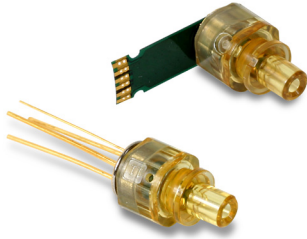


850 nm 8.5 G ROSA



Key Features

- Data rates up to 8.5 Gbps
- 3.3 V operation
- -40 °C to 85 °C operation
- Differential output
- Isolated case
- Received signal strength indicator (RSSI)
- LC or SC connectorized PIN plus preamplifier

Benefits

- Optional controlled impedance flex from OSA to PCBA for excellent 8.5 Gbps product performance
- Industrial operational temperature
- Industry standard form factor and size
- Modulation performance verification

The JDSU 850 nm 8.5G ROSA connectorized ROSA product (Receiver Optical Sub-Assembly) is designed for high-speed data communication applications. The product utilizes a GaAs PIN/TIA integrated in a custom hermetic TO package. Each device is actively aligned to a precision OSA housing using a proprietary alignment algorithm and tested to precise requirements. A controlled impedance flex circuit provides the user with optimum performance.

The 8.5G ROSA converts optical power into an electrical signal at data rates up to 8.5 Gbps and is engineered for performance over extended operating temperature and power conditions with high reliability.

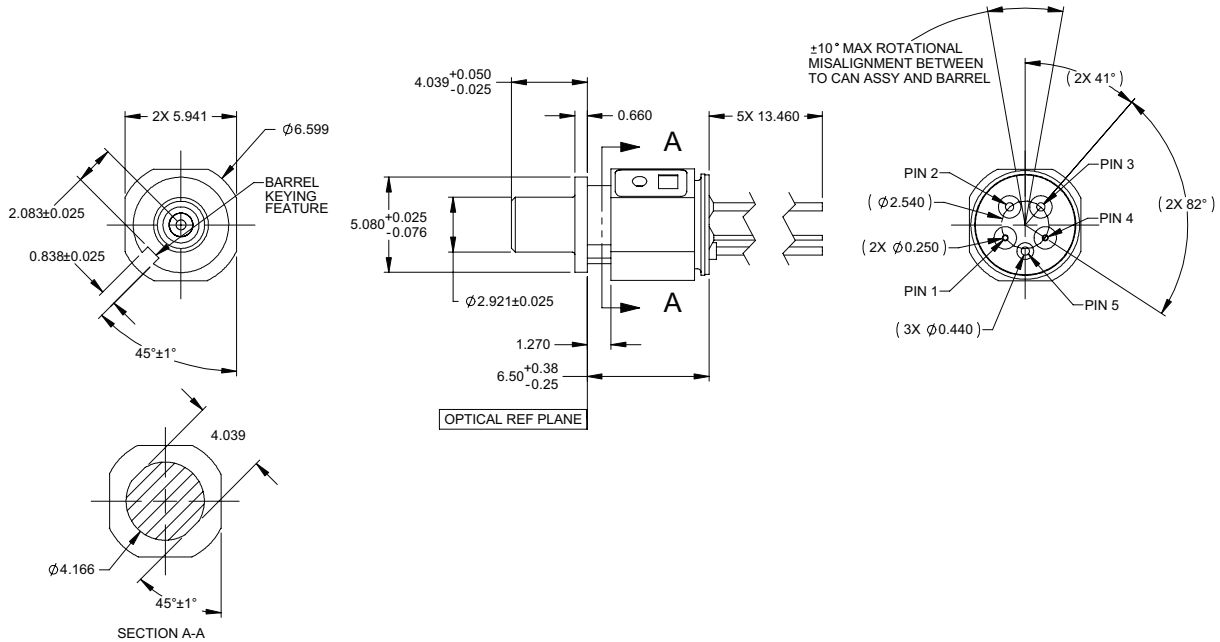
Each part is electro-optically tested to insure optimum performance and sensitivity.

2

ROSA without Flex Dimensions (LC)

UNITS: MM

.X = ±0.2
 .XX = ±0.10
 .XXX = ±0.050



21113382-001 (no flex)

Pin	Symbol	Function
1	Vout P	TIA Output Voltage (Non-Inverted)
2	Vdd	Positive Supply Voltage
3	RSSI	Receive Signal Power, Avg. Current
4	Vout N	TIA Output Voltage (Inverted)
5	GND	Ground

