

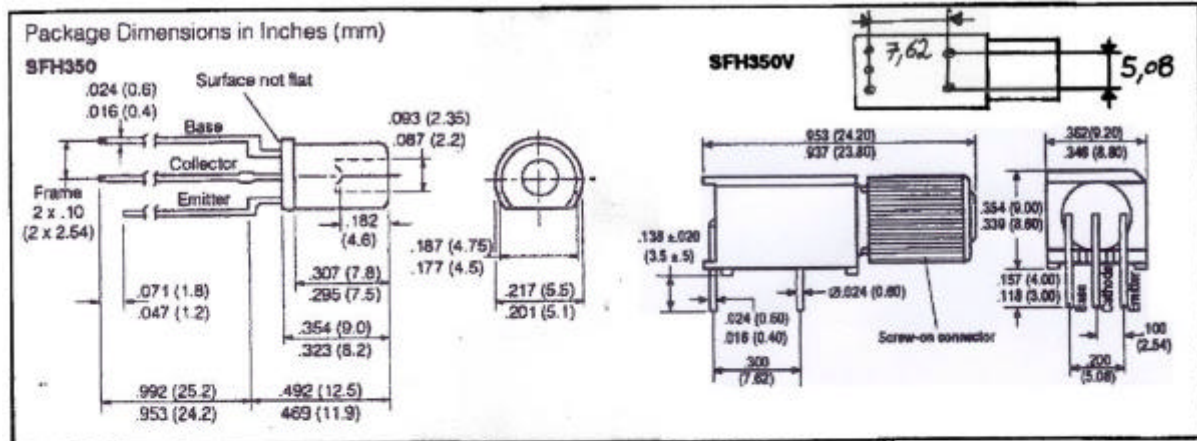
SIEMENS

3762

T1 3/4 SFH350

PLASTIC CONNECTOR HOUSING SFH350V

PLASTIC FIBER OPTIC
PHOTOTRANSISTOR DETECTOR



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
- SFH350V Only
 - Plastic Connector Housing
 - Mounting Screw Attached to 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—SFH350/350V
 - Household Electronics
 - Power Electronics
 - Optical Networks
 - Medical Instruments
 - Automotive Electronics
 - Light Barriers

Maximum Ratings

Operating and Storage Temperature Range (T_{OP} , T_{STG})	–55° to +100°C
Soldering Temperature (2 mm from case bottom) (T_S) ≤ 5 s	260°C
Collector-Emitter Voltage (V_{CE})	50 V
Collector Current (I_C)	50 mA
Collector Peak Current (I_{CP}) ≤ 10 sec.	100 mA
Emitter Base Voltage (V_{EB})	7 V
Power Dissipation (P_{TOT}) $T_A = 25^\circ\text{C}$	200 mW
Thermal Resistance ($R_{\theta JA}$)	375 K/W

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

Parameter	Symbol	Value	Unit
Maximum Photosensitivity Wavelength	$\lambda_{S\text{MAX}}$	850	nm
Photosensitivity Spectral Range ($S = 10\%$ of S_{MAX})	λ	400 to 1100	nm
Capacitance			
($V_{CE} = 0$ V, $f = 1$ MHz, $E_V = 0$ lx)	C_{CE}	10.5	pF
($V_{CB} = 0$ V, $f = 1$ MHz, $E_V = 0$ lx)	C_{CB}	21.5	pF
($V_{EB} = 0$ V, $f = 1$ MHz, $E_V = 0$ lx)	C_{EB}	20.5	pF
Rise and Fall Time of Photocurrent ($R_L = 1$ K Ω , $I_C = 1.0$ mA, $V_{CE} = 5$ V, $\lambda = 959$ nm)	t_R , t_F	20	μs
Current Gain	HFE	500	–
Collector Dark Current ($V_{CE} = 10$ V)	I_{CBO}	2 (≤ 50)	nA
Photocurrent ($V_{CE} = 5$ V, $\lambda = 660$ nm)(1)	I_{CE}	0.8 (≥ 0.16)	mA
Temperature Coefficient, HFE	TC_{HFE}	0.55	%/K
Temperature Coefficient, I_{CE} ($\lambda = 560$ to 660 nm)	TC_I	0.66	%/K
($\lambda = 830$ nm)	TC_I	0.49	%/K
($\lambda = 950$ nm)	TC_I	0.34	%/K

Note

1. Photocurrent generated at 10 μW light incidence through plastic 1000 micron fiber (distance lens-fiber ≤ 0.1 mm. Fiber type ESKA EH4001, fiber face polished.)

See Appnote 40, 41, 42, 43 for application information.

RADIOSPARS

99%

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