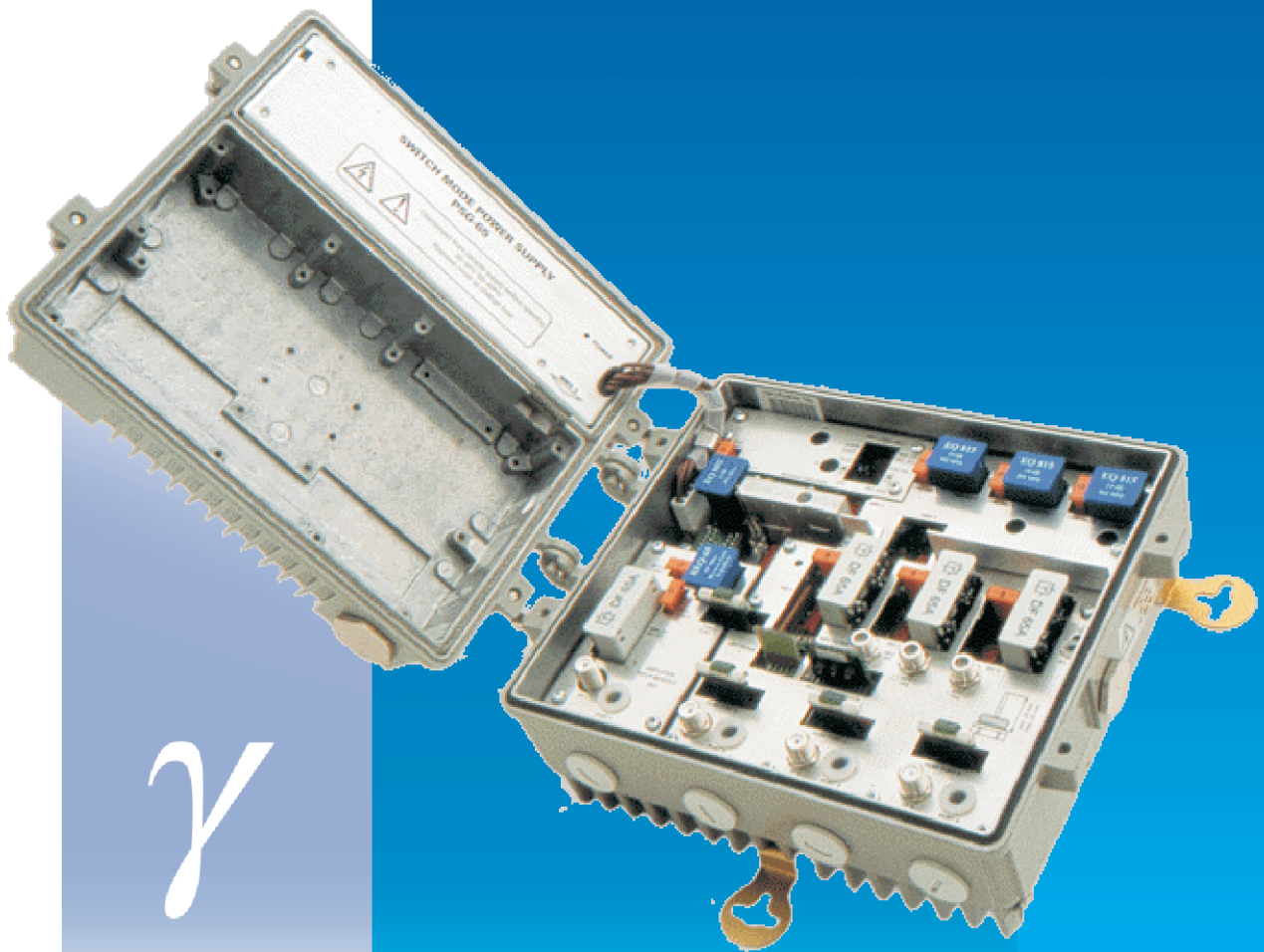




VECTOR



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***broadband distribution node
GAMMA U8X-33A-AF8***

INTRODUCTION

Broadband distribution node GAMMA can be used as a compact, multiport optical node or distribution amplifier. Its modular design allows flexible configuration and step-by-step development of the system.

