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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.

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Plastic Fiber Optic Phototransistor Detector Plastic Connector Housing

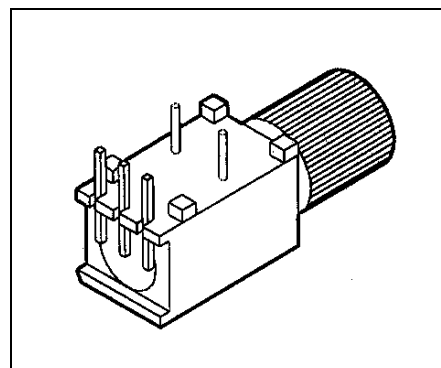
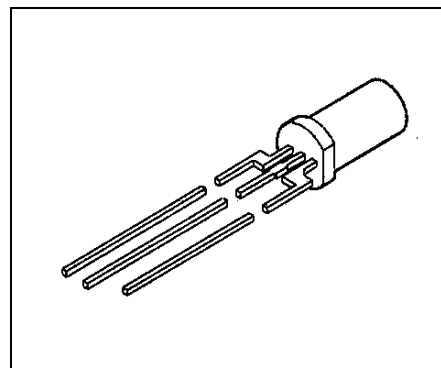
SFH350
SFH350V

Features

- 2.2 mm Aperture holds Standard 1000 Micron Plastic Fiber
- No Fiber Stripping Required
- Good Linearity
- Sensitive in visible and near IR Range
- Molded Microlens for Efficient Coupling

Plastic Connector Housing

- Mounting Screw Attached to the Connector
- Interference Free Transmission from light-Tight Housing
- Transmitter and Receiver can be flexibly positioned
- No Cross Talk
- Auto insertable and Wave solderable
- Supplied in Tubes



Applications

- Household Electronics
- Power Electronics
- Optical Networks
- Light Barriers

Type	Ordering Code
SFH350	Q62702-P1033
SFH350V	Q62702-P0264

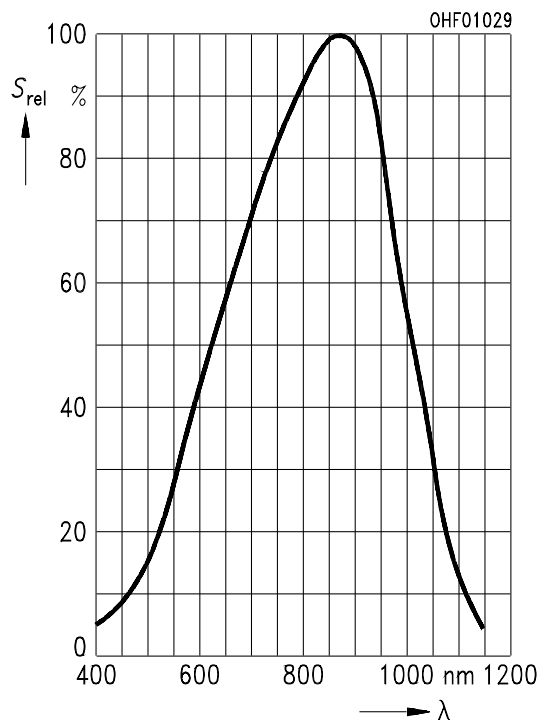
Technical Data
Absolute Maximum Ratings

Parameter	Symbol	Limit Values		Unit
		min.	max.	
Operating Temperature Range	T_{OP}	-40	+85	°C
Storage Temperature Range	T_{STG}	-40	+100	°C
Soldering Temperature (2 mm from case bottom, $t \leq 5$ s)	T_S		260	°C
Collector-Emitter Voltage	V_{CE}		50	V
Collector Current	I_C		50	mA
Collector Peak Current ($t \leq 10$ s)	I_{CP}		100	mA
Emitter-Bias Voltage	V_{EB}		7	V
Reverse Voltage	V_R		30	V
Power Dissipation $T_A = 25^\circ\text{C}$	P_{TOT}		200	mW
Thermal Resistance, Junction/Air	R_{thJA}		375	K/W

