



Datasheet

HCA-S Ser.Nr.: 02-99-155/-158

High-Speed Balanced Photoreceiver integrated Si-PIN-Photodiodes

Features	<ul style="list-style-type: none"> • Si-PIN-Detectors, 1.2 mm active Diameter • Bandwidth DC ... 4 MHz • Amplifier Transimpedance (Gain) 1×10^6 V/A • Conversion-Gain 5.7×10^5 V/W (@800 nm) • FC optical Fiber Input 		
Specifications	<i>Test Conditions</i> $V_s = \pm 15$ V, $T_a = 25^\circ\text{C}$		
Gain	Transimpedance	1×10^6 V/A	(@ 50 Ω Load; doubles with high impedance Load)
	Conversion Gain	5.7×10^5 V/W	(@ 800 nm, 50 Ω Load; doubles with high impedance Load)
	Common Mode Rejection	25 dB typ.	
Frequency Response	Lower Cut-Off Frequency	DC	
	Upper Cut-Off Frequency	4 MHz	(- 3 dB)
	Rise- / Fall-Time	90 ns	(10% - 90%)
Detectors	Detector Material	Si-PIN	
	Active Diameter	1.2 mm	
	Spectral Response	320 – 1060 nm	
	Peak Sensitivity	0.64 A/W	(@ 900 nm)
	Bias Voltage	12 V	
Input	Offset Compensation	> ± 1 V (@ Output) adjustable by Offset trimpot	
	Max. Optical Input Power	3 μ W (for linear Amplification, @ 800 nm)	
Noise	NEP	0.6 pW/ $\sqrt{\text{Hz}}$	(@ 800 nm, 200 kHz)
Output	Output Voltage	± 1.6 V	(50 Ω Load)
	Output Impedance	50 Ω	
Power Supply	Supply Voltage	± 15 V	
	Supply Current	± 55 mA typ.	
Case	Weight	210 gr. (0.5 lbs)	
	Material	AlMg4.5Mn, nickel-plated	
Temperature Range	Storage Temperature	-40 ... +100 $^\circ\text{C}$	
	Operating Temperature	0 ... +60 $^\circ\text{C}$	
Absolute Maximum Ratings	Optical Input Power	20 mW	
	Power Supply Voltage	± 22 V	

