NPN-Si-Fototransistor mit V_λ Charakteristik
Silicon NPN Phototransistor with V_λ Characteristics
Lead (Pb) Free Product - RoHS Compliant

SFH 3310

Wesentliche Merkmale

- Speziell geeignet für Anwendungen im Bereich von 350 nm bis 970 nm
- Angepasst an die Augenempfindlichkeit (V_λ)

Features

- Especially suitable for applications from 350 nm to 970 nm
- Adapted to human eye sensitivity (V_λ)

Anwendungen

- Umgebungslicht-Detektor
- Beleuchtungsmesser
- Dimmungssensor für Hintergrundbeleuchtung
- „Messen/Steuern/Regeln“

Applications

- Ambient light detector
- Exposure meter for daylight and artificial light
- Sensor for Backlight-Dimming
- For control and drive circuits

Typ **Type**	**Bestellnummer** **Ordering Code**	**Fotostrom** , E_e= 10µW/cm^2, λ = 560nm, V_{CE} = 5 V **Photocurrent** Ipce (µA)
SFH 3310	Q65110A5343	2.5...8.0

Grenzwerte (T_A = 25 °C)
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
Kollektor-Emitterspannung Collector-emitter voltage	V_{CE}	5.5	V
Kollektorstrom Collector current	I_C	20	mA
Emitter-Kollektorspannung Emitter-collector voltage	V_{EC}	0.5	V

Kennwerte (T_A = 25 °C)
Characteristics

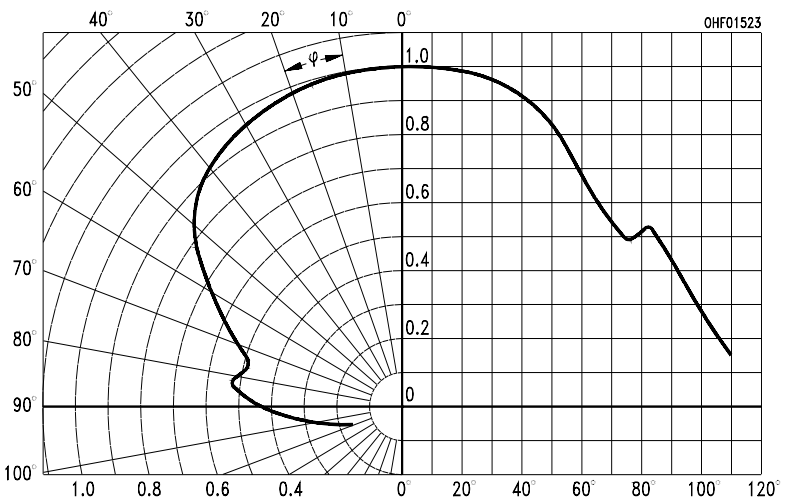
Bezeichnung Parameter	Symbol Symbol	Wert Value	Einheit Unit
Wellenlänge der max. Fotoempfindlichkeit Wavelength of max. sensitivity	λ_{Smax}	570	nm
Spektraler Bereich der Fotoempfindlichkeit S = 10% von S_{max} Spectral range of sensitivity S = 10% of S_{max}	λ	350 … 970	nm
Bestrahlungsempfindliche Fläche Radiant sensitive area	A	0.29	mm^2
Abmessung der Chipfläche Dimensions of chip area	$L \times B$ $L \times W$	0.75 × 0.75	mm × mm
Halbwinkel Half angle	φ	± 75	Grad. deg.
Kapazität, V_{CE} = 0 V, f = 1 MHz, E = 0 Capacitance	C_{CE}	16	pF
Dunkelstrom Dark current V_R = 5 V	I_{CEO}	3 (< 50)	nA

Bezeichnung Parameter	Symbol Symbol	Wert Value		Einheit Unit
		-2	-3	
Fotostrom Photocurrent E_e= 10µW/cm², λ = 560nm, V_{CE} = 5 V E_v = 1000lx, Normlicht/Standard light A	I_{PCE}	2.5…5.0 290	4.0…8.0 460	µA µA
Kollektor-Emitter-Sättigungsspannung Collector-emitter saturation voltage $I_C = I_{PCEmin}$ [1] × 0.3, E_e= 10µW/cm², λ = 560nm	V_{CEsat}	100	100	mV

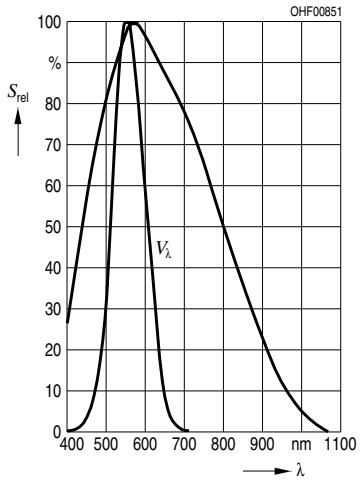
[1] I_{PCEmin} ist der minimale Fotostrom der jeweiligen Gruppe