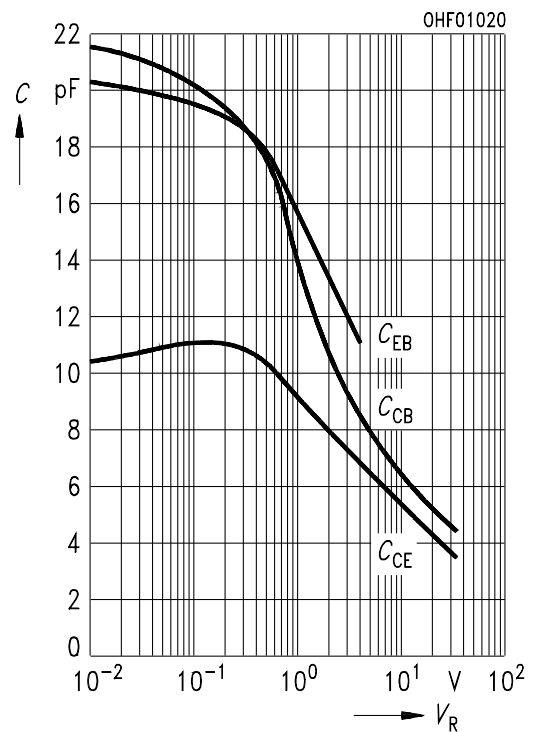
Characteristics ($T_A = 25^\circ\text{C}$)

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
Maximum Photosensitivity Wavelength	λ_{Smax}		850		nm
Photosensitivity Spectral Range ($S = 10\% S_{\text{max}}$)	λ	400		1100	nm
Dark Current ($V_R = 20 \text{ V}$)	I_R		1 (≤ 10)		nA
Capacitance ($f = 1 \text{ MHz}$, without light) ($V_{\text{CE}} = 0 \text{ V}$) ($V_{\text{CB}} = 0 \text{ V}$) ($V_{\text{EB}} = 0 \text{ V}$)	C_{CE} C_{CB} C_{EB}		10.5 21.5 20.5		pF
Rise and Fall Times of Photo Current ($R_L = 1 \text{ k}\Omega$, $V_{\text{CE}} = 5 \text{ V}$, $I_C = 1.0 \text{ mA}$, $\lambda = 959 \text{ nm}$) 10% to 90% 90% to 10%	t_R t_F		20 20		μs
Current Gain	HFE		500		
Collector Dark Current ($V_{\text{CE}} = 5 \text{ V}$)	I_{CE0}		2 (≤ 50)		nA
Photo Current ($V_{\text{CE}} = 5 \text{ V}$, $\Phi_{\text{IN}} = 10 \mu\text{W}$ coupled from the end of a plastic fiber, $\lambda = 660 \text{ nm}$)	I_{CE}		0.8 (≥ 0.16)		mA
Temperature Coefficient HFE	TC_{HFE}		0.55		%/K
Temperature Coefficient I_{CE} $\lambda = 560 \text{ to } 660 \text{ nm}$	TC_I		0.34		%K
Temperature Coefficient I_{CE} $\lambda = 830 \text{ nm}$			0.49		
Temperature Coefficient I_{CE} $\lambda = 950 \text{ nm}$			0.66		

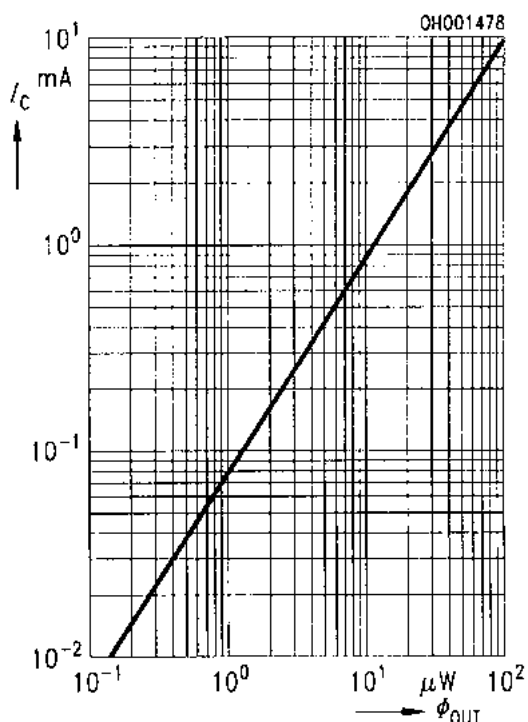
Relative Spectral Sensitivity $S_{\text{rel}} = f(\lambda)$



