



Eyal MAG Ltd.

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***MULTI CARRIER POWER AMPLIFIER
FOR W-CDMA REPEATER SYSTEMS
2 AND 4 W-CDMA CARRIERS
MCPA-4030R 30 W***

Features:



- **CDMA IS-95C, 2 & 4 W-CDMA Carriers**
- **2150 to 2170 MHz**
- **30 W Output Power**
- **55 dB Gain**
- **27 V DC Voltage Range**
- **- 40°C to +85°C Operating Temperature Range**

Feedforward Technology

- **Linear Main Amplifiers Design, Utilizing LD-MOS Transistors.**
- **Optimum Error Amplifier Design for Perfect IMD Suppression.**
- **Low Loss Delay Filters.**
- **Innovative Adaptive Feedforward Correction Algorithm (Pending Patent).**
- **DSP Based Controller.**
- **Superior IMD Suppression Over The Full Operating Frequency and Temperature Range.**
- **Minimized DC Current, High Efficiency.**
- **Alarms and Indications Per Customer Request.**
- **Mechanical Design: Rack Mount and Modules**



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SPECIFICATION SUMMARY **FOR W-CDMA MCPA FOR REPEATER APPLICATIONS** **MCPA-4030R**

PARAMETERS	SPEC.
FREQ. RANGE	2150-2170 MHz
OPERATING BANDWIDTH	20 MHz
GAIN	55 dB
GAIN FLATNESS	±0.2 dB Over any 5 MHz
GAIN Vs TEMP.	±1.0 dB
INPUT VSWR	1.4:1
OUTPUT VSWR	1.4:1
PHASE FLATNESS	±2°
INPUT DYNAMIC RANGE	25 dB
OUTPUT DYNAMIC RANGE	19.0 to 44.7 dBm
EVM	7%
W-CDMA 2 FA & 4 FA	30 W
ACLR AT ±5.0 MHz P _{out} =30 W 2 & 4W-CDMA Carriers	-48 dBc Channel Integration B.W: 3.84 MHz
ACLR AT ±10.0 MHz P _{out} =30 W 2 & 4 W-CDMA Carriers	-53 dBc Channel Integration B.W: 3.84 MHz
SPECTRUM EMISSION MASK 30 W 1 CARRIER	PER 3GPP TS-25.141 At 25°C
±2.5 MHz	-14 dBm / 30 KHz
±3.5 MHz	-20 dBm / 30 KHz
±4.0 MHz	-20 dBm / 30 KHz
±8.0 MHz	-26 dBm / 30 KHz
SUPPLY VOLTAGE	27 V ± 1 V 24 V to 28 V With degradation of performance
SUPPLY CURRENT	15 A (P _o =30 W)
ALARMS & STATUS	SEE PAGE 4
OPERATING TEMP. RANGE	-30°C ÷ +60°C AMBIENT
STORAGE TEMP. RANGE	-40°C- +85°C
SIZE	354.9 x 266.7 x 54.0 mm
TYPE	ADAPTIVE FEED FORWARD

- The input signal is generated by the use of four-signal generator and a four-way combiner.
- Carrier modulation: W-CDMA per 3GPP, Chip rate: 3.84 Mbps, 64 channels.
- The ACLR measurement depends on the test set-up.
- **ACLR Measurement using 1 to 4 carriers.**
- **3GPP Spur Emission Mask using only 1 carrier.**