MAXNET® II

Platinum Series

RF & Optical Signal Management

Patented
U.S.# 7,142,414

3RU Active Chassis
(front view)

Active Products

Amplifiers:

Forward RF Amplifiers:

- 17, 21, 28, 31, & 34 dB, GaAs, 1000 MHz amplifier module offerings
- High performance MCX connectors (with optional F connectors)
- Front access input & output test points
- Front access to plug-in pad & EQ locations
- Front LEDs provide an indication of amplifier power & status
- Amplifier module voltage, current, temperature, fan status, nominal RF output power, & RF output power alarm threshold are easily monitored & controlled over the network (HMS compliant (SNMP v2c)) or through a web browser; e-mail alarm notification is also supported
- Amplifier module takes up 2 slots in MAXNET® II chassis (total of 24 slots)

Forward RF Amplifier Specifications

PART NUMBER (6)	GAIN		GAIN AND SLOPE CONTROL (1)	TEST POINTS (7)	RETURN LOSS (5)	DISTORTION PERFORMANCE (3,4)			NOISE FIGURE (4)	OPERATING CURRENT (2)
	BW (MHz)	Gain (dB)	PLUG IN	I/O (dB)	I/O (dB)	Output Level (dBmV)	CTB (-dB)	CSO (-dB)	(dB)	(mA)
QMP1000-17GP	40-1000	17 +/- 1.0	INPUT / OUTPUT	20 +/- 1.0	16/15	40	71	71	6	470
QMP1000-21GP	40-1000	21 +/- 1.0	INPUT / OUTPUT	20 +/- 1.0	16/15	40	71	71	6	470
QMP1000-28GP	40-1000	28 +/- 1.0	INPUT / INTERSTAGE	20 +/- 1.0	16/15	40	71	71	6.5	520
QMP1000-31GP	40-1000	31 +/- 1.0	INPUT / INTERSTAGE	20 +/- 1.0	16/15	40	71	71	6.5	520
QMP1000-34GP	40-1000	34 +/- 1.0	INPUT / INTERSTAGE	20 +/- 1.0	16/15	40	71	71	6.5	520
QMP1000-17GPF	40-1000	17 +/- 1.0	INPUT / OUTPUT	20 +/- 1.0	16/15	40	71	71	6	470
QMP1000-21GPF	40-1000	21 +/- 1.0	INPUT / OUTPUT	20 +/- 1.0	16/15	40	71	71	6	470
QMP1000-28GPF	40-1000	28 +/- 1.0	INPUT / INTERSTAGE	20 +/- 1.0	16/15	40	71	71	6.5	520
QMP1000-31GPF	40-1000	31 +/- 1.0	INPUT / INTERSTAGE	20 +/- 1.0	16/15	40	71	71	6.5	520
QMP1000-34GPF	40-1000	34 +/- 1.0	INPUT / INTERSTAGE	20 +/- 1.0	16/15	40	71	71	6.5	520

NOTES:

1) See functional schematics.
2) DC load current at + 24 VDC.
3) Distortions measured with 50-550 MHz analog CW (6 MHz spacing) and 550-1000 MHz noise at -6 dBc (average power per 6 MHz).
4) Specified with 0 dB plug-in attenuators and 0 dB plug-in EQs.
5) Return Loss is 15 dB minimum from 870 MHz to 1000 MHz.
6) GP = MCX connectors; GPF = F connectors.
7) At input test point specified with 0 dB plug-in attenuator and 0 dB plug-in EQ.

OTHER NOTES:

Minimum / Maximum composite RF detection level is 20.5/80 dBmV.