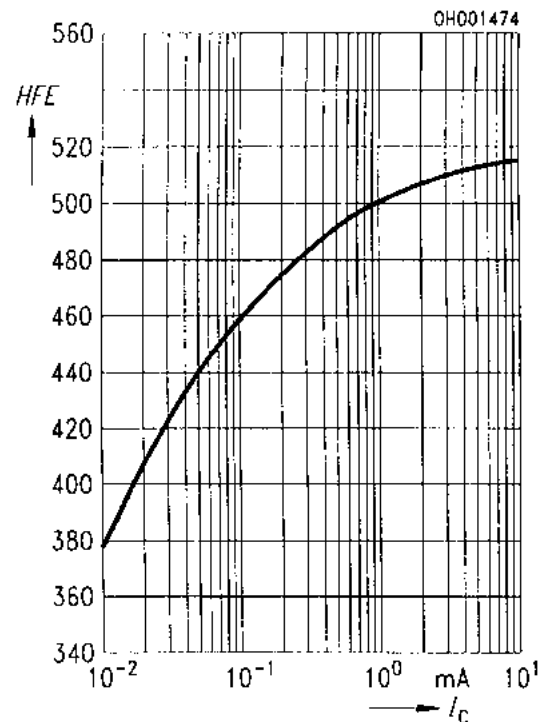
Capacitance $C = f(V_R), f = 1 \text{ MHz}, E_V = 0$

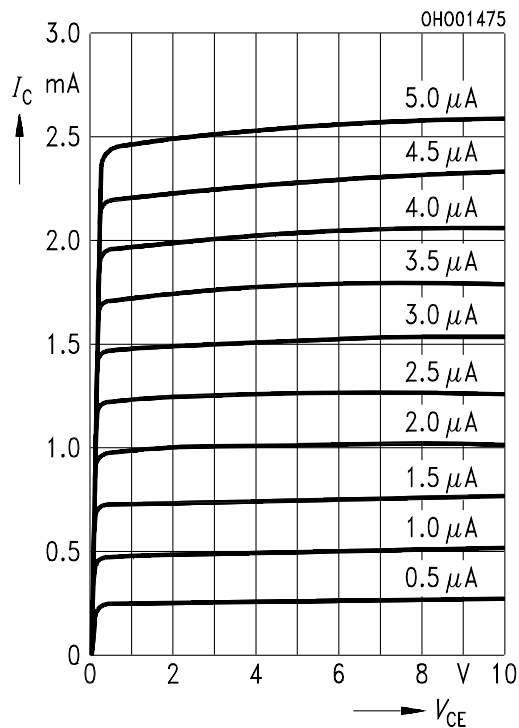
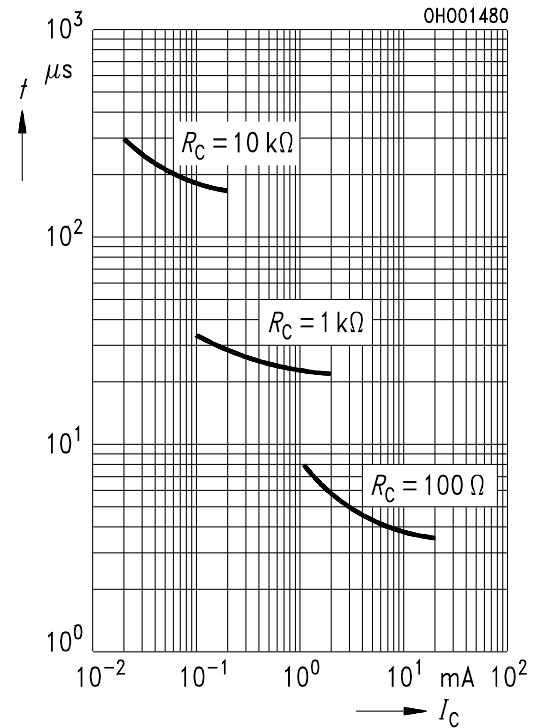
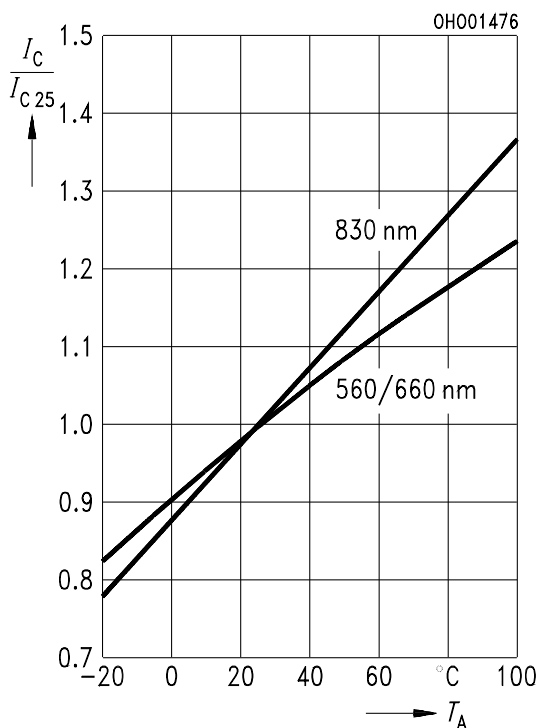
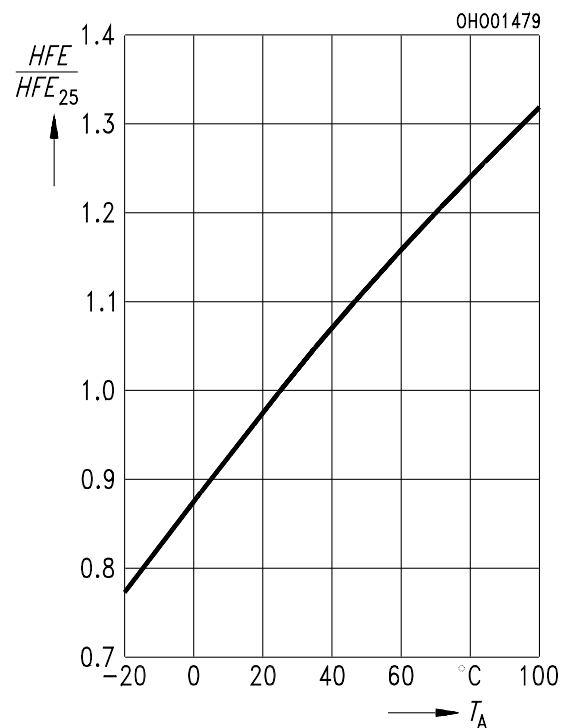


