



## AC6520 Series

### Uncooled 2.5 Gbps Receiver in 4-pin ROSA Package



#### Features:

- Wide dynamic range with differential output
- Low power +3.3 V operation
- Wide operation temperature (-40°C to +85°C)
- High reliability
- Suitable for 2.5 Gbps applications

**Applications:** Telecom and Datacom

#### Electrical/Optical Characteristics (T<sub>c</sub>=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Power Supply	V <sub>cc</sub>	3.0	3.3	3.6	V
Supply Current <sup>(1)</sup>	I <sub>cc</sub>		42	58	mA
Bandwidth	BW	1.5		2.4	GHz
Low-Frequency Cut Off	LF		50		kHz
Rise Time/Fall Time <sup>(2,3)</sup>	Tr/Tf			200	ps
Wavelength	λ	1100		1650	nm
Single Ended Output Impedance	R <sub>o</sub>		50		Ohms
Overload <sup>(3,4)</sup>	P <sub>over</sub>	0	+3		dBm
Sensitivity <sup>(3,4)</sup>	P <sub>sens</sub>		-23		dBm
Conversion Gain <sup>(5)</sup>			8		kV/W
Differential Output Voltage <sup>(6)</sup>	V <sub>diff</sub>		350	500	mVpp

(1) No Loads

(2) 20% to 80% at -18 dBm input

(3) λ=1550 nm, 0.9A/W

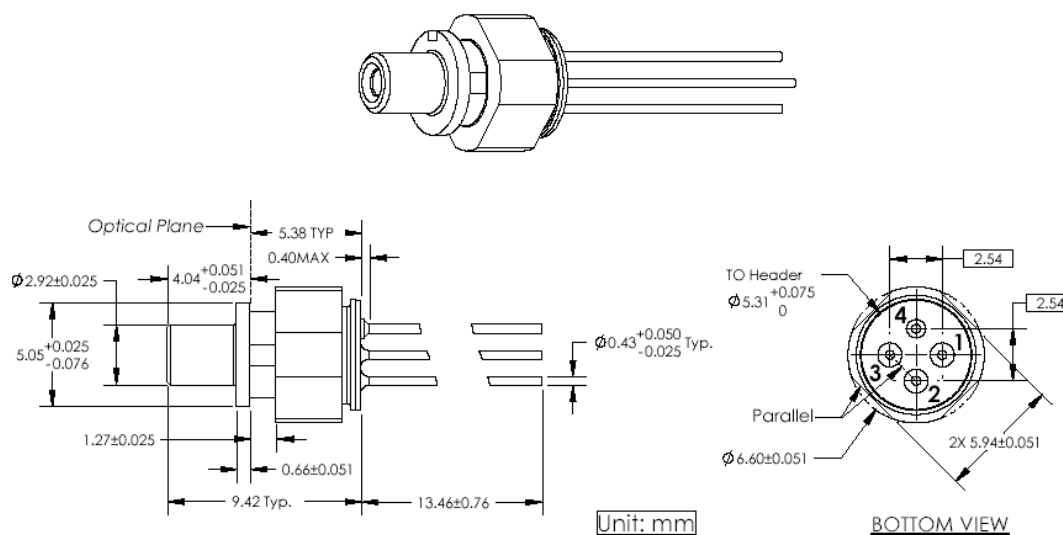
(4) BER = 10<sup>-12</sup>, PRBS 2<sup>31</sup>-1, ER =10 dB

(5) Single ended output voltage (peak to peak) to optical power swing (OMA)

(6) Into 50 Ohms

#### Absolute Maximum Ratings:

Parameter	Symbol	Min	Max	Unit
Case Temperature	T <sub>C</sub>	-40	+85	°C
Storage Temperature	T <sub>stg</sub>	-40	100	°C
Humidity Range	RH	5	95	%
Amplifier Bias Voltage	V <sub>ccmax</sub>		5	V
Input Optical Power	P <sub>max</sub>		+6	dBm
Load Solder Temp. and Time			260 °C, 10sec	

**Outline Drawing (Customer special order is available):****Pin-out Options:****X= B Pin-out Assignment Options (Customer specific pin-out available)**

4-pin Pin-out Assignment	
Pin #	"B"
1	Dout-P
2	Vcc
3	Dout-N
4	GND

**Ordering Information:****AC6520-W-YZ**

**W** = Pin-out: "B" see table. (Custom pin-out available)

**YZ** = Receptacle type: "L1" for LC Plastic, "L2" for LC Metal, "S1" for SC plastic

Example: **AC6520-B-L1** is an Archcom 4-pin, 2.5 Gbps ROSA with Type-B pin-out with low cost plastic LC receptacle.

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