

1550nm Butterfly SOA 14PIN



❖ Overview

Semiconductor optical amplifier (SOA) JSA-BT515G25 series products are mainly applied to 1550nm wavelength optical amplification, which can significantly increase the output optical power. The series of products are based on the standard packaging platform of the Institute of Optoelectronic Integrated Microsystems, Tsinghua University, and use sealed inorganic butterfly device packaging technology.

❖ Features

- ◆ SOA chips made in China, full process autonomy,
- ◆ High gain, low power consumption, low polarization-related loss, high extinction ratio, etc,
- ◆ Supports temperature monitoring and TEC thermoelectric control to ensure stable operation over the full temperature operating range.

❖ Applications

- ◆ Used in distributed fiber optic sensing systems to replace acousto-optic modulators and achieve optical switching functions,
- ◆ Used in broad-spectrum light sources, such as broad-spectrum light sources for demodulators of fiber grating,
- ◆ Used in optical communication systems to achieve 1550 wavelength optical

signal amplification, replacing some EDFA applications,

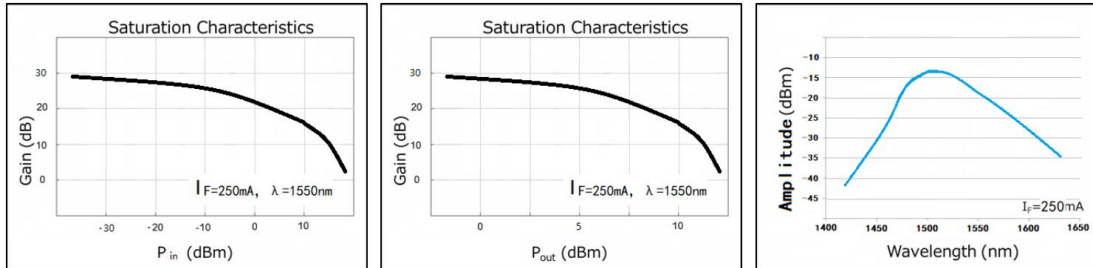
- ◆ Used in 1550nm solid-state LIDAR or FM continuous wave LIDAR in combination with narrow linewidth lasers to produce pulsed light.

❖ Specifications

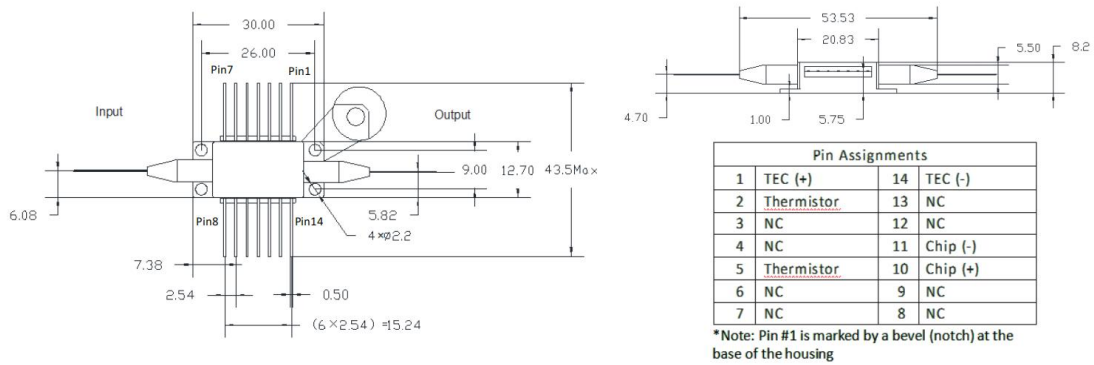
Parameters	Symbols	Conditions	Min.	Type.	Max.	Unit
Operating wavelength	λ	---	1490	1515	1590	nm
Bandwidth	$\Delta\lambda$	@-3dB	55	---	60	nm
Saturated optical power	Psat	If=250mA	12	---	15	dBm
Small signal gain Gain (Max)	G	If=250mA Pin=-25dBm	25		30	dB
Operating current optical power	If			250	400	mA
Forward Voltage	Vf				1.8	V
Extinction ratio 1	ER1	If=250mA/If=0mA Pin=0dBm		50		dB
Extinction ratio 2	ER2	If=250mA/If=-0.4mA Pin=0dBm		65		dB
TEC Current	ITEC				1.8	A
TEC Voltage	VTEC				3.4	V
Polarization-related gain	PDG			1.5	2.0	dB
Thermistor resistance value	Rtherm	T=25°C	9.5	10	10.5	K Ω
Thermistor current	Itherm				5	mA
Airtightness 1		T=25°C	1*10 ⁻¹²	1*10 ⁻¹¹	1*10 ⁻⁸	Pa.m ³ / /s
Operating temperature	TC	I=Iop	-10		70	°C
Storage temperature	Tstg				85	°C

Total power consumption	P				4	W
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❖ Typical Characteristics



❖ Structural dimensions and pin definition



❖ Order Information

Model	Product description	Remark
JSA-BT515G25	1550nm-15dBm-25dB-Butterfly SOA	