

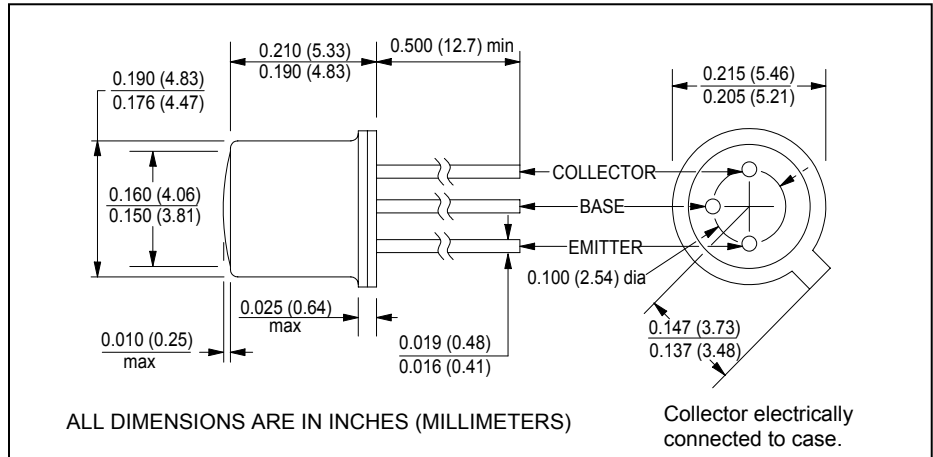
CLT130W, CLT131W, CLT132W

NPN Silicon Phototransistors

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



July, 2001



features

- high sensitivity
- $\pm 35^\circ$ acceptance angle
- TO-18 hermetically sealed package
- transistor base is bonded
- RoHS compliant

absolute maximum ratings ($T_A = 25^\circ\text{C}$ 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

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

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 $T_A = +150^\circ\text{C}$.

electrical characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

symbol	parameter		min	typ	max	units	test conditions
I_L	Light current ⁽⁴⁾	CLT130W	0.4	-	-	mA	$V_{CE}=5V, E_e=5.0\text{mW}/\text{cm}^2$
		CLT131W	1.0	-	-	mA	$V_{CE}=5V, E_e=5.0\text{mW}/\text{cm}^2$
		CLT132W	2.5	-	-	mA	$V_{CE}=5V, E_e=5.0\text{mW}/\text{cm}^2$
I_{CEO}	Collector dark current		-	25	nA	$V_{CE}=10V, E_e=0$	
$V_{(BR)CEO}$	Collector-emitter breakdown		30	-	-	V	$I_C=100\mu A, E_e=0$
$V_{(BR)CBO}$	Collector-base breakdown		5.0	-	-	V	$I_C=100\mu A, E_e=0$
$V_{(BR)ECO}$	Emitter-collector breakdown		5.0	-	-	V	$I_E=100\mu A, E_e=0$
$V_{CE(sat)}$	Collector-emitter saturation voltage		-	-	0.30	V	$I_C=0.4\text{mA}, E_e=5.0\text{mW}/\text{cm}^2$
t_r, t_f	Output rise and fall time ⁽⁵⁾		-	3.0	-	μs	$V_{CC}=5V, R_L=1K\Omega$
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 $\leq 0.3\mu\text{s}$.

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

Revised 3/22/06

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