[1] I_{PCEmin} is the min. photocurrent of the specified group

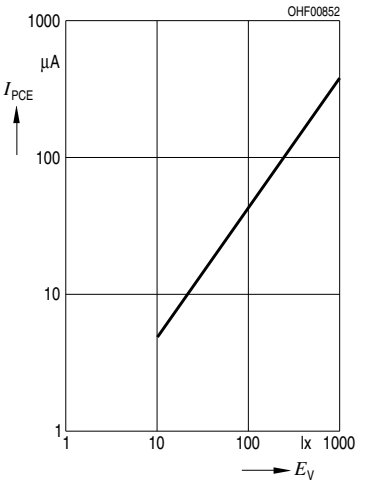
Directional Characteristics $S_{rel} = f(\varphi)$



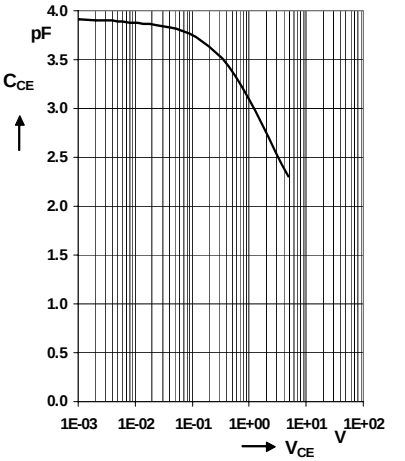
Relative Spectral Sensitivity
$S_{rel} = f(\lambda)$



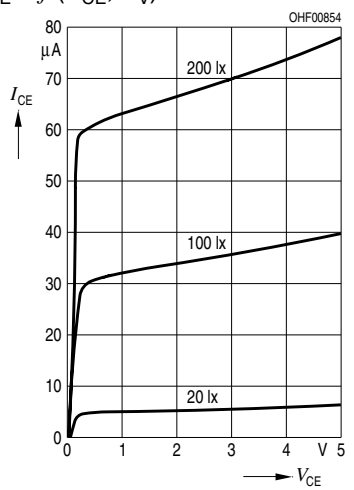
Photocurrent
$I_{PCE} = f(E_V)$, V_{CE} = 5 V



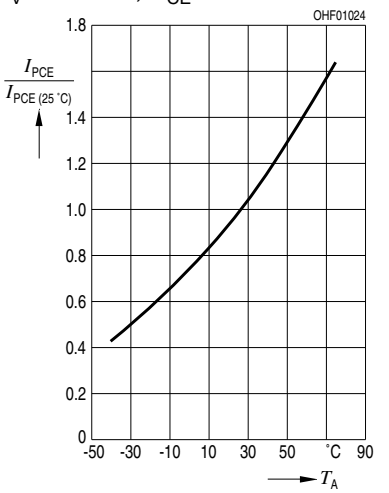
Collector-Emitter Capacitance
$C_{CE} = f(V_{CE})$



