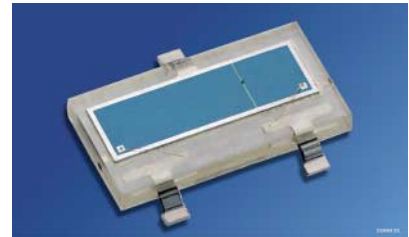


2fach-Silizium-PIN Fotodiode in SMT
2-Chip Silicon PIN Photodiode in SMT
Lead (Pb) Free Product - RoHS Compliant

KOM 2125



KOM 2125

Wesentliche Merkmale

- Speziell geeignet für Anwendungen im Bereich von 400 nm bis 1100 nm
- Kurze Schaltzeit (typ. 25 ns)
- SMT-fähig

Anwendungen

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

Features

- Especially suitable for applications from 400 nm to 1100 nm
- Short switching time (typ. 25 ns)
- Suitable for SMT

Applications

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

Typ Type	Bestellnummer Ordering Code
KOM 2125	Q65110A2703

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 ($T_A = 25\text{ °C}$)

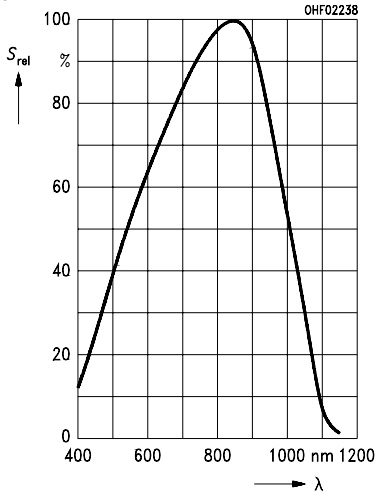
Bezeichnung Parameter	Symbol Symbol	Wert Value	Einheit Unit
Fotostrom Photocurrent $V_R = 5\text{ V}$; Normlicht/standard light A $T = 2856\text{ K}$, $E_v = 1000\text{ lx}$ $V_R = 5\text{ V}$; $\lambda = 870\text{ nm}$, $E_e = 1\text{ mW/cm}^2$	Diode A Diode B Diode A Diode B I_P I_P	40 (≥ 30) 100 (≥ 75)	μA μA
Wellenlänge der max. Fotoempfindlichkeit Wavelength of max. sensitivity	$\lambda_{S\text{ max}}$	850	nm
Spektraler Bereich der Fotoempfindlichkeit $S = 10\%$ von S_{max} Spectral range of sensitivity $S = 10\%$ of S_{max}	λ	400 ...1100	nm
Bestrahlungsempfindliche Fläche Radiant sensitive area	Diode A Diode B A	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	$\text{mm} \times \text{mm}$
Halbwinkel Half angle	φ	± 60	Grad deg.
Dunkelstrom, $V_R = 10\text{ V}$ Dark current	Diode A Diode B I_R	5 (≤ 30) 10 (≤ 30)	nA
Leerlaufspannung Open-circuit voltage $E_v = 1000\text{ lx}$, Normlicht/standard light A $\lambda = 870\text{ nm}$, $E_e = 1\text{ mW/cm}^2$	V_O V_O	350 (≥ 300)	mV mV

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

Bezeichnung Parameter	Symbol Symbol	Wert Value	Einheit Unit
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 Diode A Diode B	I_{SC} I_{SC}	μA μA
Anstiegszeit/Abfallzeit Rise and fall time $R_L = 50\ \Omega$; $V_R = 5\text{ V}$; $\lambda = 850\text{ nm}$	Diode A Diode B	t_r, t_f	ns
Durchlaßspannung, $I_F = 100\text{ mA}$; $E = 0$ Forward voltage		V_F	V
Kapazität Capacitance $V_R = 0\text{ V}$; $f = 1\text{ MHz}$; $E = 0$	Diode A Diode B	C_0	pF
Temperaturkoeffizient von V_O Temperature coefficient of V_O		TC_V	mV/K
Temperaturkoeffizient von I_P Temperature coefficient of I_P Normlicht/standard light A $\lambda = 870\text{ nm}$		TC_1	%/K
Rauschäquivalente Strahlungsleistung Noise equivalent power $V_R = 10\text{ V}$	Diode A Diode B	NEP	$\frac{\text{W}}{\sqrt{\text{Hz}}}$
Nachweisgrenze Detection limit $V_R = 10\text{ V}$	Diode A Diode B	D^*	$\frac{\text{cm} \times \sqrt{\text{Hz}}}{\text{W}}$

