CLT130,CLT131,CLT132,CLT133

NPN Silicon Phototransistors

CLT130, CLT131, CLT132 and CLT133 are exact replacements for obsolete part numbers CLT2130, CLT2140, CLT2150 and CLT2160.

Clairex® Technologies, Inc.

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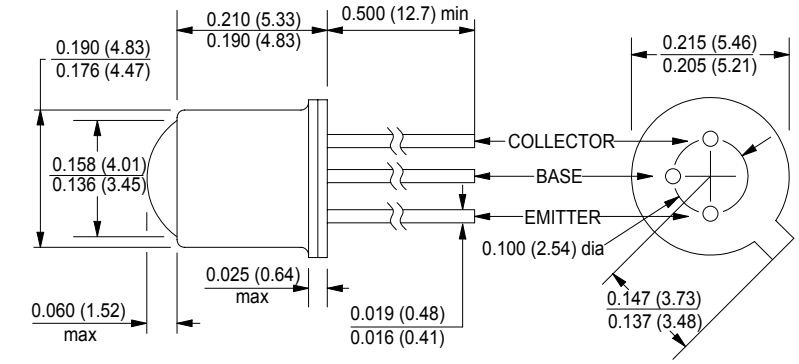

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS)

features

- high sensitivity
- ± 9° acceptance angle
- custom aspheric lensed TO-18 package
- transistor base is bonded
- usable throughout visible and near infrared spectrum
- RoHS compliant

description

The CLT130-CLT133 series are NPN silicon phototransistors mounted in TO-18 packages which feature custom double convex glass-to-metal sealed aspheric lenses. Narrow acceptance angle enables excellent on-axis coupling. These devices are mechanically and spectrally matched to the CLE130-CLE133 series of IREDs. For additional information, call Clairex.

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

storage temperature	-65°C to +150°C
operating temperature	-65°C to +125°C
lead soldering temperature[1]	260°C
collector-emitter voltage	30V
continuous collector current	50mA
continuous power dissipation[2]	250mW

notes:

1. 0.06" (1.5mm) from the header for 5 seconds maximum
2. Derate linearly 2.0mW/°C from 25°C free air temperature to T_A = +125°C.

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

symbol	parameter		min	typ	max	units	test conditions
I_L	Light current[3]	CLT130	0.60	-	-	mA	V_{CE}=5V, E_e=1.5mW/cm^2
		CLT131	1.2	-	-	mA	V_{CE}=5V, E_e=1.5mW/cm^2
		CLT132	2.4	-	-	mA	V_{CE}=5V, E_e=1.5mW/cm^2
		CLT133	4.0	-	-	mA	V_{CE}=5V, E_e=1.5mW/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
t_r, t_f	Output rise and fall time		-	5.0	-	μs	I_C =1mA, V_{CE}=5V, R_L=1kΩ.
θ_{HP}	Total angle at half sensitivity points		-	18	-	deg.	

note: 3. Radiation source for all light current testing is a 940nm IRED.

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