

## TECHNICAL CHARACTERISTICS

<b>VIDEO CHARACTERISTICS (MT SERIES)</b>	Input connector	BNC unbalanced
	Input impedance	75 Ω
	Input signal level	1 Vp.p.
	Input return loss	>30 dB
	Differential gain	≤ 4 %
	Differential phase	≤ ± 3°
	Amplitude frequency response (in the vision band)	≤ ± 0.5 dB
	Group delay frequency response (in the vision band)	≤ ± 50 nS
S/N ratio	> 60 dB	

<b>AUDIO CHARACTERISTICS (MT SERIES)</b>	Input connector	XLR balanced
	Input impedance	600 Ω
	THD (50 KHz peak deviation at 1 KHz)	≤ 0.4 %
	S/N (50 KHz peak deviation at 1 KHz)	>60 dB
	Deviation from preemphasis curve (20 Hz to 15 KHz)	± 0.5 dB

<b>METERING</b>	Forward and reflected power, DC voltages and currents
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<b>ALARMS</b>	VSWR, over temperature, video signal missing, cooling system failure, overdriving
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<b>POWER SUPPLY</b>	Operating voltage	208/220/380 Vac ±10%, 47 to 62 Hz three phases (single phase power supply available on request)
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<b>GENERAL OPERATING CONDITIONS</b>	Cooling	forced air with axial fans (liquid cooling on request)
	Operating temperature	-5° ÷ +45° C
	Humidity	95% max

<b>WEIGHTS &amp; SIZES</b>	<b>Transmitter</b>		
	Transmitter	Weight	Size (WxHxD)
	MTI 2000/S, MTV 2000/S	260 kg	1 cabinet: 625 x 1160 x 850 mm
	MTI 2500/S, MTV 2500/S	260 kg	1 cabinet: 625 x 1160 x 850 mm
	MTI 3000/S, MTV 3000/S	260 kg	1 cabinet: 625 x 1160 x 850 mm
	MTI 5000/S, MTV 5000/S	490 kg	1 cabinet: 625 x 1830 x 950 mm
	MTI 10000/S, MTV 10000/S	1040 kg	2 cabinets: 625 x 2000 x 950 mm
	MTI 20000/S, MTV 20000/S	1880 kg	3 cabinets: 625 x 2000 x 950 mm
	<b>Amplifier</b>		
	Amplifier	Weight	Size (WxHxD)
	KBI 2000, KBV 2000	240 kg	1 cabinet: 625 x 1160 x 850 mm
	KBI 2500, KBV 2500	240 kg	1 cabinet: 625 x 1160 x 850 mm
	KBI 3000, KBV 3000	240 kg	1 cabinet: 625 x 1160 x 850 mm
	KBI 5000, KBV 5000	470 kg	1 cabinet: 625 x 1830 x 950 mm
	KBI 10000, KBV 10000	1020 kg	2 cabinets: 625 x 2000 x 950 mm
	KBI 20000, KBV 20000	1860 kg	3 cabinets: 625 x 2000 x 950 mm

Features and specifications subject to change without notice.



## VHF Solid State High Power Television Transmitters / Amplifiers

MT Series / KB Series



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# VHF Solid State High Power Television Transmitters / Amplifiers

## MT Series / KB Series

- **Digital upgradeable.** Thanks to the high linearity of the internal MOSFET amplifier modules, the MT Series transmitters and KB Series amplifiers are designed to grant extremely high performances for analog modulation and for digital television modulation (DVB-T, ATSC, etc...). Each MT's Series transmitter is also easily upgradeable for digital transmission. Optional kits are available for field digital upgrading. This reduces the cost of later upgrade to digital while providing the best quality of analogue service currently available.
- **New MOSFET technology.** Using the latest MOSFET technology and a new PA design, the MT Series transmitters and KB Series amplifiers are extremely rugged, with excellent thermal characteristics, exhibiting at the same time superior IMD and linearity performances.
- **High gain.** The KB Series amplifiers have a very high gain with only 5 watt of maximum drive power required to obtain the full nominal output power.