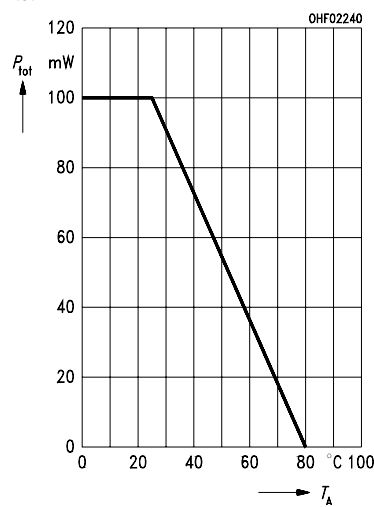
Relative Spectral Sensitivity

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

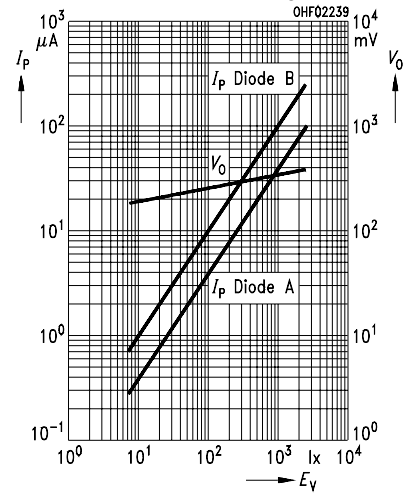


Total Power Dissipation

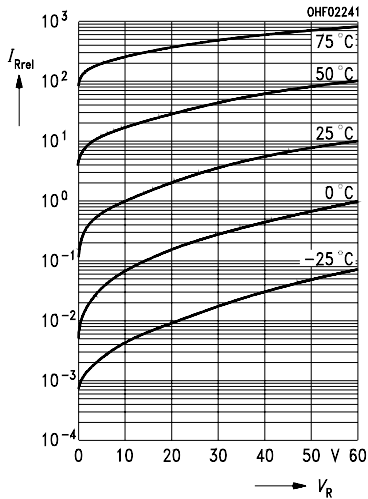
$P_{tot} = f(T_A)$



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

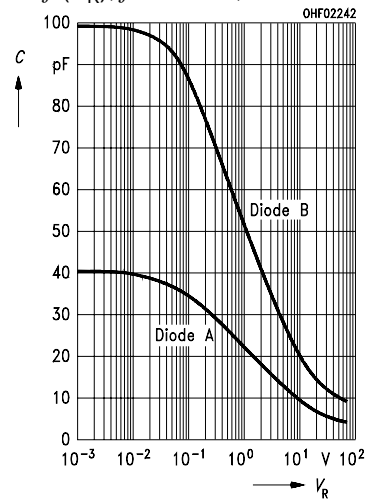


**Dark Current, $I_R = f(V_R)$, $E = 0$
normalized to 10 V/25 °C**

