



SG4-ITU-CH-*

DWDM Analog Return Transmitter Scalable Network Solution

Motorola increases the segmentation solutions for the 1 GHz SG4000 modular node with the introduction of analog DWDM return path transmitters.

Features

- DWDM ITU lasers
- 5 to 200 MHz RF Passband
- 8 dBm Optical Power
- SBS Suppression
- RoHS Compliant
- Monitored via LL-SG4-DOCSIS transponder
- Hot-swap modules

Motorola's 1 GHz SG4000 modular optical node provides independent and incremental forward and return path segmentation. Depending on the network design and the quantity of fibers available to the operator, Motorola offers analog 1310 nm, eight 1550 CWDM wavelengths, or 2X Digital Return transmitters. Now, with the introduction of the SG4-ITU-CH* analog Dense Wave Division Multiplexed (DWDM) return path transmitters, Motorola provides an intermediate solution when network designs call for more wavelength aggregation than CWDM transmitters can provide but require less distance than is typically achieved with digital return links.

The SG4-ITU-CH* transmitters feature cooled, 8 dBm Distributed Feedback (DFBT) lasers based on the International Telecommunications Union (ITU) wavelength grid. When combined with ruggedized optical muxes, these analog ITU transmitters provide greater wavelength aggregation options over traditional Coarse Wave Division Multiplexed (CWDM) transmitters. Without amplification, the typical link budget is 20 dB. When needed, the SG4-ITU-CH* DWDM signals can be amplified by Erbium Doped Fiber Amplifiers (EDFA) to overcome large link budgets similar to digital return links.

The SG4-ITU-CH* can provide additional savings because a proprietary return receiver is not required as in with digital return systems. The performance of the SG4-ITU-CH transmitters is typified by a 40/13 dB Noise Power Ratio (NPR) specification.

The SG4-ITU-CH* is supported by the new LL-SG4-DOCSIS status monitor transponder. Parameters for control and monitoring include optical output power, laser bias current, 24V supply current, and module identification information.

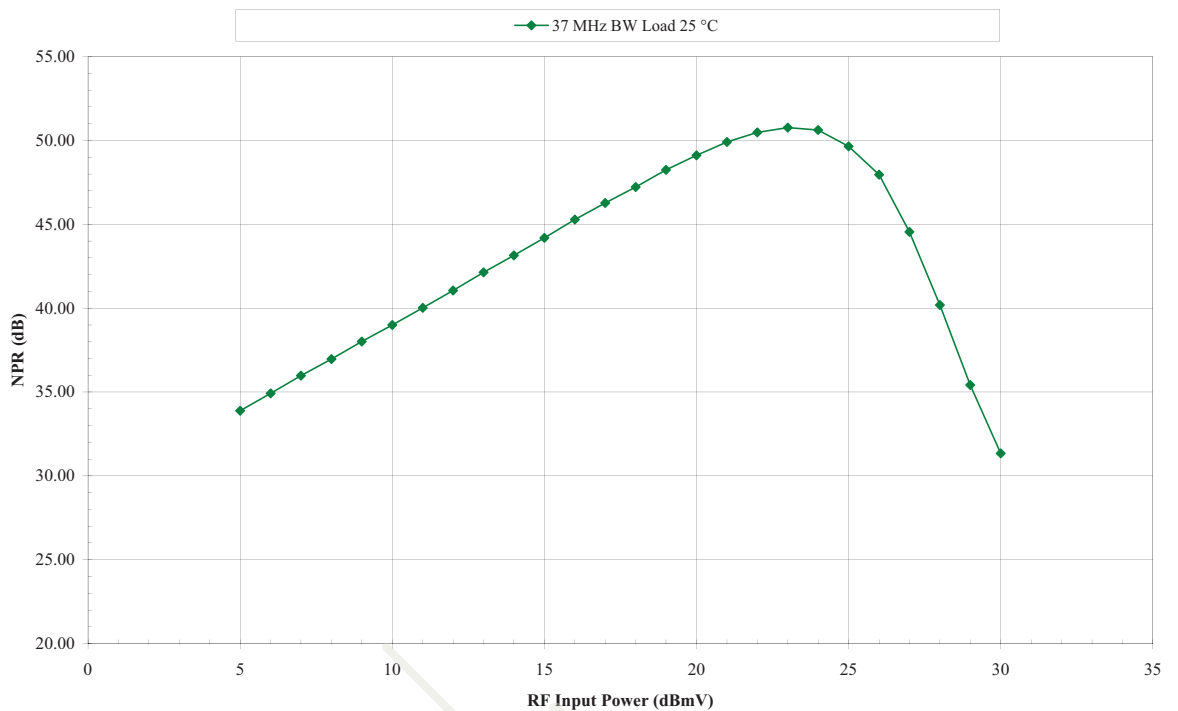
SPECIFICATION SHEET

SG4-ITU-CH-*

SPECIFICATIONS

Available Wavelength Range	ITU CH 20 – 60
Wavelength Stability	± 0.1 nm Max.
Optical Output Power	8.0 ± 0.4 dBm
Optical Power Test Point	1.0 ± 0.15 mW/V
RF Bandwidth	5 MHz to 200 MHz
Frequency Response Flatness	± 0.50 dB Max.
RF Return Loss	18 dB Min.
Nominal RF Input Level (Total Power)	23 dBmV
RF Input Test Point	-5.0 dBmV Typical
Dynamic Range For NPR ≥ 40 dB	13 dB
37 MHz Loading (5 MHz – 42 MHz) 40 km SMF 28 fiber, plus passive loss to obtain -6 dBm optical input to receiver	
Supply Current	
+24V Supply	415 mA Max.
+5V Supply	5 mA Max.
Dimensions	2.1in L x 6.5 in W x 2.4 in D (5.3 cm x 16.5 cm x 6 cm)
Weight	1 lb (0.45 kgs)
Operating Temperature Range (Node)	-40° F to 140° F (-40° C to 60° C)

NPR vs. RF Input Power



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