

MOTr-OA509N21

MOTOROLA OPTICAL TRANSPORT MOTr, GAIN-FLATTENED OPTICAL AMPLIFIER



The MOTr-OA509N21 EDFA allows cable operators to maximize the number of wavelengths per fiber and extend the reach of their networks.

Product Overview

The MOTr-OA509N21 is a gain-flattened, high-power Erbium-Doped Fiber Amplifier that allows operators to use 1550 nm Dense Wave Division Multiplex (DWDM) transmitters to cover greater distances and link budgets.

Deploying MOTr solutions provides benefits such as reducing the quantity of physical hubs (reduced CapEx), simplifying operations over Broadcast/Narrowcast (reduced OpEx), and extending network reach to new subscribers (increased revenues).

Featuring 21 dBm total output power and a nominal gain of 9 dB, the MOTr-OA-509N21 complements Motorola's Broadband Full Spectrum Multi-Wavelength transmitter and optical passive portfolio.

The OA-509N21 is gain-flattened across the entire C-Band, which allows optimum performance in full band, broadcast, narrowcast and return band applications.

With intuitive user interfaces, the OA509N21 simplifies installation and maintenance within the MOTr field hardened hub enclosure or SG4000 optical node. Up to six OA-509-N21 optical amplifiers can be configured within the MOTr field-hardened enclosure. The module can also be utilized in an SG4000 HFC node in an overlay or fiber pass through design.

Highlights

- 21 dBm optical output
- Low Noise Input
- Gain-flattened across the DWDM C band
- Constant Gain Mode for multi-wavelength



The MOTr-OA-509N21 features LED status indicators, gain control push buttons and output level test point. The module can be accessed remotely utilizing the DOCSIS status monitor transponder.

Specifications

Operating Wavelength Range	1530.25 nm to 1561.50 nm
Nominal Total Optical Input Power	12 dBm
Maximum Optical Output Power	21.0 ± 0.4 dBm
Output Power Stability Over Time	± 0.10 dB Max.
Default Optical Gain	9.0 ± 0.5 dB
Gain Adjustment Range	8.0 dB to 11.0 dB
Gain Set Point Accuracy	± 0.5 dB Max.
Gain Stability Over Temperature	± 0.5 dB Max.
Optical Power Test Point Accuracy	± 1.2 dB Max.
Optical Return Loss (Input and Output)	40 dB Min.
Optical Noise Figure:	6.5 dB typical
Single Tone Saturated Output Power Variation	± 0.25 dB Max.
Multi Tone Gain Flatness	
	Full Wavelength Range (Red/Blue Band):
	Default Optical Gain ± 0.80 dB typical
	From 1549.28 nm to 1561.46 nm (Red Band):
	Default Optical Gain ± 0.35 dB typical
RF Spurious Outputs	-70 dBc Max.
MOTr Enclosure Operating Temperature Range	-40 °C to +60 °C
Supply Current:	
	+24 V Supply 600 mA Max.
	+5 V Supply 10 mA Max.

Specifications are subject to change without notice.

Ordering Information

Part Number	Model Name	Description
588337-001-00	MOTr-OA509N21	Field hardened, gain-flattened 21 dBm single output EDFA

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365-095-20837 x.1 10/12