

MOT 1000 PLATINUM B. IV-V



The **MOT 1000 Platinum** is a 1KW TV transmitter made up of the **MOT 10/15 Platinum** modulator/transmitter, 2 hybrid-combined **\$ 500** TV amplifiers, designed with LDMOS technology. Using the complete alarm and digitalized information systems of the MOT 1000, the user can control the following parameters: forward power, reflected power, service voltages, video level, audio level, synchronism level and temperature. The transmitter includes protections against: forward power excess, SWR excess, power supply over-voltage, over-current and over-voltage in the final stage and temperature. The MOT 1000 Platinum also includes digital telemetry output and Notch BPF (Band Pass Filter).

TECHNICAL FEATURES	
MOT 10/15 PLATINUM	
RF	
FREQUENCY RANGE	Bands IV,V (470-860MHz)
OUTPUT POWER	0 ~ 15W adjustable
OUTPUT POWER CONTROL	Automatic or manual (switching selectable)
CHANNEL LOCAL OSCILLATOR: FREQUENCY STABILITY	2.5ppm (0.05 ppm optional)
SPURIOUS & HARMONICS LEVEL	< -60dB
RF OUTPUT CONNECTOR/IMPEDANCE	N Female / 50Ω
VIDEO	
INPUT CONNECTOR/IMPEDANCE	BNC Female / 75Ω
NOMINAL INPUT LEVEL	1Vpp
INPUT RETURN LOSS	≥ 30dB up to 5MHz
DC RESTORER	Clamped to Back Porch
WHITE CLIPPER	90 ~ 115% adjustable (chrominance non-affected)
GROUP DELAY PRE-CORRECTOR	8 correcting cells
GROUP DELAY	≤ 50ns (with professional VSB filter)
FREQUENCY RESPONSE	±0.5dB
DIFFERENTIAL GAIN	≤ 5%
DIFFERENTIAL PHASE	≤ ± 5%
LUMINANCE NON-LINEARITY	≤ 5%
SIGNAL TO HUM RATIO	45dB (weighted)
S/N RATIO	≥ 65dB weighted, ≥ 55dB un-weighted
BLACK LEVEL VARIATION	≤ 2%
2T K FACTOR	≤ 1%

VIDEO IF	32.7 ~ 45.75MHz (customer requested)
EXTERNAL LINK IF LEVEL	-15 ~ -10dBm
AUDIO	
INPUT CONNECTOR/IMPEDANCE	XLR Female 600Ω / 10KΩ balanced
NOMINAL INPUT LEVEL	2.2Vpp (-10 to + 6dB adjustable)
PRE-ENPHASIS	Options: Flat, 50μs or 75μs
LOW PASS FILTER	15KHz, 100KHz
LIMITATION CIRCUIT	Δfnom + 1 dB
FREQUENCY RESPONSE	± 0.5 dB
HARMONIC DISTORTION	≤ 0.5%
INTERMODULATION DISTORTION	d2 ≤ - 60dB, d3 ≤ - 60dB
FM CCIR S/N RATIO	≤ 60dB weighted, ≤ 60dB un-weighted (ref. 50KHz)
AM S/N RATIO	≤ 70dB asynchronous, ≤ 50dB synchronous (ref. 100%)
INTERMEDIATE FREQUENCY	From 30.5 to 41.25MHz (customer requested)
IF LEVEL (ON EXTERNAL LINK)	Adjustable
CHANNEL LOCAL OSCILLATOR	
OFFSET	± 32KHz max.
FREQUENCY STABILITY	± 2.5ppm from - 5 to + 45°C
REFERENCE INTERNAL INPUT FOR THE PRECISION	
OSCILLATOR	5MHz
OUTPUT LEVEL (MIXER INPUT)	+ 7dBm ± 1dB
FM CCIR S/N RATIO	≥ 60dB weighted, ≥ 60dB un-weighted (ref. 50 KHz)
GENERAL SPECIFICATIONS	
AC POWER SUPPLY	90 ~ 260VAC, 50/60Hz
CABINET	3RU Height (19" standard rack)
WEIGHT	28.66Lb (13Kg)
OPERATING TEMPERATURE RANGE	- 5 ~ + 45°C
RELATIVE HUMIDITY RANGE	20 to 90% non-condensed
REMOTE CONTROL/TELEMETRY	DB-9 Female
8 500	
GENERAL SPECIFICATIONS	
FREQUENCY RANGE	Bands IV, V (470 ~ 860MHz)
AMPLIFYING CLASS	AB1 Class
COOLING	Air forced with axial blowers
OPERATING TEMPERATURE RANGE	- 10 ~ + 45°C
STORAGE TEMPERATURE RANGE	- 30 ~ + 85°C
MAXIMUM RELATIVE HUMIDITY	90% (without condensation)
POWER SUPPLY	180 ~ 240VAC, single-phase, 50/60Hz (other under request)
COMSUMPTION	1.8KVA average
PROTECTIONS	Excess of: Forward power, SWR, Temperature, power supply voltage, final stage consumption, and input power
DIMENSIONS	453 x 623 x 222mm (W x D x H)
CABINET	5RU (19" Standard rack)
WEIGHT	30Kg (66lbs)
INPUT PARAMETERS	
INPUT IMPEDANCE	50Ω asymmetrical
INPUT CONNECTOR	N Female
INPUT SWR	1.7 : 1 typical (2:1 maximum)
NOMIMAL RF INPUT LEVEL	8Wblp
OUTPUT PARAMETERS	
NOMINAL OUTPUT POWER	500Wsp (blp)
TYPICAL OUTPUT POWER	500Wsp (blp)
OUTPUT IMPEDANCE	50Ω asymmetrical
OUTPUT CONNECTOR	DIN 7/16" Female (other connector type under request)
RF MONITOR CONNECTOR	BNC Female

RF MONITOR SAMPLE LEVEL	- 60dBc
MAXIMUM LOAD SWR	2 : 1
INTERMODULATION DISTORTION	Better than -58 dB (at nominal output power)
SPURIOUS	Better than -58dB (with output filter)
NOTE	OMB LDMOS power amplifiers are ready for digital TV

GENERAL SPECIFICATIONS

NOMINAL OUTPUT POWER	1kW
CONSUMPTION	1.8W
DIMENSIONS	1.240 x 590 x 900mm (H x W x H)
WEIGHT	87Kg (191.4lbs)

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