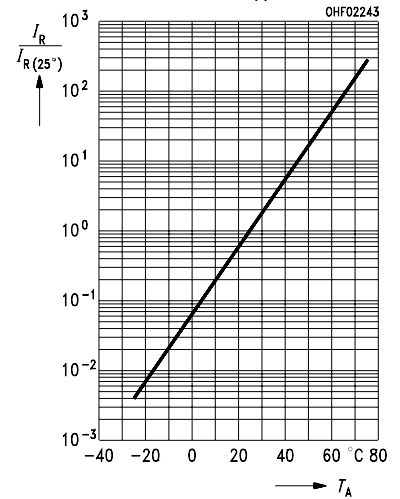


Capacitance

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

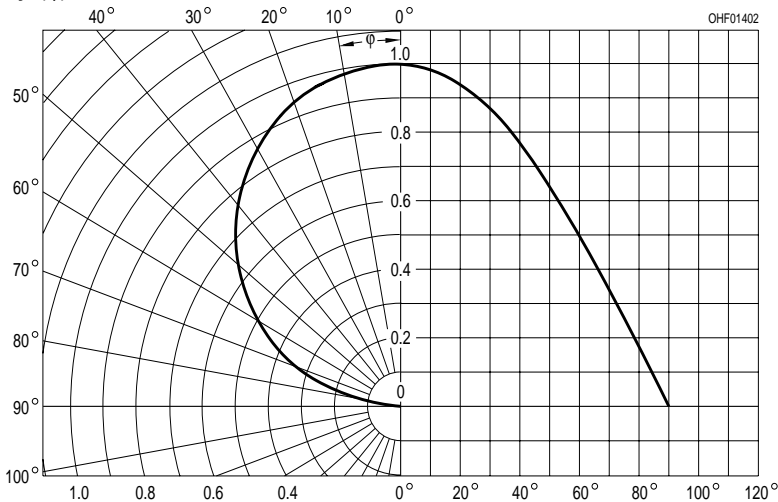


**Dark Current $I_R = f(T_A)$, $V_R = 10 V$,
 $E = 0$, normalized to $T_A = 25 °C$**

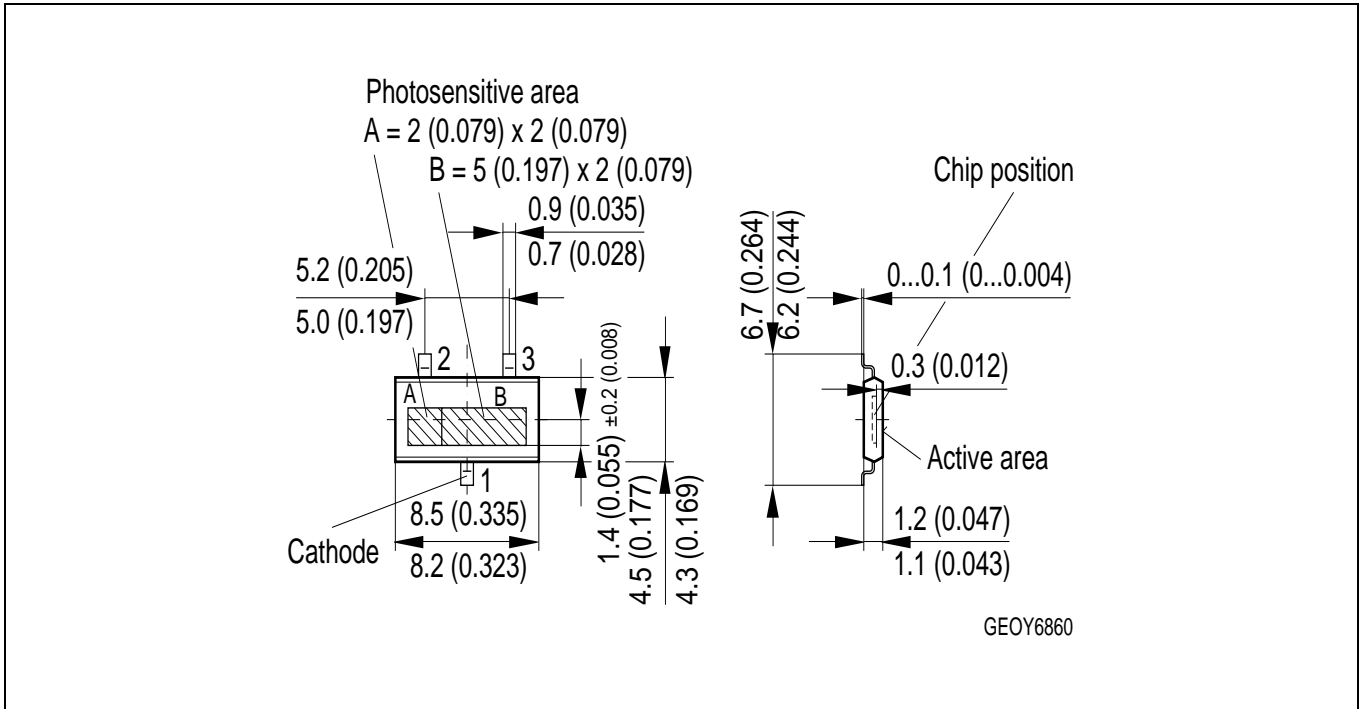


Directional Characteristics

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