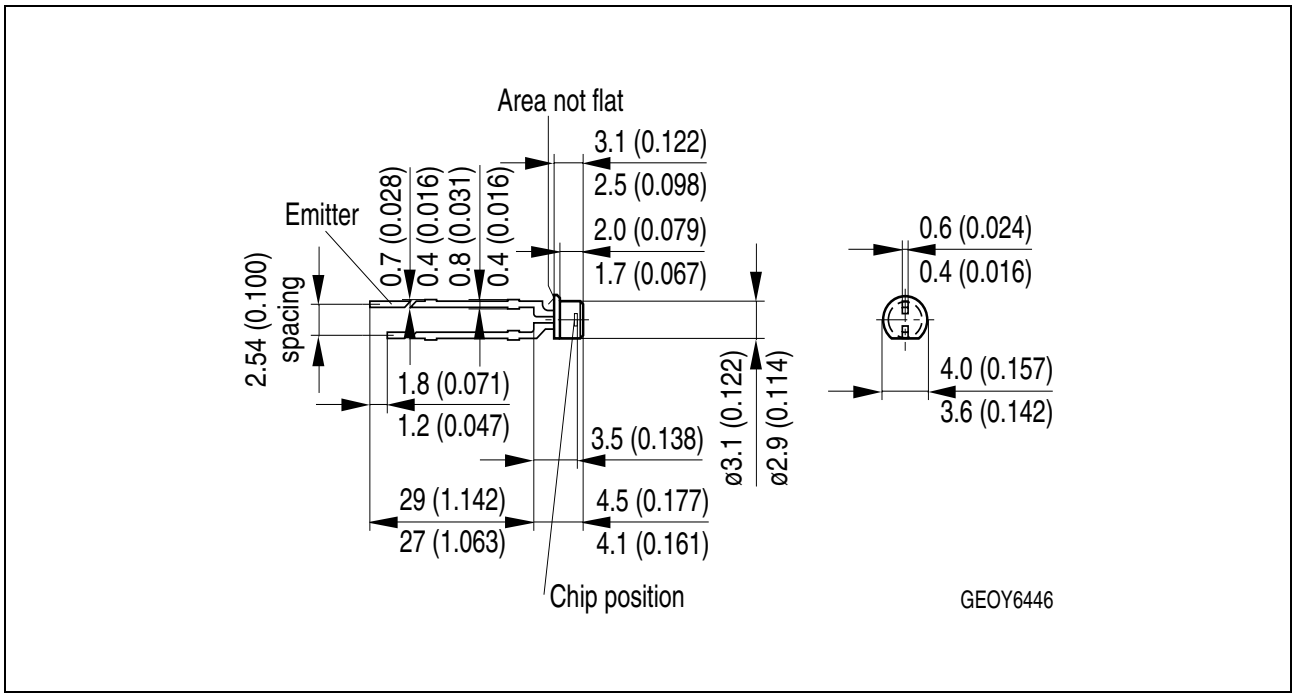
Collector-Emitter Current
$I_{CE} = f(V_{CE}; E_V)$



Photocurrent $I_{PCE}/I_{PCE(25\,°C)} = f(T_A)$
E_v = 1000 lx, V_{CE} = 1 V … 5 V

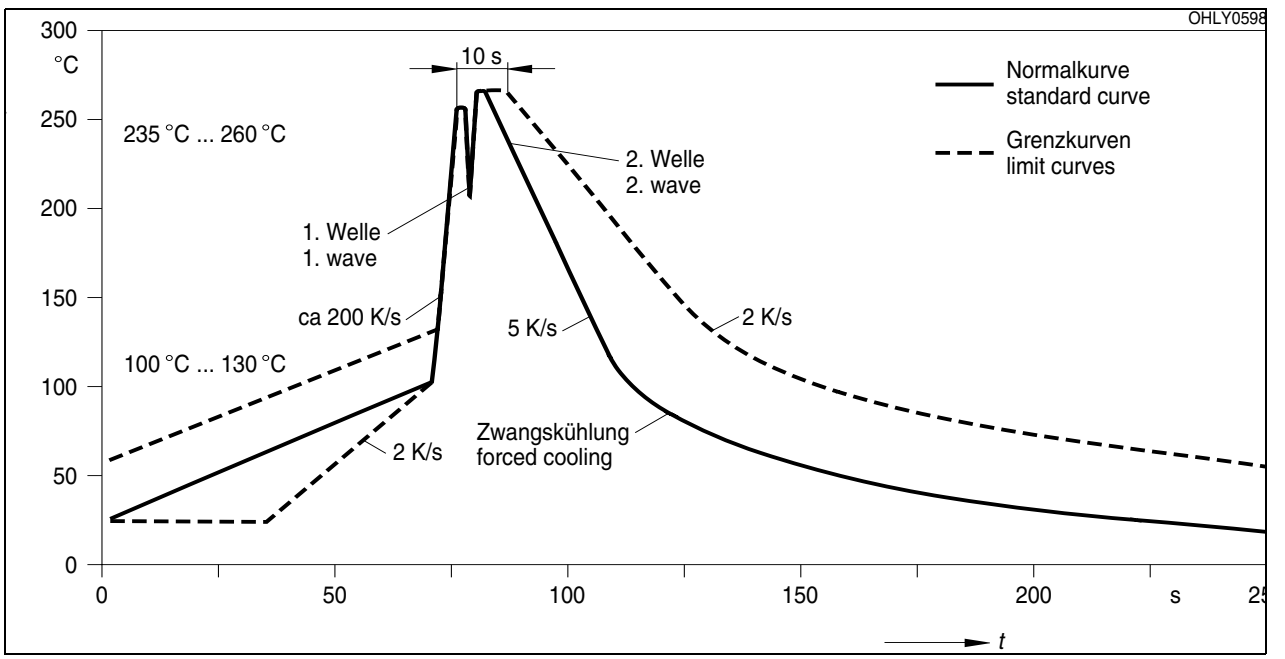


Maßzeichnung
Package Outlines



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

Lötbedingungen
Soldering Conditions
Wellenlöten (TTW) (nach CECC 00802)
TTW Soldering (acc. to CECC 00802)



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