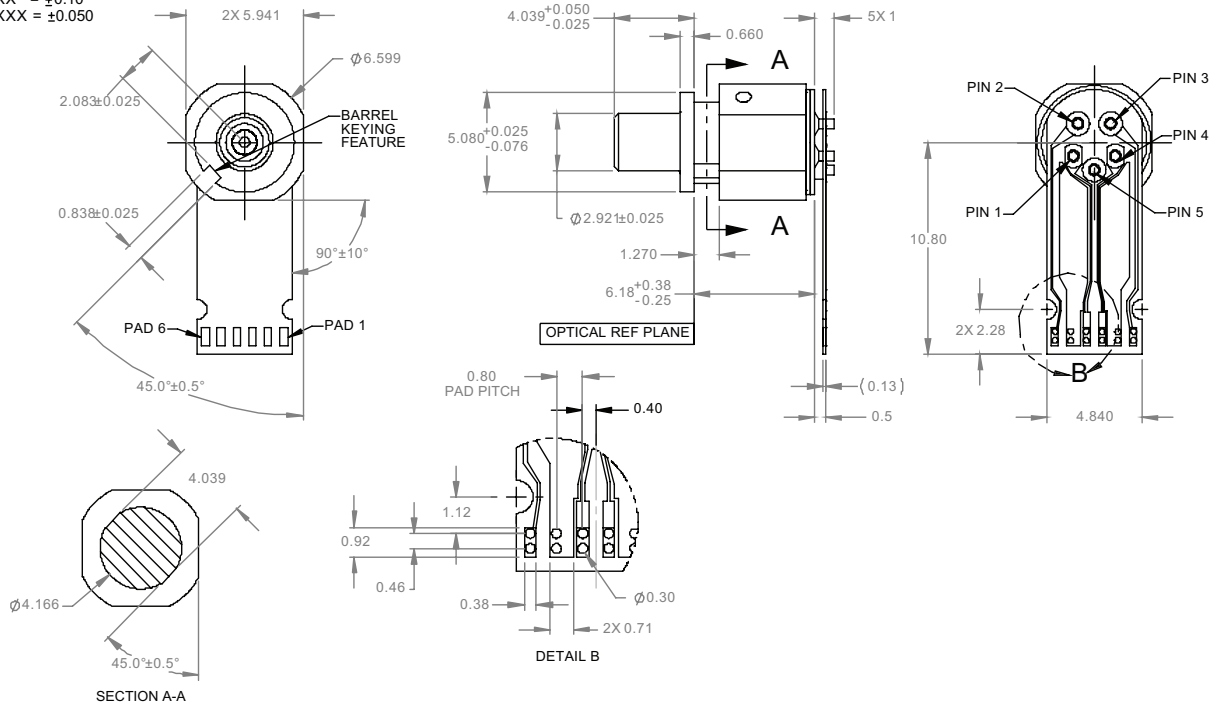
Pin	Symbol	Function
1	Vout P	TIA Output Voltage (Non-Inverted)
2	Vdd	Positive Supply Voltage
3	RSSI	Receive Signal Power, Avg. Current
4	Vout N	TIA Output Voltage (Inverted)
5	GND	Ground

3

ROSA with Flex Dimensions (LC)

UNITS: MM

.X = ± 0.2
 .XX = ± 0.10
 .XXX = ± 0.050



Pad	Symbol	Function
1	Vcc	Vcc
2	GND	Ground
3	Vout P	TIA Output Voltage (Non-Inverted)
4	Vout N	TIA Output Voltage (Inverted)
5	GND	Ground
6	RSSI	Receive Signal Power, Avg. Current

Pad	Symbol	Function
1	Vcc	Vcc
2	GND	Ground
3	Vout P	TIA Output Voltage (Non-Inverted)
4	Vout N	TIA Output Voltage (Inverted)
5	GND	Ground
6	RSSI	Receive Signal Power, Avg. Current

4

Shipping Information

Shipped in anti-static stackable trays.

Absolute Maximum Ratings

($T_{\text{case}} = 30\text{ }^{\circ}\text{C}$, Continuous Wave (CW) operation unless otherwise stated)

Parameter	Symbol	Ratings	Unit
Storage temperature	T_{st}	-40 to +100	$^{\circ}\text{C}$
Incident optical power	P_{in}	+5	dBm
Lead solder temperature	T_{S}	260 $^{\circ}\text{C}$ for 10 sec. 2 mm from case	
Flex attach temperature	T_{F}	370 $^{\circ}\text{C}$ for 10 sec.	
Power supply voltage	V_{P}	4.0	V

Note:

Conditions exceeding those listed may cause permanent damage to the device. Devices subjected to conditions beyond the limits specified for extended periods of time may adversely affect reliability.

Electro-optical Characteristics

($T_{\text{case}} = 30\text{ }^{\circ}\text{C}$, $V_{\text{cc}} = 3.3\text{ V}$ unless otherwise stated)

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Wavelength responsivity	λ	840	850	860	nm
Case operating temperature	T_{op}	-40		85	$^{\circ}\text{C}$
Supply voltage	V_{cc}	2.97	3.3	3.63	V
Supply current	I_{cc}	34	45	61	mA
Bandwidth	BW	6.375			GHz
Low frequency cutoff	BW_{LF}			70	kHz
Responsivity (@50 MHz)	R		5000		V/W
Sensitivity (OMA)	S		-15	-14	dBm
Output resistance	R_{o}		100		Ω
Optical overload		1.5			dBm
Differential output voltage	V_{out}			285	mV
Duty cycle distortion			1	10	%
Rise/Fall time	$t_{\text{r}}/t_{\text{f}}$			50	ps
Slope of RSSI vs P_{in}	RSSI slope	0.9	1	1.1	A/W
RSSI current with zero input ¹	RSSI offset			1	μA
RSSI linearity range	RSSI range	5		1100	μA

1. Connect RSSI to ground with a resistor <2500 ohms.

Ordering Information

For more information on this or other products and their availability, please contact your local JDSU account manager or JDSU directly at 1-800-498-JDSU (5378) in North America and +800-5378-JDSU worldwide or via e-mail at customer.service@jdsu.com.

Part Number	Description
21113382-001	Differential drive 8.5 G TOSA with LC housing