



AC6503 Series

155 Mbps Receiver in 5-pin ROSA Package



Features:

- Wide dynamic range with differential output
- Low power +3.3 V operation
- Wide operation temperature (-20°C to +85°C)
- High reliability
- Suitable for 155 Mbps applications needing receptacle style connectorization

Applications: Telecom and Datacom

Electrical/Optical Characteristics (T_c=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Power Supply ⁽⁷⁾	V _{cc}	2.97	3.30	3.63	V
Supply Current ⁽¹⁾	I _{cc}		20	25	mA
Bandwidth	BW	110	140		MHz
Low-Frequency Cut Off	LF		50		kHz
Rise Time/Fall Time ^(2,3)	Tr/Tf		2		ns
Wavelength	λ	1100	1310	1650	nm
Single Ended Output Impedance	R _o		40		Ohms
Saturation Power ^(3,4)	P _{sat}	+2	+3		dBm
Sensitivity ^(3,4)	P _{sens}		-39	-36	dBm
Conversion Gain ⁽⁵⁾		18	27		kV/W
Differential Output Voltage ⁽⁶⁾	V _{diff}			800	mVpp

(1) No Loads

(3) λ=1310 nm

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

(6) Into 500 Ohms

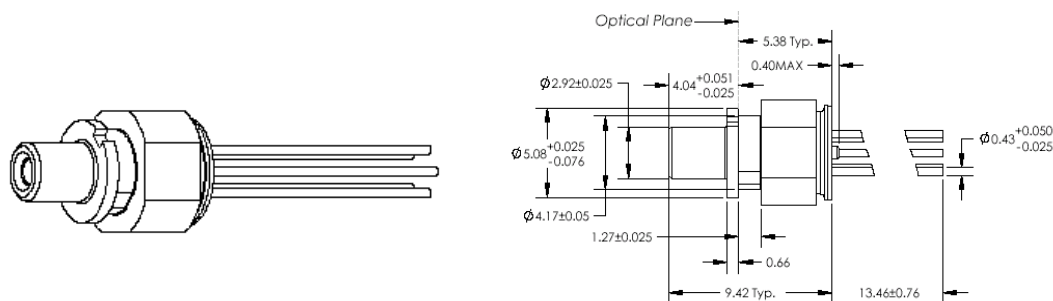
(2) 20% to 80% at -15 dBm input

(4) BER = 10⁻¹⁰, PRBS 2³¹-1, ER = 10 dB

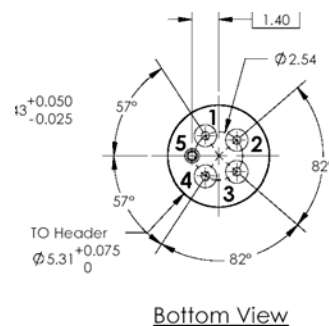
(7) V_{pd} = +3.3V

Absolute Maximum Ratings:

Parameter	Symbol	Min	Max	Unit
Case Temperature	T _C	-20	+85	°C
Storage Temperature	T _{stg}	-40	100	°C
Humidity Range	RH	5	95	%
Amplifier Bias Voltage	V _{ccmax}		4.5	V
Input Optical Power	P _{max}		+6	dBm
Load Solder Temp. and Time			260 °C, 10sec	

Outline Drawing (Customer special order is available):**Plastic LC 5-pin version**

5-pin Pin-out Assignment		
Pin #	“B”	“D”
1	Dout-P	NA
2	Vcc	NA
3	Vpd	NA
4	Dout-N	NA
5	GND	NA

**Ordering Information:****AC6503-W-YZ**

W = Pin-out: “B” see table. (Custom pin-out available)

YZ = Receptacle type: “L1” for LC Plastic, “L2” for LC Metal, “L3” for LC metal (-27dB ORL), “S1” for SC plastic, “S2” for SC metal, “S3” for SC metal (-27dB ORL)

Example: **AC6503-B-L1** is an Archcom 5-pin, 155 Mbps ROSA with Type-B pin-out with low cost plastic LC receptacle

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