



SLT-50HF Series

NPN Phototransistor

Features

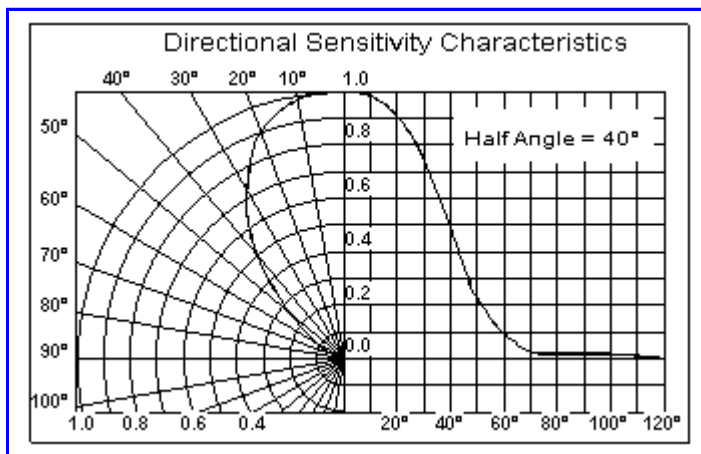
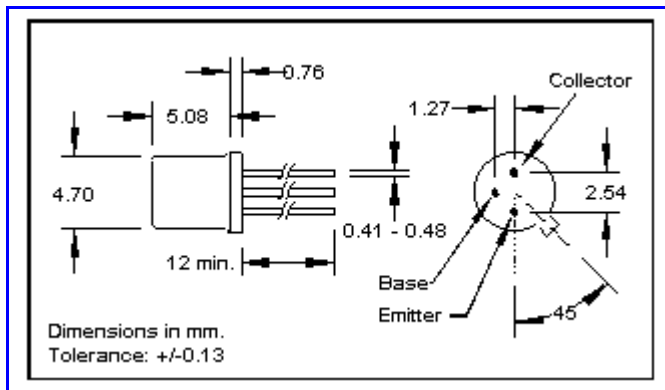
- Wide receiving angle
- NPN planar epitaxial process
- Multiple sensitivity ranges
- Extended temperature range
- Hermetic TO-18 case with flat window

Description

The SLT-50HF series consists of an NPN silicon planar epitaxial phototransistor mounted in a hermetically sealed TO-18 flat window package. The wide angle of receiving sensitivity provides a relatively uniform response over a wide field of view. The TO-18 hermetic package provides high reliability in hostile environments. The various sensitivity ranges available provide the desired output to meet multiple application demands.

Absolute Maximum Ratings

Storage Temperature Range	-65° C to +150° C
Operating Temperature Range	-55° C to +125° C
Soldering Temperature (2)	260° C
Power Dissipation @ 25° C (1)	250mW



Electrical Characteristics (T_A=25° C unless otherwise noted)

Symbol	Parameter	MIN	TYP	MAX	UNITS	TEST
$I_{C(ON)}$	On-State Collector Current:					
	SLT-50HF1	0.2			mA	$V_{CE}=5V, E_e=5mV$
	SLT-50HF2	0.4			mA	$V_{CE}=5V, E_e=5mV$
	SLT-50HF3	1.0			mA	$V_{CE}=5V, E_e=5mV$
	SLT-50HF4	2.5			mA	$V_{CE}=5V, E_e=5mV$
I_{CEO}	Collector Dark Current			50	nA	$V_{CE}=10V, E_e=0$
BV_{CEO}	Collector-Emitter Breakdown Voltage	40			V	$I_C=100\mu A, E_e=0$
BV_{CBO}	Collector-Base Breakdown Voltage	60			V	$I_C=100\mu A, E_e=0$
BV_{ECO}	Emitter- Collector Breakdown Voltage	7.5			V	$I_C=100\mu A, E_e=0$
$V_{CE(SAT)}$	Collector to Emitter Saturation Voltage			0.4	V	$I_C=0.15mA, E_e=0$

t_r, t_f	Rise Time, Fall Time		3		μS	$R_L=100 \Omega, I_C=80$
λ_P	Maximum Sensitivity Wavelength		930		nm	
λ_R	Sensitivity Spectral Range	400		1100	nm	
$\theta_{1/2}$	Acceptance Half Angle		40		deg	(off center-line)

Notes: (1) derate @ 2.5mW/° C above 25° C. Specifications subject to change without notice.

(2) >2 mm from case for <5 sec. 103122 REV 0

(3) Ee = source @ 2854 ° K

(4) Ee = source @ $\lambda = 880$ nm