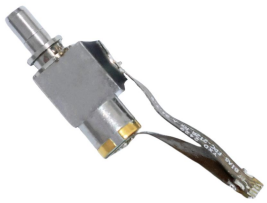
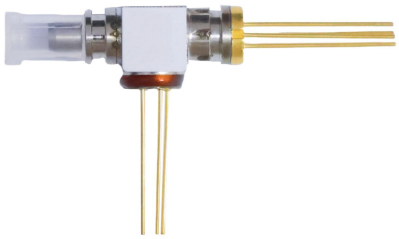
Analog BOSA





Feature

- **1270nm/1330nm DFB laser diode and APD chip**
- **Low threshold current and 6G bandwidth.**
- **High intensity of light emission**
- **High coupling efficiency and Fiber output high power**
- **Very good Linearity**

Application

- **Analog transmission system and 6G RF transceiver**
- **High speed and Big data processing**
- **AI Network**

Absolute Maximum Ratings

Parameter		Min.	Max.	Unit
Tx	Power Voltage (LD)	--	3.6	V
	Reverse Voltage (LD)	--	2	V
	Forward Current (LD)	--	120	mA
	Reverse Voltage (MPD)	--	20	V
	Forward Current (MPD)	--	2	mA
Rx	Reverse Voltage	--	15	V
	Forward Current (LD)	--	10	mA
	Input Power	--	5	dBm

Threshold Voltage	200	--	V
Storage Temperature	-40	+85	℃
Operating Temperature	0	+75	℃
Lead Soldering Temperature	--	260/10	℃/s

Optical and Electrical Characteristics

Parameter	Symbol	SPEC.				Test Conditions
		Min.	Typ.	Max.	Unit	
Central Wavelength	λc	1260	1270	1280	nm	Iop =50~60mA
	λc	1320	1330	1340	nm	Iop =50~60mA
Fiber Output Power	Pf	6.0	--	10.0	mW	Iop= Ith＋20mA, CW,
Threshold Current	Ith	5	--	15	mA	Tc=25℃
		1	--	40	mA	Tc=0~+75℃
Spectral Width (-20dB)	△λ	--	--	1	nm	Iop =ITH+20mA，Tc=25℃
Slope Efficiency	η	0.2	--	--	W/A	
Side-mode suppression ratio	SMSR	30	--	--	dB	Iop =ITH+20mA，Tc=25℃
Monitor Current	Im	50	--	1000	μA	Tc=0~+75℃
Monitor Dark Current	Id	--	--	200	nA	Tc=0~+75℃
RF Parameter						
Bandwidth（3dB）	BW	0.01	--	7	GHz	
Input P-1dB	--	15	--	--	V	5GHz
2nd Harmonic Rejection	--	40	--	--	dBc	Pin=0dBm,100MHz~4GHz
		30	--	--	dBc	Pin=0dBm,4GHz~6GHz
Working Condition						
Power Voltage	--	3.135	--	3.465	V	
Operating Current	I_{op}	--	--	80	mA	
Operating Voltage	V_{cc}	--	--	1.6	V	

Electrical and optical characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	TEST CONDITIONS
Power Supply	Vcc	4.750	--	5.250	V	
Operating Wavelength	λ	1320	1330	1340	nm	
		1260	1270	1280	nm	
Responsivity	*Re*	0.8	--	--	mA/mW	
APD dark current	I_d	--	--	300	nA	
Breakdown voltage	V_{BR}	20	--	43	V	Dark current, I_d =10 μA
Bandwidth (3dB down)	BW	0.01	--	7	GHz	
Overload	Ps	6	--	---	dBm	
Return Loss	RL	--	--	35	dB	
2nd Harmonic Rejection	--	38	--	--	dBc	100MHz~1GHz,Input=2dBm
3nd Harmonic Rejection	--	53	--	--	dBc	100MHz~1GHz,Input=2dBm
ESD Requirement	ESD	200	--	--	V	

Package Dimensions and Pin Description(LC)