Ordering Information

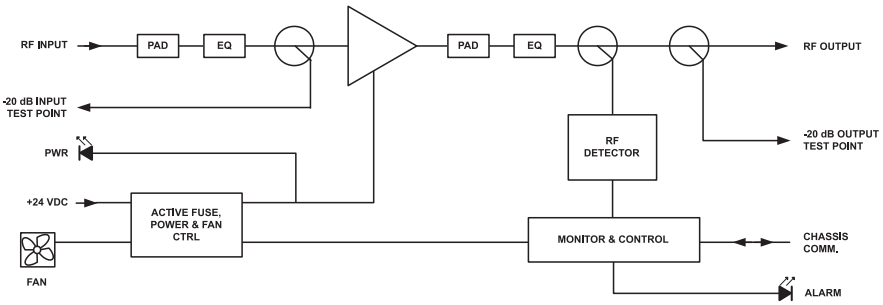
Part Number	Description
QMP1000-17GP	1000 MHz, 17 dB GaAs Single Stage, MCX Connectors
QMP1000-21GP	1000 MHz, 21 dB GaAs Single Stage, MCX Connectors
QMP1000-28GP	1000 MHz, 28 dB GaAs Dual Stage, MCX Connectors
QMP1000-31GP	1000 MHz, 31 dB GaAs Dual Stage, MCX Connectors
QMP1000-34GP	1000 MHz, 34 dB GaAs Dual Stage, MCX Connectors
QMP1000-17GPF	1000 MHz, 17 dB GaAs Single Stage, F Connectors
QMP1000-21GPF	1000 MHz, 21 dB GaAs Single Stage, F Connectors
QMP1000-28GPF	1000 MHz, 28 dB GaAs Dual Stage, F Connectors
QMP1000-31GPF	1000 MHz, 31 dB GaAs Dual Stage, F Connectors
QMP1000-34GPF	1000 MHz, 34 dB GaAs Dual Stage, F Connectors

Amplifiers:

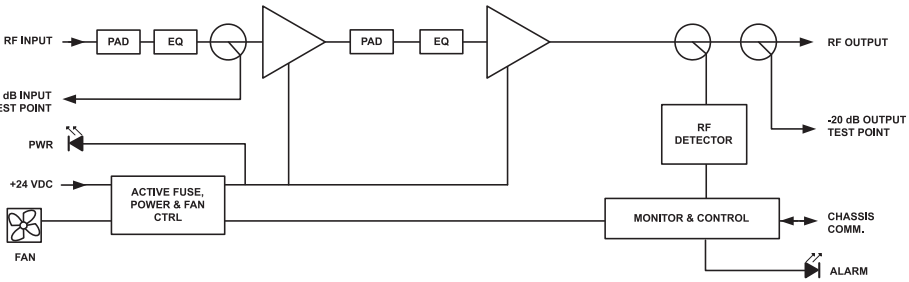
Forward RF Amplifiers (cont'd):

Functional Schematics

Single Stage Forward Amplifier



Dual Stage Forward Amplifier



Amplifiers:

Return RF/IF Amplifiers:

- 20 & 28 dB, 5-200 MHz Si PP versions available
- High performance MCX connectors (with optional F connectors)
- Front access input & output test points
- Front access to plug-in pad & EQ locations
- Front LEDs provide an indication of amplifier power & status
- Voltage, current, temperature, fan status, nominal RF output power, & RF output power alarm threshold are easily monitored & controlled over the network (HMS compliant (SNMP v2c)), through a web browser or proprietary network interface; e-mail alarm notification is also supported
- Amplifier module takes up 2 slots in MAXNET®II chassis (total of 24 slots)

Return RF/IF Amplifier Specifications

PART NUMBER (3)	GAIN		GAIN AND SLOPE CONTROL (1)	TEST POINTS (4)	RETURN LOSS	DISTORTION PERFORMANCE					NOISE FIGURE	OPERATING CURRENT (2)
	BW (MHz)	Gain (dB)	PLUG IN	I/O (dB)	I/O (dB)	Output Level (dBmV)	Ch. Load (#)	Ch. Slope (dB)	CTB (-dB)	CSO (-dB)	(dB)	(mA)
QMP200-28L	5-200	28 +/- 1.0	INPUT / OUTPUT	20 +/- 1.0	18	50	10	0	74	65	7	140
QMP200-20L	5-200	20 +/- 1.0	INPUT / OUTPUT	20 +/- 1.0	18	50	10	0	75	65	7	140
QMP200-28LF	5-200	28 +/- 1.0	INPUT / OUTPUT	20 +/- 1.0	18	50	10	0	74	65	7	140
QMP200-20LF	5-200	20 +/- 1.0	INPUT / OUTPUT	20 +/- 1.0	18	50	10	0	75	65	7	140

