

# J9151A

Hot Pluggable, Dual-LC, 1310nm, SMF, 10km, HP Compatible

## Part Number: J9151A

### Quick Spec:

Manufacturer Compatibility:	HP
Form Factor:	SFP+
TX Wavelength:	1310nm
Reach:	10km
Cable Type:	SMF
Rate Category:	10GBase
Interface Type:	LR
Digital Optical Mon. (DOM):	True
Connector Type:	Dual-LC



### Features

- Operating Data Rate up to 10.3Gbps
- 1310nm DFB-LD Transmitter
- Single 3.3V Power Supply and TTL Logic Interface
- Hot Pluggable
- Operating Case Temperature: Standard: 0°C~+70°C Industrial: -40°C~+85°C
- Compliant with MSA SFP+ Specification SFF-8431
- Compliant with IEEE 802.3ae 10GBASE-LR
- Compliant with IEEE 802.3ae 10GBASE-LW
- Compliant with SFF-8472
- RoHS 6 Compliant

### Applications

- 10GBASE-LR at 10.3125Gbps
- 10GBASE-LW at 9.953Gbps
- Other Optical Links

### Electrical Characteristics (Condition: Ta=TOP)

Parameter	Symbol	Min.	Typ	Max.	Unit	Notes
CML Inputs(Differential)	Vin	150		1200	mV p-p	AC coupled inputs
Supply Current	ICC			300	mA	
Input Impedance (Differential)	Zin	85	100	115	ohm	Rin > 100 kohm @ DC
Tx_Disable Input Voltage – Low	VIL	0		0.8	V	
Tx_Disable Input Voltage – High	VIH	2.0		3.45	V	
Tx_Fault Output Voltage – Low	VOL	0		0.5	V	
Tx_Fault Output Voltage – High	VOH	2.0		Vcc+0.3	V	
CML Outputs (Differential)	Vout	350		700	mV pp	AC coupled outputs
Output Impedance (Differential)	Zout	85	100	115	ohms	

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Rx_LOS Output Voltage- Low	VOL	0		0.5	V	
Rx_LOS Output Voltage- High	VOH	2.5			V	

## Optical Characteristics (Condition: Ta=TOP)

TX						
Parameter	Symbol	Min	Typ	Max	Unit	
Data Rate		-	10.3	-	Gb/s	
9µm Core Diameter SMF			10		Km	
Centre wavelength	$\lambda_c$	1270	1310	1355	nm	
Output Spectral Width(-20dB)	$\Delta\lambda$	-	-	1	nm	
Average Output Power	$P_{out}$	-8	-	+0.5	dBm	
Extinction Ratio	ER	3.5	-	-	dB	
Average Power of OFF Transmitter				-30	dBm	
Side Mode Suppression Ratio	SMSR	30			dB	
Input Differential Impedance	$Z_{in}$	90	100	110	$\Omega$	
TX Disable	Disable		2.0	$V_{cc}+0.3$	V	
	Enable		0	0.8		
TX Fault	Fault		2.0	$V_{cc}+0.3$	V	
	Normal		0	0.8		
TX Disable Assert Time	$t_{off}$			10	us	
RX						
Parameter	Symbol	Min	Typ	Max	Unit	
Center Wavelength	$\lambda_c$	1260		1565	nm	
Receive Sensitivity	$P_{in}$	-	-	-14	dBm	
Maximum Input Power	$P_{MAX}$	-3	0	-	dBm	
Signal Detect Threshold-Assertion:	$SD_{HIGH}$	-	-	-15	dBm	
Signal Detect Threshold-Deassertion:	$SD_{LOW}$	-25	-	-	dBm	
Output Differential Impedance	$P_{in}$	90	100	110	$\Omega$	
Receiver Overload	$P_{max}$	0.5			dBm	

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Optical Return Loss		ORL			-12	dB
LOS	High	2.0			V <sub>CC</sub> +0.3	V
	Low	0			0.8	

### Absolute Maximum Ratings (T<sub>C</sub>=25°C)

Parameter	Symbol	Min	Max	Unit
Storage Temperature	T <sub>ST</sub>	-40	+85	°C
Operating Temperature (Com)	T <sub>IP</sub>	0	+70	°C
Operating Temperature ( Ext )		-40	+85	
Input Voltage	T <sub>CC</sub>	0	5	V

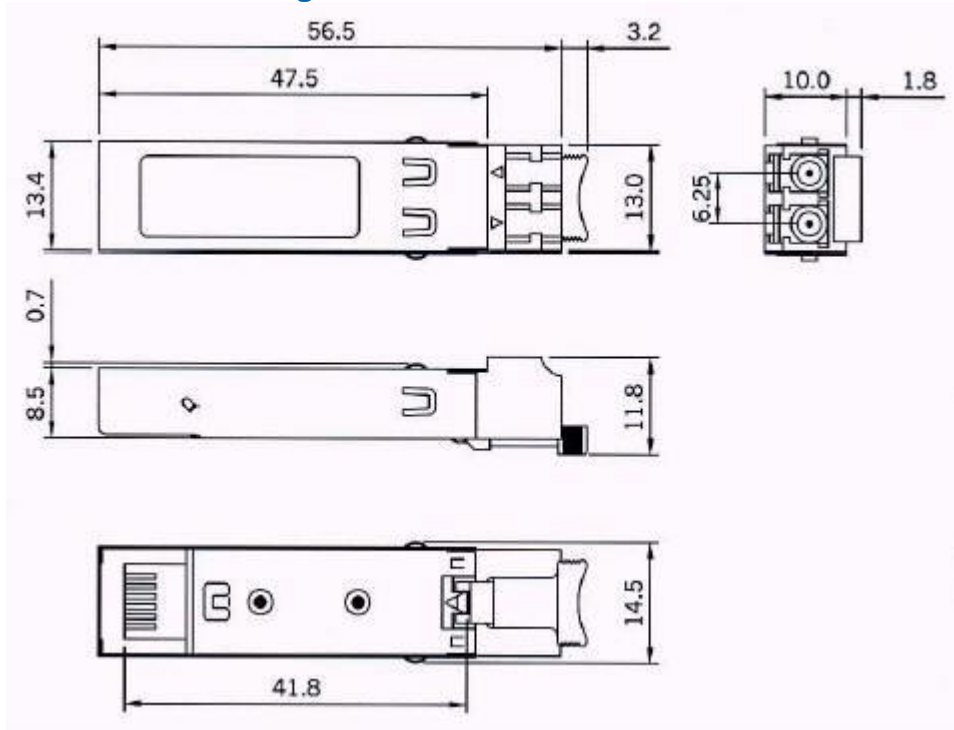
### Recommend Operation Environment

Parameter	Symbol	Min	Typ	Max	Unit
Supply Voltage	V <sub>CC</sub>	+3.15	3.3	+3.45	V
Operating Temperature	T <sub>OP</sub>	0	-	+70	°C
Operating Temperature		-40	-	+85	

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### Mechanical Drawing



### Dimensions

Dimensions (H x W x D): 8.5 x 13.4 x 56.5 mm