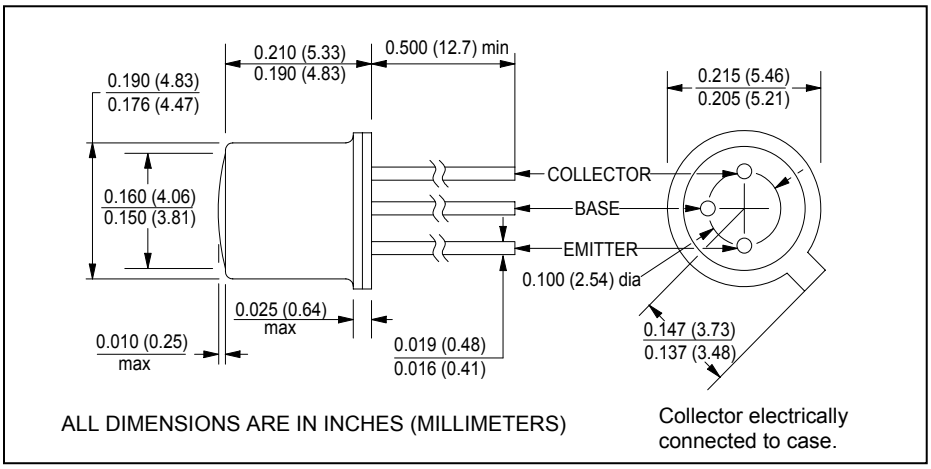
CLT130W, CLT131W, CLT132W

NPN Silicon Phototransistors

The CLT130W, CLT131W and CLT132W are exact replacements for obsolete part numbers CLT2020, CLT2030 and CLT2035.

July, 2001



ALL DIMENSIONS ARE IN INCHES (MILLIMETERS)

Collector electrically connected to case.

features

- high sensitivity
- ± 35° acceptance angle
- TO-18 hermetically sealed package
- transistor base is bonded
- RoHS compliant

description

The CLT130W, CLT131W and CLT132W are silicon NPN planar epitaxial phototransistors mounted in TO-18 flat window packages. The wide acceptance angle provided by the flat window enables even reception over a relatively large area. For additional information, call Clairex

absolute maximum ratings (T_A = 25°C unless otherwise stated)

storage temperature	-65°C to +200°C
operating temperature	-65°C to +150°C
lead soldering temperature[1]	260°C
collector-emitter voltage	30V
continuous collector current[2]	50mA
continuous power dissipation[3]	250mW

notes:

1. 0.06" (1.5mm) from the header for 5 seconds maximum.
2. 200mA when pulsed at 1.0ms, 10% duty cycle.
3. Derate linearly 1.6mW/°C from 25°C free air temperature to T_A = +150°C.

electrical characteristics (T_A = 25°C unless otherwise noted)

symbol	parameter		min	typ	max	units	test conditions
I_L	Light current[4]	CLT130W	0.4	-	-	mA	V_{CE}=5V, E_e=5.0mW/cm^2
		CLT131W	1.0	-	-	mA	V_{CE}=5V, E_e=5.0mW/cm^2
		CLT132W	2.5	-	-	mA	V_{CE}=5V, E_e=5.0mW/cm^2
I_{CEO}	Collector dark current		-		25	nA	V_{CE}=10V, E_e=0
$V_{(BR)CEO}$	Collector-emitter breakdown		30	-	-	V	I_C=100μA, E_e=0
$V_{(BR)CBO}$	Collector-base breakdown		5.0	-	-	V	I_C=100μA, E_e=0
$V_{(BR)ECO}$	Emitter-collector breakdown		5.0	-	-	V	I_E=100μA, E_e=0
$V_{CE(sat)}$	Collector-emitter saturation voltage		-	-	0.30	V	I_C=0.4mA, E_e=5.0mW/cm^2
t_r, t_f	Output rise and fall time[5]		-	3.0	-	μs	V_{CC}=5V, R_L=1KΩ
θ_{HP}	Total angle at half sensitivity points		-	70	-	deg.	

notes: 4. Radiation source for all light current testing is a 850nm IRED.
5. The radiation source is a pulsed gallium arsenide IRED with rise and fall times of ≤0.3μs.

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