

CLT130W, CLT131W, CLT132W

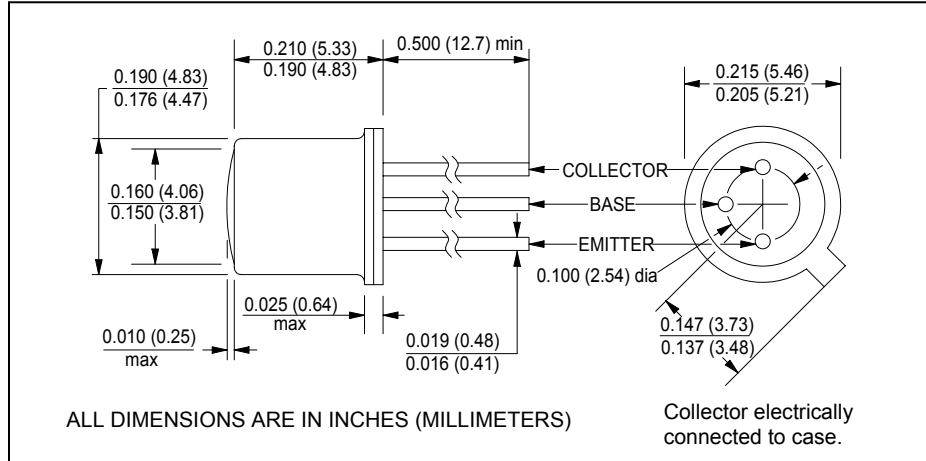
NPN Silicon Phototransistors

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



Clairex
Technologies, Inc.

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features

- high sensitivity
- 70° acceptance angle
- TO-18 hermetically sealed package
- transistor base is bonded

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.....	50mA ⁽²⁾
maximum continuous power dissipation.....	250mW ⁽³⁾

notes:

1. 0.06" (1.5mm) from the header for 5 seconds maximum.
2. 200mA when pulsed at 300μs, 2% duty cycle.
3. Derate linearly 2.0mW/°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 ⁽¹⁾	CLT130W	0.4	-	-	mA	V _{CE} =5V, E _e =5mW/cm ²
		CLT131W	1.0	-	-	mA	V _{CE} =5V, E _e =5mW/cm ²
		CLT132W	2.5	-	-	mA	V _{CE} =5V, E _e =5mW/cm ²
I _{CEO}	Collector dark current	CLT130W	-	-	25	nA	V _{CE} =10V, E _e =0
		CLT131W	-	-	25	nA	V _{CE} =10V, E _e =0
		CLT132W	-	-	100	nA	V _{CE} =10V, E _e =0
V _{(BR)CEO}	Collector-emitter breakdown		30	-	-	V	I _C =100μA
V _{(BR)CBO}	Collector-base breakdown		60	-	-	V	I _C =100μA
V _{(BR)ECO}	Emitter-collector breakdown		5	-	-	V	I _C =100μA
V _{CE(sat)}	Collector-emitter saturation voltage		-	-	0.30	V	I _C =10mA, I _B =0.5mA, E _e =0
t _r , t _f	Output rise and fall time ⁽²⁾		-	3	-	μs	I _C =1.0mA
θ _{HP}	Total angle at half sensitivity points		-	70	-	deg.	

- notes: 1. Radiation source is a frosted tungsten incandescent lamp operating at 2854K or an equivalent source.
2. V_{CC}=5V, R_L=100Ω. The light source is a pulsed gallium arsenide IRED with rise and fall times of ≤0.3μs.

Clairex reserves the right to make changes at any time to improve design and to provide the best possible product.

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