**TMaßzeichnung
Package Outlines**



Maße in mm (inch) / Dimensions in mm (inch).

Lötbedingungen

Soldering Conditions

Reflow Lötprofil für bleifreies Löt

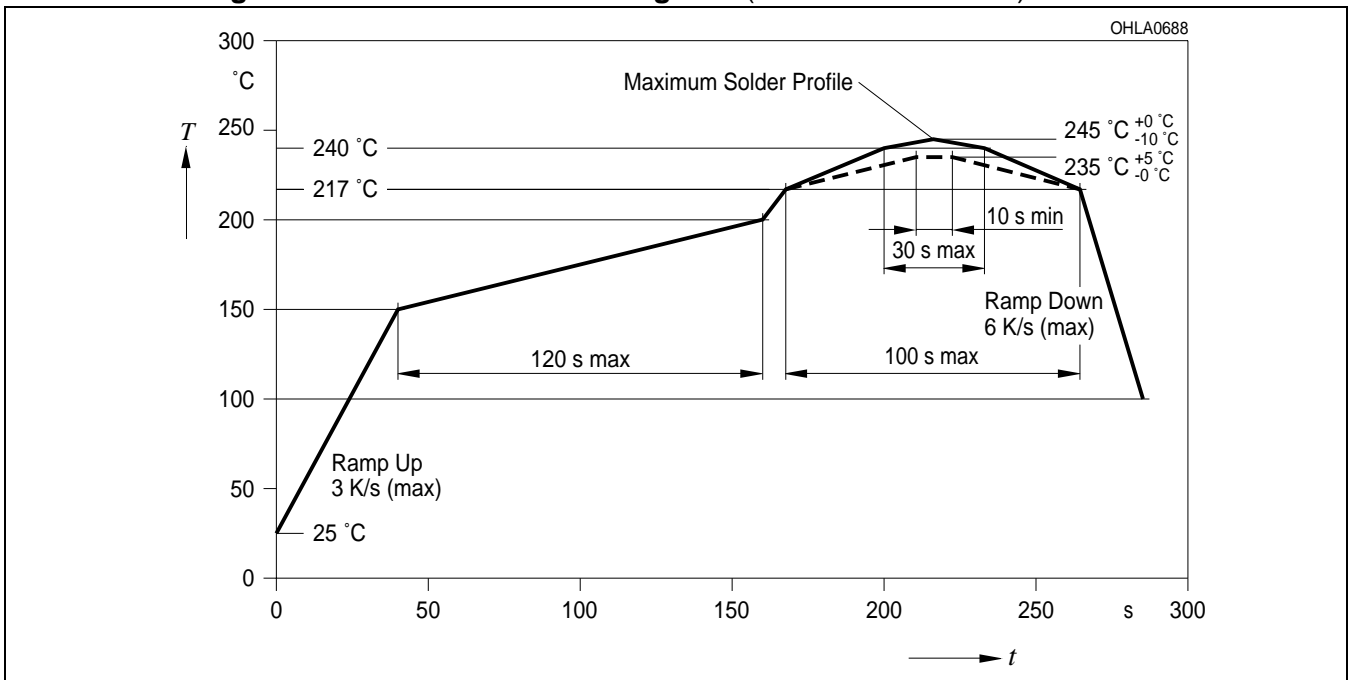
Reflow Soldering Profile for lead free soldering

Vorbehandlung nach JEDEC Level 4

Preconditioning acc. to JEDEC Level 4

(nach J-STD-020C)

(acc. to J-STD-020C)



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