Photocurrent $I_C = f(\Phi_{\text{OUT}}), V_{\text{CE}} = 5 \text{ V}, \lambda = 560 \dots 950 \text{ nm}$



Current Gain $HFE = f(I_C), V_{\text{CE}} = 5 \text{ V}, T_A = 25^\circ\text{C}$



Output Characteristics $I_C = f(V_{CE})$,
 $I_B = \text{parameter}$

Response Time $t = f(I_C)$, $V_{CC} = 5$ V,
 $\lambda = 950$ nm

Photocurrent $I_C/I_{C25} = f(T_A)$, $V_{CE} = 5$ V,
 $\lambda = \text{parameter}$

Current Gain $HFE/HFE_{25} = f(T_A)$,
 $V_{CE} = 5$ V, $I_C = 1$ mA


Package Outlines

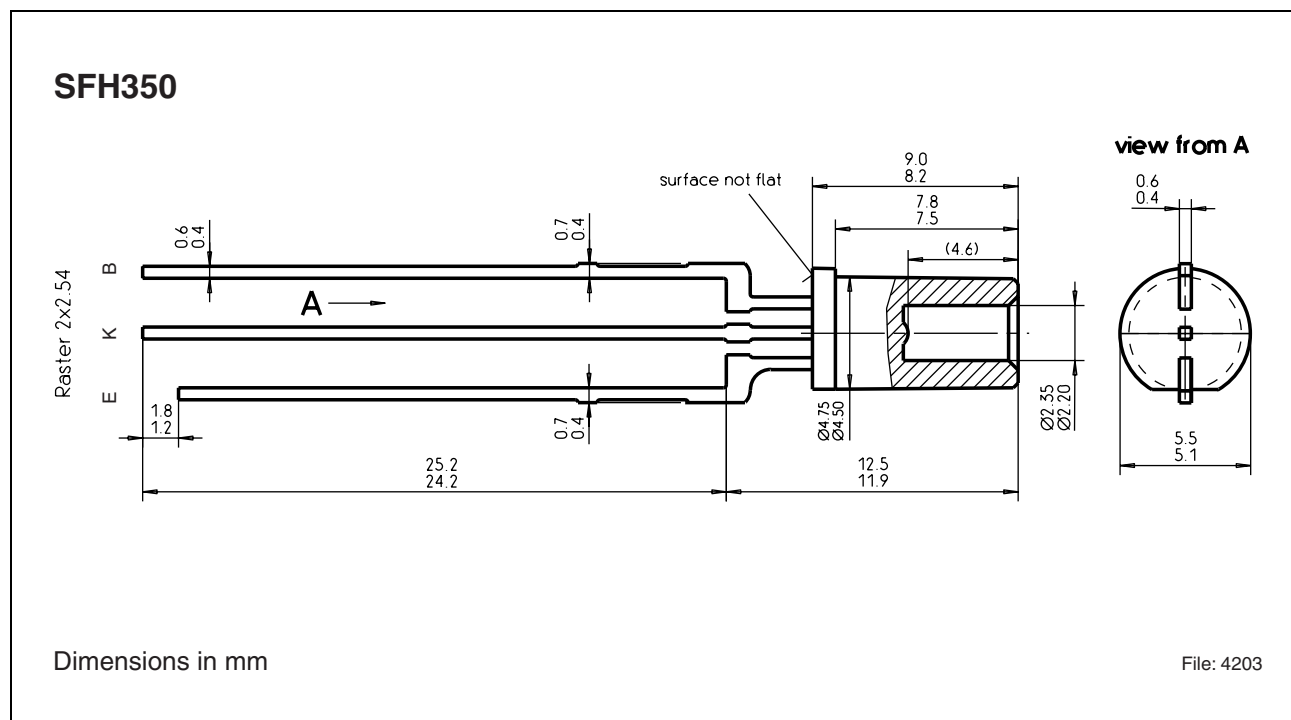


Figure 1

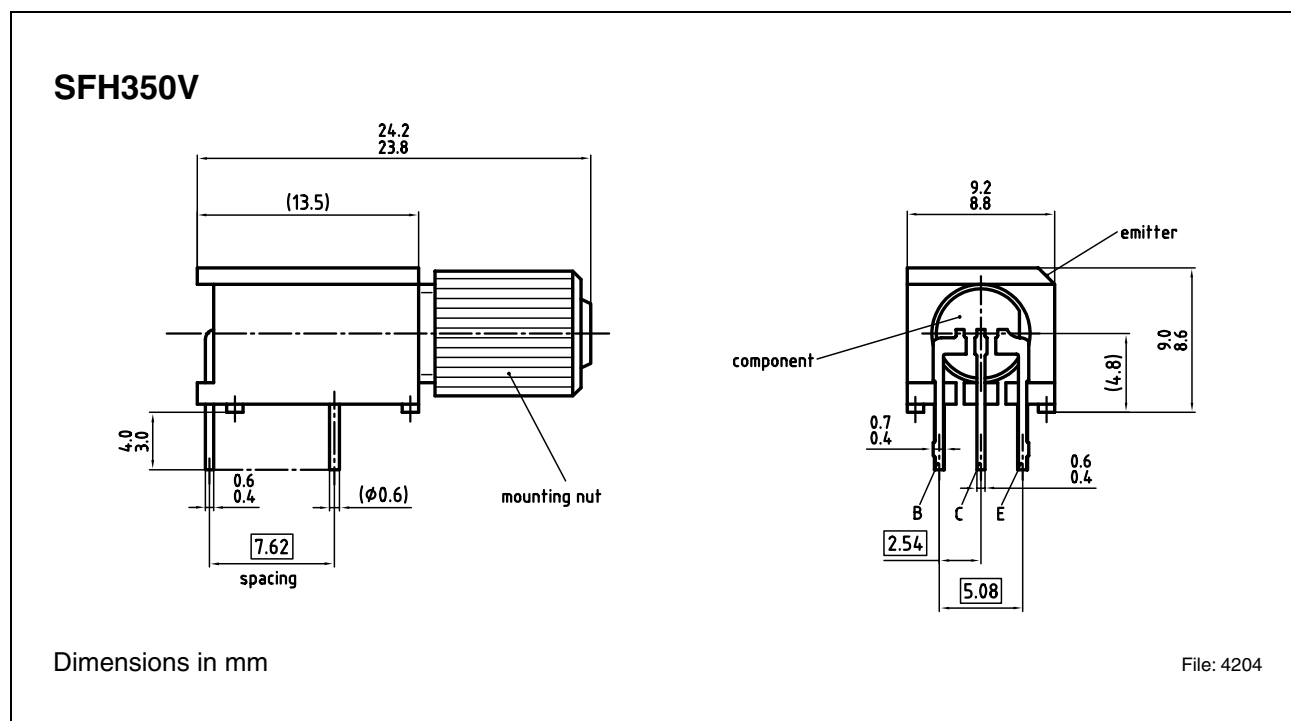


Figure 2

SFH350
SFH350V

Revision History:	2004-03-19	DS1
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