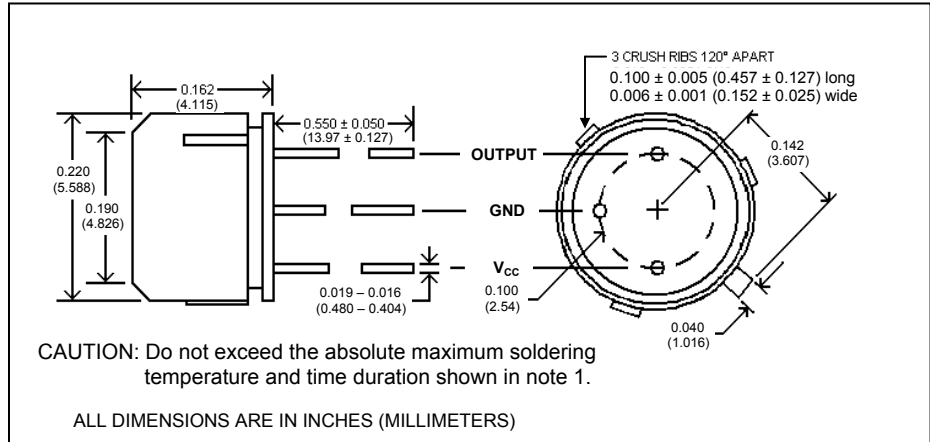
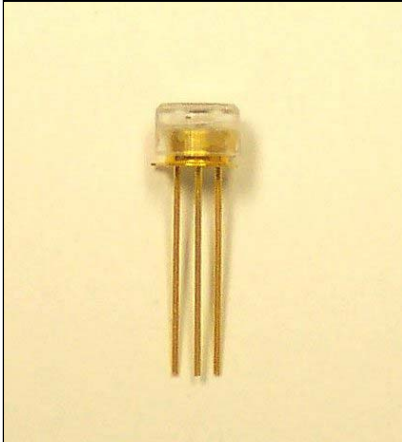


CFR520

5 Mb Fiber Optic Receiver inverter, open collector output



April, 2004



features

- Converts fiber optic signals to TTL digital output
- Single 5 V supply
- TO-18 header with plastic lens

description

The CFR520 is intended for use in fiber-optic systems and contains an open collector, digital output, monolithic photo-IC mounted on a TO-18 header. The output allows direct interface with TTL circuits. The plastic lens has three crush ribs on the outside of the case to provide press-fit installation and precise alignment. A microlens is mechanically centered over the photodiode.

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

storage temperature	-40°C to +100°C
operating temperature	-40°C to +100°C
lead soldering temperature ⁽¹⁾	240°C
supply voltage	6V

notes:

1. 1/16" (1.6mm) from case for 5 seconds maximum.
2. For maximum performance, a 0.1µF capacitor must be connected between V_{CC} and GND.
3. Pulse Width Distortion (PWD) is an increase in output pulse width due to optical power, temperature and/or frequency changes and is dependent on system conditions.

definition:

inverter – output is LOW when input radiation is above the threshold level.

electrical characteristics (T_A = 25°C, V_{CC} = 5VDC unless otherwise noted)

symbol	parameter	min	typ	max	units	test conditions
V _{CC}	Supply voltage ⁽²⁾	4.5	-	5.5	V	
P _{IN} (peak)	Minimum input sensitivity	-	2.0 -27.0	4.0 -14.0	µW dBm	λ _P = 850nm into 100/140 µm optical fiber, f = 2.5MHz, D.C. = 50%, PWD <10%
I _{CC}	Supply current	-	13 4.5	15 6.5	mA mA	P _{IN} ≥ 3µW P _{IN} ≤ 0.1µW
V _{OL}	Low level output voltage	-	0.25	0.5	V	P _{IN} ≥ 3µW, R _L = 560Ω
V _{OH}	High level output voltage	2.4	4.5	-	V	P _{IN} ≤ 0.1µW, R _L = 560Ω
t _r	Output rise time	-	6.0	9.0	ns	P _{IN} = 10µW, V _O = 0.5 to 2.4V R _L = 560Ω
t _f	Output fall time	-	6.0	9.0	ns	P _{IN} = 10µW, V _O = 2.4 to 0.5V R _L = 560Ω
PWD	Pulse width distortion ⁽³⁾	-	5.0 25	10 35	% %	P _{IN} = 3µW peak } f = 2.5MHz, P _{IN} = 80µW peak } D.C. = 50%

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

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