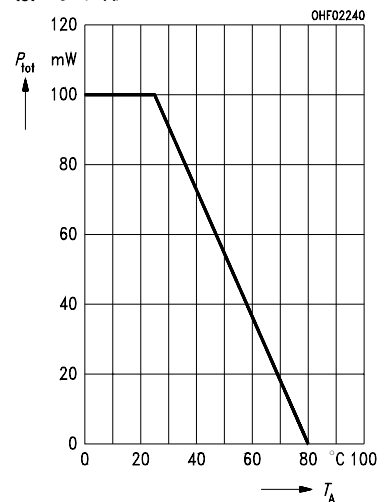
Dark Current $I_R = f(T_A)$, $V_R = 10 V$,
 $E = 0$, normalized to $T_A = 25 °C$



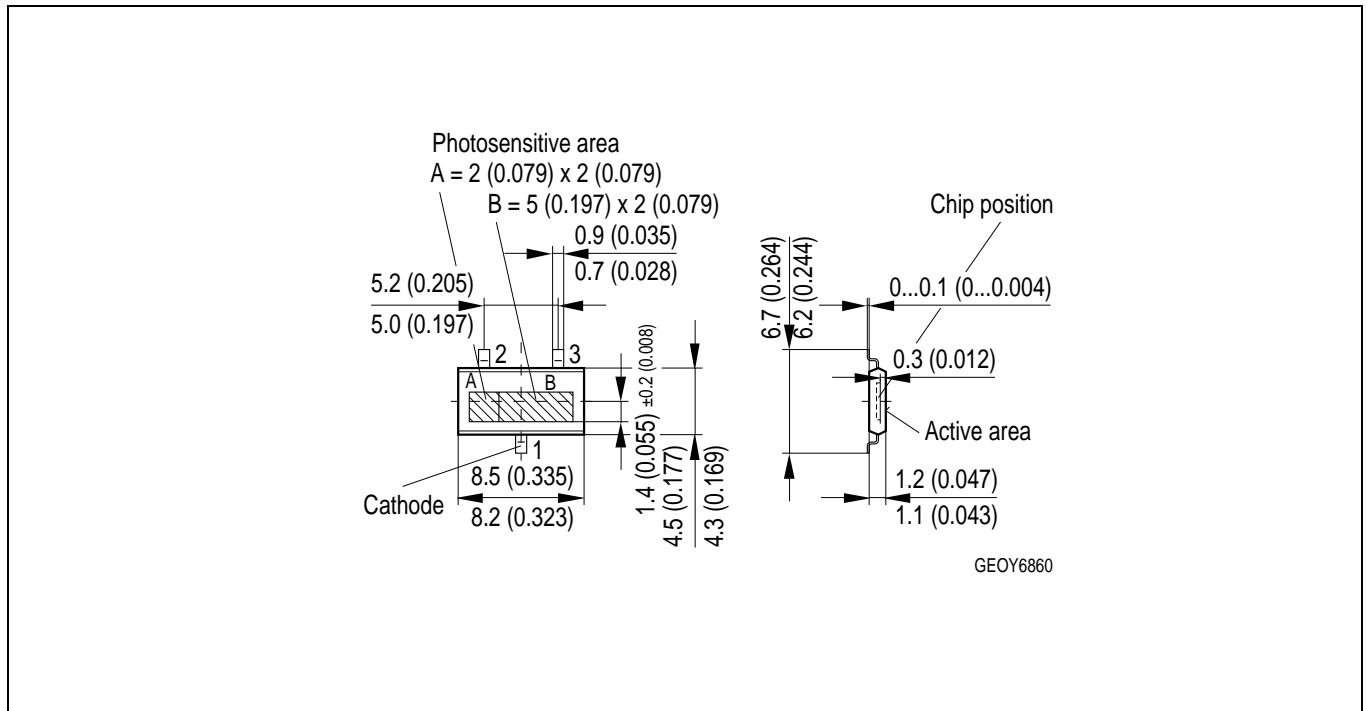
Directional Characteristics
 $S_{rel} = f(\phi)$



Total Power Dissipation
 $P_{tot} = f(T_A)$



Maßzeichnung Package Outlines



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

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