

AZ3267

2.5Gbps Transimpedance Amplifier

FEATURES

- 1900 MHz Bandwidth
- 1 mA Input Overload
- 11 pA/Hz^{1/2} Noise Density
- Single 3.0V to 3.6V or 4.5V to 5.5V Supply
- Internal DC Restoration Capacitor
- Direct Replacement for MAX3267

PACKAGE AVAILABILITY

PACKAGE	PART NO.	MARKING
DIE	AZ3267	N/A

DESCRIPTION

The AZ3267 is a transimpedance amplifier for 2.5Gbps fiber optic receivers. The part operates from a single 3.0V to 3.6V or 4.5V to 5.5V supply. Photodiode bias is provided via a 1.5kΩ resistor from V_{CC}.

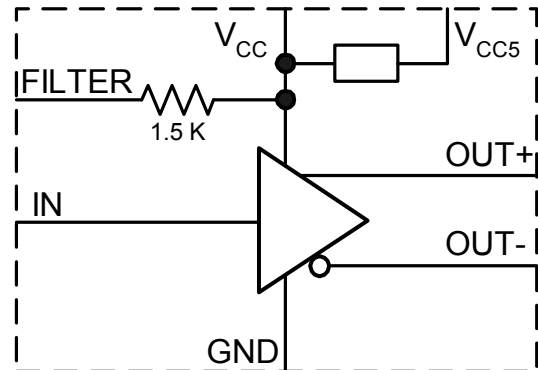
DC restoration is built in, with no external compensation capacitor required. The DC restoration can be disabled for testing by pulling the FILTER pin to ground potential.

If the part is operated using the V_{CC5} supply pin, the V_{CC} pin should be bypassed to ground with a capacitor of at least 0.1μf.

PAD DESCRIPTION

NAME	FUNCTION
V _{CC}	Supply Voltage 3.0 to 3.6V
V _{CC5}	Supply Voltage 4.5 to 5.5V
IN	Photodiode Input
FILTER	Bias Voltage Via 1.5kΩ Resistor
GND	Ground
OUT-	Inverting Output
OUT+	Noninverting Output

BLOCK DIAGRAM



Absolute Maximum Ratings are those values beyond which device life may be impaired.

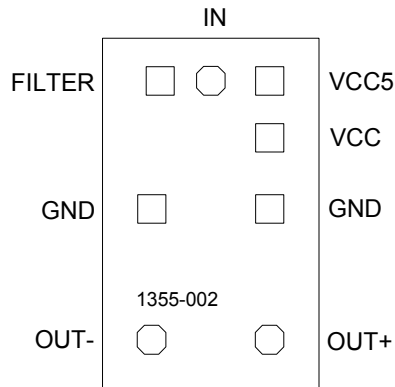
Symbol	Character	Value	Unit
V _{CC2}	DC Supply Voltage (Referenced to GND)	6.0	V
T _A	Operating Temperature Range (In Free-Air)	-40 to +85	°C
T _{STG}	Storage Temperature Range	-65 to +150	°C
	IN Current	±3	mA
	FILTER Current	±3	mA

ELECTRICAL CHARACTERISTICS (V_{CC} = 3.0V to 3.6V or V_{CC5} = 4.5 to 5.5V; 100Ω load between OUT+ and OUT-)

Symbol	Characteristic	Min	Typ	Max	Unit	Condition
	Input Bias Voltage	0.70	0.81	0.93	V	
I _{CC}	Power Supply Current		21	35	mA	
	Transimpedance	1540	1900	2330	Ω	40μA p-p input
R _o	Output Impedance		50		Ω	Per output pin
	Maximum Differential Output Voltage	185	250	415	mV p-p	1 mA p-p input
	Filter Resistor	1220	1500	1860	Ω	
	AC Input Overload	1.0			mA p-p	
	DC Input Overload	0.65			mA	
	Input Referred Noise Density		11		pA/Hz ^{1/2}	
	Small Signal Bandwidth	1530	1900	2420	MHz	≤40 uA p-p
	Low Frequency Cutoff		44		kHz	-3 dB, input ≤40 uA p-p
	Power Supply Rejection Ratio		50		dB	Output referred, f < 2 MHz

Die Size: 1260 x 800 μm

Pad Size: 85 x 85 μ



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