NOTES:

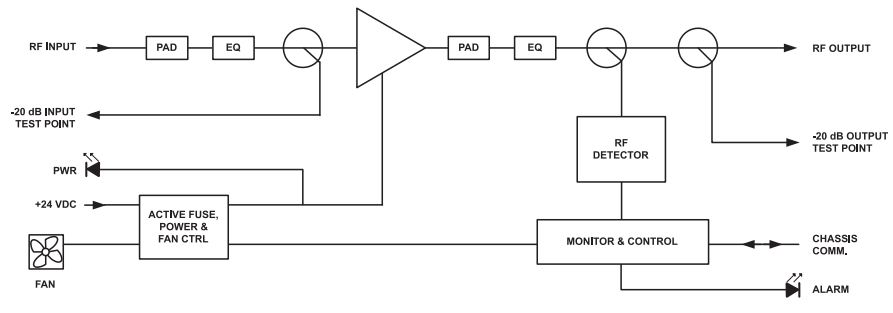
1) See functional schematics.
2) DC load current at + 24 VDC.
3) L = MCX connectors; LF = F connectors.
4) At input test point specified with 0 dB plug-in attenuator and 0 dB plug-in EQ.

Ordering Information

Part Number	Description
QMP200-28L	200 MHz, 28 dB Gain Single Stage, MCX Connectors
QMP200-20L	200 MHz, 20 dB Gain Single Stage, MCX Connectors
QMP200-28LF	200 MHz, 28 dB Gain Single Stage, F Connectors
QMP200-20LF	200 MHz, 20 dB Gain Single Stage, F Connectors

Functional Schematic

Return RF/IF Amplifier



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RF & Optical Signal Management

Plug-in Pads/EQs:

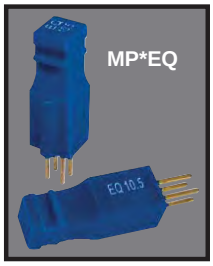
- Pads & EQs can be easily inserted or removed with fingertips or by using the pad tool (pad tool part # MPPT - see MAXNET®II Accessories spec sheet)
- Plug-in pads are available from 0-20 dB in 1 dB increments, 16-20 dB recommended for return band only

Plug-in Pad/EQ Specifications

dB VALUES	FREQ. RANGE	IMPEDANCE	RETURN LOSS	TILT	FLATNESS
0 dB	5 - 1000 MHz	75 ohm	≥ 20 dB	N/A	N/A
1-20 dB	5 - 1000 MHz	75 ohm	≥ 20 dB	≤ 0.5 dB	+/- 0.2 dB

EQ VALUES	SLOPE 1000/45 MHz	INSERTION LOSS	EQUALIZER TOLERANCE	RETURN LOSS	IMPEDANCE
1.5 dB	1.4 dB	≤ 1 dB	+/- 0.5 dB	≥ 18 dB	75 ohm
3 dB	3.2 dB				
4.5 dB	3.8 dB				
6 dB	5.1 dB				
7.5 dB	6.2 dB				
9 dB	7.1 dB				
10.5 dB	8.7 dB				

* = PAD Value



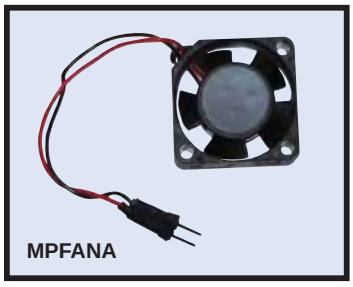
* = EQ Value

Ordering Information

Part Number	Description
MP*PAD	Plug-in Pad (* = dB value, 0 to 20 dB) (must order in quantities of 10)
MP*EQ	Plug-in Equalizer, 1000 MHz (* = dB value, 1.5 to 10.5 dB) (must order in quantities of 10)

Replacement Fan:

- Front access replacement fan



Ordering Information

Part Number	Description
MPFANA	Replacement Fan for MAXNET II Receivers, Power Supplies & Amplifiers

Specifications subject to change without notice

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Advanced Media Technologies® Inc. · 3150 SW 15th Street Deerfield Beach, FL 33442
(888) 293-5856 · (954) 427-5711 · Fax (954) 427-9688