- **Broadband.** The amplification circuits are fully broadband, so enabling a fast and agile frequency change without any retuning needing.
- **Modular assembly.** Easy removable identical and interchangeable power amplifier modules and power supplies simplify the maintenance, reducing spare requirement and service costs.
- **On-air serviceability.** Power supplies and power amplifier modules can be safely removed during operation, for on-air maintenance. Failure or module removal keep always transmitter on-air.
- **High redundancy.** The RF independent modules with their own separate power supply and combining system architecture assure high redundancy degree and uninterrupted service even in case of PA or power supply failure.
- **Dual driver.** High on-air reliability is assured by using optional dual driver configuration.
- **Power supply.** A rugged, high-efficiency (> 93%) power supply support each PA module. Power supplies are protected from incoming AC line overvoltage, overcurrent, transient and lightning.
- **Electronic protections system** gives full reliability and protects the units against all system or environmental anomalies.
- **Advanced LCD monitoring system** provide full front panel transmitter control capabilities and extensive metering. Standard or special remote control interface are also available.
- **Cooling.** An oversized standard air cooling system with internal fans extends transistors life. In the standard version, air enters through removable filters in the front panel of each PA module. Air is exhausted from the rear of cabinet or from the top (optional). A special version is also available when it is necessary to separate transmitter cooling air from building air.
- **Meets or exceeds** all international standards for safety and electrical requirements.



SURGE AND LIGHTNING PROTECTION SYSTEM



SWITCHING POWER SUPPLY



1500 W PA MODULE



## TECHNICAL CHARACTERISTICS

### ELECTRICAL CHARACTERISTICS

<b>Frequency range:</b>			
MTI Series, KBI Series		45-90 MHz	
MTV Series, KBV Series		174-230 MHz	
<b>Output power:</b>			
<b>Transmitter</b>	<b>Amplifier</b>	<b>Analog Power</b>	<b>Digital Power</b>
MTI 2000/S, MTV 2000/S	KBI 2000, KBV 2000	2 kWps	500 Wrms
MTI 2500/S, MTV 2500/S	KBI 2500, KBV 2500	2.5 kWps	600 Wrms
MTI 3000/S, MTV 3000/S	KBI 3000, KBV 3000	3 kWps	800 Wrms
MTI 5000/S, MTV 5000/S	KBI 5000, KBV 5000	5 kWps	1200 Wrms
MTI 10000/S, MTV 10000/S	KBI 10000, KBV 10000	10 kWps	2400 Wrms
MTI 20000/S, MTV 20000/S	KBI 20000, KBV 20000	20 kWps	4800 Wrms
Input power (KB series only)			max. 5 Wps
<b>Power Consumption (at maximum power with black video signal):</b>			
<b>Transmitter</b>		<b>Consumption</b>	
MTI 2000/S, MTV 2000/S		5440 VA	
MTI 2500/S, MTV 2500/S		6020 VA	
MTI 3000/S, MTV 3000/S		7160 VA	
MTI 5000/S, MTV 5000/S		12060 VA	
MTI 10000/S, MTV 10000/S		23880 VA	
MTI 20000/S, MTV 20000/S		47580 VA	
<b>Amplifier</b>		<b>Consumption</b>	
KBI 2000, KBV 2000		5360 VA	
KBI 2500, KBV 2500		5940 VA	
KBI 3000, KBV 3000		7080 VA	
KBI 5000, KBV 5000		11980 VA	
KBI 10000, KBV 10000		23800 VA	
KBI 20000, KBV 20000		47500 VA	
In/out impedance			50 Ω
Input connector (KB series only)			N type (others on request)
<b>Output connector:</b>			
Up to 3 kWps		EIA 7/8" (others on request)	
5 kWps		EIA 1+5/8" (others on request)	
10 kWps & 20 kWps		EIA 3+1/8" (others on request)	
Spurious and harmonic emissions (ref. to carrier)			≤ - 60 dBc
Power stability			< 1%
Intermodulation (IMD-DIN 45004 -8, -16, -10 dB)			< -54 dBc (typ. - 56 dBc)