



## T V T Series Tube VHF TV 6 / 12.5 / 20 / 30 kW VHF Television Transmitters

- Available as Transmitters or Translators
- Available in all TV Standards Worldwide
- Stereo / dual sound compatible
- Common amplification audio and video carriers up to 20 kW
- Separate amplification on 30 kW model, optional on 20 kW model
- Single Tube, modular construction
- Driver suitable for precision offset
- Oversized cooling systems
- LOCAL or REMOTE mode control logic
- Anode HV power supply in 3 equal sections
- Sequential soft start turn-on
- Standardized subsystems, easy removal and testing
- Cavities are tunable to any VHF channel
- Full protection for: Loss of Video signal; Overload & short-circuits, Phase loss on 3-phase line, Inefficiency of cooling system, Incorrect operation or adjustment, RF mismatching, Excessive VSWR

### Technical Specifications

Frequency range	Low Band and High Band VHF
TV Standards	Any (specify with order)
Video emission class	C3F (A5C)
Audio emission class	S1=F3E (F3)
Audio FM carrier deviation	S2=F3E (F3) or NICAM 728
Stereo system	50 kHz / 25 kHz (standard M/N) 2XF3E (IRT) or NICAM 728 or 1XF3E (BTSC)
Output connector/impedance	7/8" EIA flange / 50 ohm
Video/Audio power ratio	Mono=10 dB or S1=13 dB or S2=20 dB (NICAM=20 dB)
Input connector/impedance	BNC / Video 75 ohm Audio 600 ohm NICAM 50 ohm
Input level	Video 1 V p-p $\pm$ 6 dB Return loss >34 dB Audio 6 dBm $\pm$ 10 dB IF NICAM 0 dBm
Audio pre-emphasis	50 $\mu$ sec or 75 $\mu$ sec defeatable
RF monitor outputs	50 ohm unbalanced 1 V rms nominal
Receiver delay precorrector	Built-in and defeatable
Precorrector	(NICAM group delay) Linear
Operating temperature	-10°C to 45°C
Maximum relative humidity	90%
Operating altitude	Up to 2000 m asl, others on req
Acoustic noise	<65 dBA
A C Line requirements (specify with order)	Any electrical system 50 Hz or 60 Hz, $\pm$ 2 Hz

Model	6 kW	12.5 kW	20 kW	30 kW
Output	1 5/8"	1 5/8"	3 1/8"	3 1/8"
Power req,	17 kVA	29 kVA	50 kVA	75 kVA
Width	1210 mm	1652 mm	1815 mm	1815 mm
Height	2183 mm	2183 mm	2183 mm	2183 mm
Depth	1194 mm	1194 mm	1194 mm	1194 mm
Weight	550 Kg	600 Kg	900 Kg	1000 Kg

### Transmission Characteristics

RF power variation (W/B)	$\pm$ 0.25 dB
Carriers frequency tolerance	$\pm$ 250 Hz for three months
Precision Offset (option)	$\pm$ 1 Hz

### Low Band VHF models:

TV/I-5/CT	(TH 371) 6 KW
TV/I-10/CT	(TH 371) 12.5 KW
TV/I-20/ST	(TH 371) 20 KW
TV/I-30/ST	(TH 371) 30 KW

External driver freq. (option)	5 MHz
Spurious emission	Below -60 dB, not >1 mW
Out-of-band IM products	Below -60 dB
In-band IM products	60 dB
<b>Video</b>	
Differential gain	<5%
Differential phase	< $\pm$ 3°
Pulse 2T distortion	$\pm$ 5%
Periodic noise (hum)	Below -48 dB (p-p)
Random noise S/N	Below -56 dB rms
Non-periodic noise	Below -60 dB (p-p)
Response at half-frame	<2%
Reponse at line frequency	<2%
Static linarity	<10%
Group delay at 4.43 or 3.58 MHz	< $\pm$ 25 ns
(without sound trap and receiver precorrector filter)	
Response level/frequency	$\pm$ 0.5 dB (Cv-0.75 MHz to Cv+5.5 MHz) 53 dB at Cv-4.43 or 3.58 Mhz 20 dB below -1.25 MHz 20 dB above Cs

### Audio

Harmonic distortion (from 30 Hz to 15 kHz)	<0.3%
Harmonic IM distortion (from 5 kHz to 15 kHz)	D2 <0.35% D3 <0.50%
FM noise (unweighted)	<-60 dB
FM noise (weighted)	<-70 dB
AM synchronous modulation	<-40 dB
AM noise	<-50 dB
Response level/frequency	40 Hz to 15 kHz, $\pm$ 0.2 dB
Multisound IRT	
Crosstalk (stereo)	>40 dB
(dual audio)	>70 dB
Multisound NICAM	
Response level/frequency	$\pm$ 0.5 dB
NICAM	
Group delay NICAM	<50 ns
Multisound BTSC	
Crosstalk (stereo)	>40 dB

### High Band VHF models:

TV/III-5/CT	(TH 371) 6 KW
TV/III-10/CT	(TH 371) 12.5 KW
TV/III-20/CT & ST	(TH 371) 20 KW
TV/III-30/ST	(TH 371) 30 KW