The modern GaAs technology applied in GAMMA guarantees very high operational RF levels with low intermodulation distortions while consuming little power. GAMMA used as a compact optical node offers the possibility of full redundancy in forward path with AGC functionality and redundancy or segmentation in reverse path.

Availability of DWDM technology in compliance with ITU-T recommendation leads to implementation of modern concept of optical access network with passive hub and centralized distribution of services at the same time limiting the number of fibres. GAMMA has the ability to interact with different Network Management Systems and to be remotely configured and controlled as well.

FIBRE OPTIC

- Optical receiver with redundancy option
- Single, redundant or dual optical reverse path with two independent optical transmitters using 1310nm FP or DFB lasers as well as 1550nm DFB lasers

RF TRANSMISSION

- Very high output level with low power consumption (GaAs technology)
- Interstage adjustments of gain and slope for each output separately
- Plugged-in ingress switch in each reverse path

MONITORING / MANAGEMENT

- Prepared for NMS transponder built in upper cover
- Management of three-state ingress switches separately for each reverse path
- Control of receiver and transmitter's parameters
- Monitoring of voltages, current consumption, temperature inside the housing and external bi-state switches



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GAMMA U8X-33A-AF8

- Simple conversion to optical node
- AGC controlled by pilot tone
- Network Management System NMS
- Full and independent control of gain and slope for each of three active outputs (GaAs Push Pull)
- IP 67 compact housing
- Local power insertion up to 15 A (Power Inserter) and current passing for each RF port up to 12 A

RF PARAMETERS

PARAMETER	FWD. PATH	REV. PATH	COMMENT
Bandwidth [MHz]	85 ÷ 862	5 ÷ 65	With plug-in diplex filters DF65A
Forward gain [dB]	3 x 38 ± 0.75	-	Input port 1 to each output port 2,3 and 4 with diplex filters, input equalizer, 0dB pads and AT800 jumpers
Reverse gain [dB]	-	20 ± 0.75	Each port 2,3,4 to reverse output 1 with diplex filters, 0dB pads, 0dB equalizer and configuration module RCG 01
Noise figure [dB]	≤ 7	≤ 12	With diplex filters, 0dB pads and equalizers and configuration module RCG 01
Slope [dB]	± 1	± 1	
Flatness [dB]	± 1	± 0.75	
Operational output level [dBμV]	3 x 110	95	Forward : 9dB interstage slope, 42 carriers CENELEC (EN 50083-3)
Distortion specification @ Operational output level (typical)			
CTB [dBc]	≤ -60	-	According to EN 50083-3 9dB interstage slope, 42 carriers CENELEC
CSO [dBc]	≤ -60	-	
NPR [dBc]	-	≤ -60	For reverse amplifier module RAG 29-1; output power 105dBμV
Third order beat IMD3 [dBc] @ 110dBμV	-	≤ -60	According to EN 50083-3
Second order beat IMD2 [dBc] @ 102dBμV	-	≤ -60	According to EN 50083-3
HUM modulation @ 12A [dBc]			
5 ÷ 15 MHz	-	≤ -55	@ 791,25MHz
15 ÷ 65 MHz	-	≤ -60	
85 ÷ 862 MHz	≤ -60	-	
RF return loss [dB]	≤ -18	≤ -18	For f < 40MHz; for f > 40MHz: 18dB - 1,5dB/oct
Test points @ output ports 2,3,4 [dB]	-20 ± 1	-20 ± 1	Directional coupler, insertion for reverse path
Test point @ input port 1 [dB]	-20 ± 1.5	-20 ± 1	Bi - directional
Test point @ reverse inputs [dB]	-	-20 ± 1	Directional coupler



