

T1490DFB/R1550nm 1.25G LC BOSA

FB-B5443ASL-00

Features:

High stability DFB laser chip
InGaAs/InP PIN detector with TIA
Operate temperature from -40°C to +85°C
LC Receptacle

Specification:

Absolute Maximum Ratings

Parameter	Symbol	Condition	Min	Max	Unit
Operating Case Temperature	T_c	--	-40	85	°C
Storage Temperature	T_{stg}	--	-40	85	°C
Lead solder Temperature	--	--		260	°C
Lead Soldering Time	--	--		10	s

Optical/Electrical Characteristics (T=25°C, unless otherwise stated)

1490nm DFB Laser Transmitter

Parameter	Symbol	Min	Typ	Max	Unit	Test Conditions
Optical Output Power	P_o	1.0	--	3.0	mW	CW, $I_{op}=30mA$
Threshold Current	I_{th}	--	10	15	mA	T=25 °C
Forward Voltage	V_F	--	1.1	1.6	V	
Operating Current	I_{op}	--	30	40	mA	CW, T=25 °C
Center Wavelength	λ_c	1470	1490	1510	nm	CW, T=25 °C
Spectral Width (-20 dB)	$\Delta\lambda$	--	0.1	1.0	nm	
Wavelength temperature coefficient	$\Delta\lambda/\Delta T$		0.08	0.12	nm/°C	
Side-Mode Suppression Ratio	SMSR	35	40		dB	$I_{op}=30mA$
Relaxation Oscillation Frequency	f_R	--	4.5	--	GHZ	$I_{op}=30mA$
Rise/Fall Times	t_R, t_F	--	--	0.1	ns	20% to 80%
Monitor Current	I_{mon}	100	--	1000	μA	$V_R=5 V,$
Monitor Dark Current	I_D	--	--	200	nA	$V_R=5 V$

1550nm 1.25Gbps Receiver

Parameter	Symbol	Min	Typ	Max	Unit	Test Conditions
Supply Voltage	VCC	3.0	3.3	3.6	V	
Supply Current	ICC	-	30	40	mA	No loads
Differential responsivity	R_d	9.6	--	32	mV/uW	$R_{load}=100 \Omega, \lambda=1550nm, P=-24dBm$
Single ended responsivity	R_s	4.8	--	16	mV/uW	$R_{load}=50 \Omega, \lambda=1550nm, P=-24dBm$
Small-Signal Bandwidth	Bw	700	-	-	MHZ	$\lambda = 1550 nm, P_f=10uW$
Low-Frequency Cut off	LF	--	--	115	KHZ	
Rise /Fall Time(20%~80%)	Tr/f		300	400	ps	$\lambda = 1550 nm, P=-24dBm$
Saturation Power	Psat	0			dBm	$\lambda=1550nm$

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Wavelength	λ	1530	1550	1570	nm	
Single ended output impedance	R_o	35	50	65	ohm	
Sensitivity		--	--	-24	dBm	$\lambda = 1550 \text{ nm}$, 1.25Gbps, PRBS7, ER=10dB, BER=1E-10

Dimensions And Package Outline

