

Subscriber Networks

Model D9482 DAVIC QPSK Modulator

Description

The Model D9482 QPSK Modulator is an integral component of Scientific-Atlanta's Digital Headend product line. This device works in conjunction with digital set-tops, including Scientific-Atlanta's Explorer® family of set-tops, and the QPSK Demodulator to provide a forward signaling and reverse path communications for interactive video and data systems over a conventional two-way CATV plant.



Features

- Interfaces with up to eight reverse-path demodulators through ATM25 interfaces
- Contains interleaving and Reed-Solomon FEC for improved performance
- Implements DAVIC MAC control algorithm
- Provides 10/100Base-T Ethernet interface for all application data plus remote provisioning, control, status monitoring, and alarms

Specifications

Specifications	
Input	10/100 Base-T Ethernet

RF Specifications	
Frequency Range (center frequency)	54 MHz to 550 MHz
Minimum Tuning Step Size	250 kHz
RF Output Power Level	+50 dBmV to +60 dBmV (minimum range)
RF Output Impedance	75 Ω
RF Output Return Loss	≥ 12 dB (45 MHz to 550 MHz)
Inband Spurious Outputs (50 MHz to 550 MHz)	< -57 dBc
Noise Floor (out-of-band)	< -126 dBc/Hz > 25 MHz from center frequency
Output Power level with Carrier Squelched	< 0 dBmV
Output Frequency Error (over temperature)	< ± 10 ppm
RF Test Point Level	RF Output Power - 20 dB (± 2 dB)

Modulation Specifications	
Modulation Type	Quadrature Phase Shift Keying
Error Correction	Reed-Solomon t = 1
Carrier Suppression	> 30 dB
Data Rate	1.544 Mbps
Data Shaping Filter	Square Root Raised Cosine; alpha = 0.30
Spectral Mask	Offset from Center (MHz) Response (dB) 0.5018 < -21 0.772 < -40
Error Vector Magnitude	$\leq 3.0\%$

Electrical Specifications	
Voltage (2 options)	-42 V dc to -56.7 V dc (option 1) 85 V ac to 264 V ac (option 2)
Power	< 65 W

Model D9482 DAVIC QPSK Modulator



Connector Specifications	
DC Input (with option 1 only)	Screw Terminal
AC Input (with option 2 only)	3-prong male socket
RF Output	Type F
RF Test Point	BNC
ATM25	RJ-45 (9)
Ethernet 10/100 Base-T	RJ-45
Alarm Relay	Quick insert wire connector
Alarm Contact Closures	Contact Type: 1 form C (NO, NC) contacts Contact Rating: 220 V dc, 2A switching

Mechanical Specifications	
Rack Mount Type	EIA RS-310
Dimensions	1.75 in. H x 19.00 in. W x 20.0 in.D

Environmental Specifications	
Operating Temperature	0°C to +50°C
Operating Humidity	0% to 95% non-condensing

Specifications and product availability are subject to change without notice.



Explorer and Scientific Atlanta are registered trademarks of Scientific-Atlanta, Inc.
Cisco, Cisco Systems, and the Cisco Systems logo are registered trademarks of Cisco Systems, Inc. and/or its affiliates in the U.S. and certain other countries.

All other trademarks shown are trademarks of their respective owners.

Specifications and product availability are subject to change without notice.

© 2006 Scientific-Atlanta, Inc. All rights reserved.

Scientific-Atlanta, Inc.
1-800-722-2009 or 770-236-6900
www.scientificatlanta.com

Part Number 740361 Rev C
May 2006