

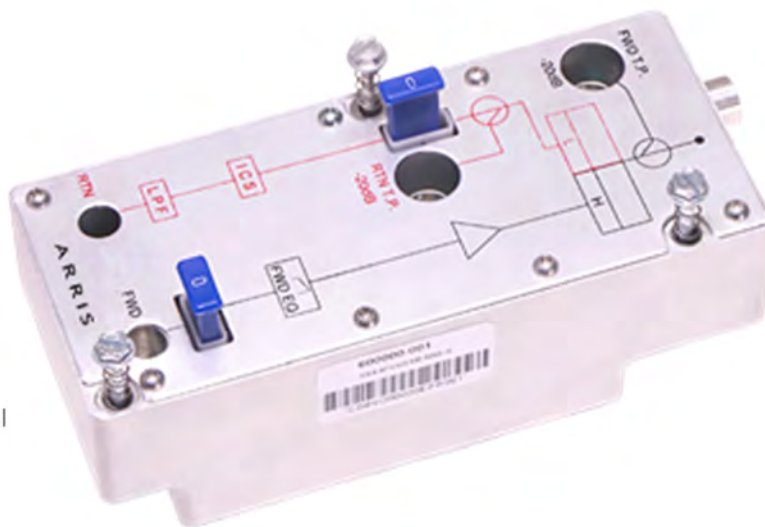
SG4-RF-100

FORWARD AND RETURN PATH RF MODULE,
OPTICAL NODE SERIES



FEATURES

- GaN technology delivers higher output and enhanced reliability for fiber deep designs
- Plug and Play installation for easy return bandwidth expansion
- Independent modules improve reliability and operational efficiencies
- Microprocessor circuitry provides telemetry to the optional DOCSIS status monitor transponder



PRODUCT OVERVIEW

The SG4-RF-100 electronics module is the foundation for total segmentation in the SG4000 optical node. Using one RF module per output port, this unique, independent module design provides superior port-to-port isolation performance. By eliminating the single point of failure that typically occurs with one-piece electronics assemblies, the module minimizes service interruptions.

The module contains all forward and return path diplex filtering within the node, so upgrading return path upper edge from 42 to 85 MHz is as simple as replacing the module. The module's forward path uses Gallium Nitride (GaN) technology to deliver the higher RF output levels required to support fiber deep migration. An integrated JXP-style pad attenuator and RF test point enable technicians to easily monitor and change forward levels. Node station output slope is generated partly by the Flatness and Slope Board (FSB) contained within the RF module. The return path features a -20 dB RF test point followed by a JXP-style pad attenuator. An Ingress Control Switch (ICS) allows technicians to operate the ICS locally using the SG4000 Embedded Plug-in Module (EPIM) or remotely using the DOCSIS status monitor transponder. Finally, a Return-Path Low-Pass Filter (RPLPF) provides additional attenuation of forward path energy at the transmitter input.

SPECIFICATIONS

Forward

Bandwidth	52 – 1 GHz, split dependent
Gain	20 dB @ 1 GHz
Flatness	±0.75 dB
Slope	6.0 ±0.5 dB
Return Loss	16 dB Minimum
Test Point	-20 ±0.5 dB
Test Point Connector	Female G
Noise Figure	14 dB Max. @ 55 MHz 9.5 dB Max. @ 870 MHz

Return

Bandwidth	5 - 85 MHz, split dependent
Through Loss	5.0 dB Maximum
Flatness	±0.50 dB
Slope	0.0 ±0.5 dB
Return Loss	16 dB Minimum
Test Point	-20 ±0.5 dB
Test Point Connector	Female G

General

Dimensions	2.5" W x 5.75" L x 1.85" H (6.35 cm x 14.6 cm x 4.7 cm)
Weight	1.0 lbs. (0.45 kgs)
Node Operating Temperature Range	-40°C to +60°C (-40°F to +140°F)
Current Draw	500 mA Max. @ +24 VDC 20 mA Max. @ +5 VDC
Power Consumption	12 W Maximum

Ordering Information

Part Number	Model	Description
525407-003-00	SG4-RF-100-A	SG4-RF-100-A module, 5-65 MHz return / 85-1 GHz forward
525407-004-00	SG4-RF-100-K	SG4-RF-100-K module, 5-42 MHz return / 54-1 GHz forward
525407-006-00	SG4-RF-100-N	SG4-RF-100-N module, 5-85 MHz return / 104-1 GHz forward

RELATED PRODUCTS

Digital Return Transmitter	Optical Patch Cords
SFPs	Optical Passives
Fiber Service Cable	Installation Services

Note: Specifications are subject to change without notice.

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