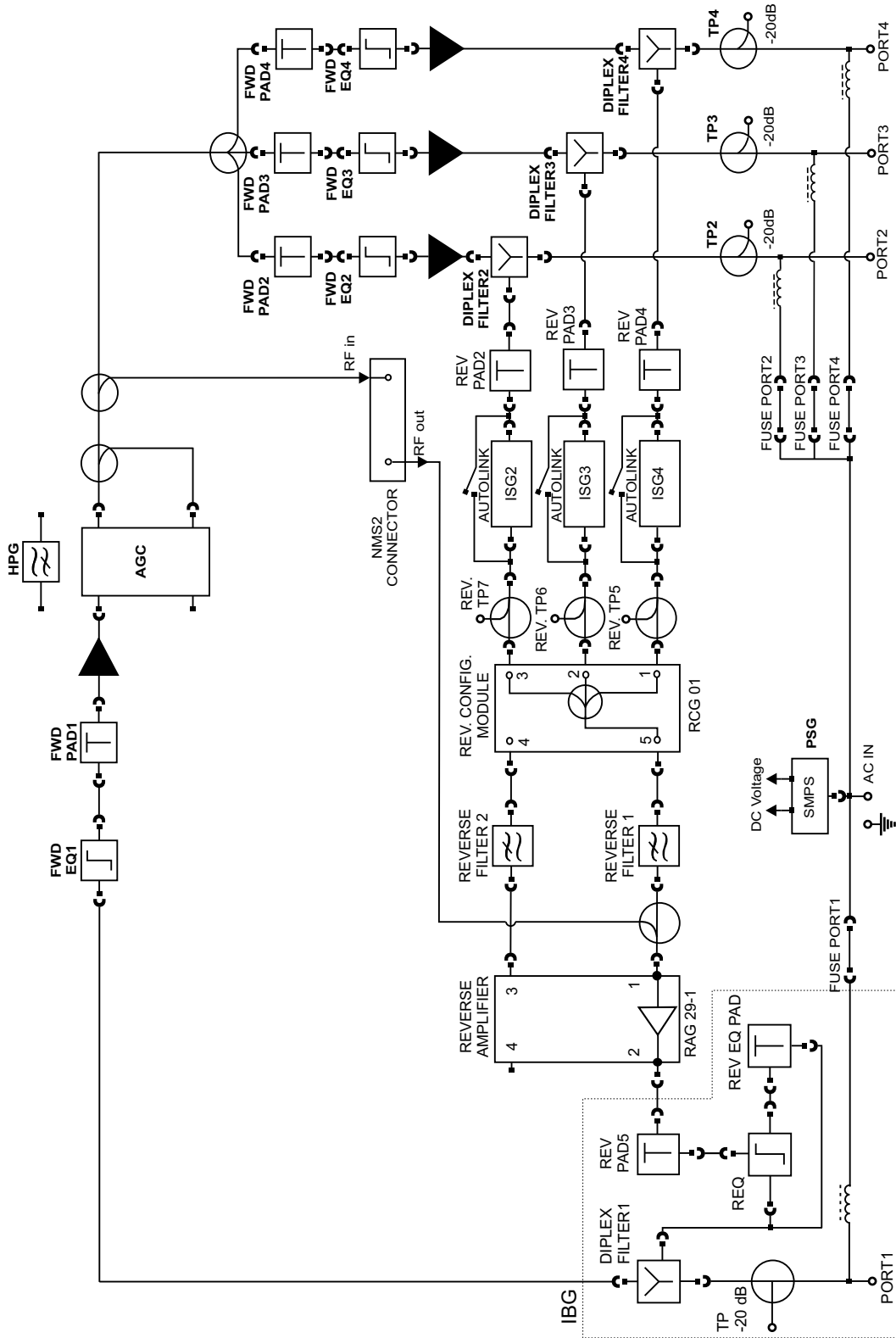
GENERAL PARAMETERS

PARAMETER	VALUE	COMMENT
Number of RF ports	4 x PG11	Others on special request
AC voltage range [V]	35 ÷ 65	AC 50 ÷ 60Hz
Maximum current passing through local power inserter AC IN [A]	15	
Maximum AC current passing [A]	12	All RF ports
AC current consumption [mA]	35VAC 48VAC 65VAC	1400 1000 790
AC power consumption [W]	38	With reverse amplifier RAG 29-1
Protection class IP	IP 67	
Operating ambient temperature range [°C]	-40 ÷ +60	
MTBF [years]	>30	Ambient temperature T = 25°C
Dimensions (W x L x H) [mm]	245 x 195 x 125	
Weight [kg]	4,3	



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BLOCK DIAGRAM



VECTOR

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