

LPV Series™ VHF Transmitters/Translators

Model LPV-4000 Video/Data Transmitter, Digital Service (Analog Compatible)

Other Models and Configurations Available

The new EMCEE LPV Series™ represents the highest evolution in a low power VHF triple conversion design transmitter or translator using LDMOS technology. Inherently low distortion minimizes the need for extensive corrective circuitry and provides for excellent performance in lower power digital and analog applications. Broadband circuitry complemented by modular packaging enables simplified maintenance with reduced spare requirements and at the same time provides a path for channel flexibility. A new generation, EMCEE designed, low phase-noise synthesizer/local oscillator chain provides built-in channel agility together with GPS/NAVSTAR or LORAN synchronizing capability for high precision frequency control and co-channel interference reduction. The Class AB amplifier design incorporates soft-fail technology, so one failed amplifier does not constitute a service outage. Hot-swappable plug-in power supplies provide for simple change out and optional N+1 or N+2 redundancy. Front panel monitoring of all internal voltages and forward and reflected power is provided in an easy to read LCD display. A front panel color LED matrix provides an “at a glance” determination of the transmitter status and alarm modes. Web based remote control interfacing for critical transmitter functions and monitoring is available via the rear chassis connections. A standard browser is all of the software that is needed to remotely monitor and control the transmitter. The LPV Series is the perfect choice for transition into digital service and for lower power analog.



Shown with DRP-1000

Features

- High Reliability
- Modular Amplifier Design
- Analog & Digital Compatible
- Fully Synthesized
- Modular Power Supply Design
- Minimum Operator Adjustments
- Low Power Consumption

Benefits

- LDMOS Technology
- Ease of Maintenance
- Versatility
- Built-in Channel Agility
- Plug-In Hot-Swap Replacement
- Simplified Operation
- Reduced Cost Of Operation

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SPECIFICATIONS – LPV SERIES TRANSMITTERS

Model LPV-4000 (Other Configurations Available)

<i>ANALOG (VISUAL) SERVICE</i>		<i>DIGITAL SERVICE</i>	
Output Power	1250 Watts Peak Visual Power	Output Power ¹	400 Watts Average (DTV) Power
Emission	5M75C3F	Emission	6M00D7W
Color Transmission	NTSC, PAL, SECAM	Modulation Mode	QPSK/16/64/256QAM, 8 OR 16 VSB
Output Frequency	Band 1/3 54-88/170-230 MHz	Output Frequency	Band 1/3 54-88/170-230 MHz
Frequency Stability	±1 KHz	Frequency Stability	±1 KHz, <1Hz with GPS input
Spurious Products ¹	-60 dB	Spectral Mask ¹ Per FCC	-37dB @ channel edge, -100 dB @ ±6 MHz Ref Channel edge below Average Power (Watts/5.4 MHz)
Intermodulation (IM3)	<-56dB	Spurious Products	<-60dB
Differential Phase	±2°	Envelope Delay	±5ns
Differential Gain	3%	Frequency Response	±0.5dB
Low Frequency Linearity	3%	Error Vector Magnitude	≤3%, SNR >30dB
Envelope Delay	Better than FCC 73.687 (a) (3)	Output Power Stability	±0.3dB
Sideband Response	Better than FCC 74.936 (b)	Digital Signal to Noise	34dB
Frequency Response ¹	±0.5 dB	Hum & Noise	<-60dB
Output Power Stability	±0.3dB	Phase Noise (Synth)	≤-104dBc/Hz @ 20 KHz
RF Regulation	2%	Harmonic Output	<-60dB
Signal to Noise	55dB	IF Input Level	-5 to -15 dBm
Hum and Noise	-55 dB	Input Impedance	75 Ohm/BNC, 44Mhz
Phase Noise (Synth)	-100 dBc/Hz @ 10 KHz	Output Impedance	50 Ohm/7/8" EIA
K Factor (2T)	2%	GENERAL/MECHANICAL CHARACTERISTICS	
ICPM	3°	(Specific to Both <u>Analog & Digital</u> Service)	
Harmonic Output	-65dB	Operating Temperature, Alt.	0° to +50°C, 10,000 Ft. AMSL
Input Impedance (Composite)	75 Ohm/BNC	Maximum Relative Humidity	95%
Output Impedance	50 Ohm Type N	Weight/Dimensions	
ELECTRICAL CHARACTERISTICS		LPV-4000	180 lbs. 30"H x22"Wx30.25"D
<u>ANALOG</u> (AURAL) SERVICE			
Output Power	-10 dB Ref. to Visual		
Emission	250KF3E		
Frequency Tolerance	NTSC +4.5 MHz ±100 Hz CCIR+5.5 & 6.5 MHz ±100 Hz	Power Requirements	85~264 VAC, 47~63 Hz Power Consumption/PF
Audio Distortion	1.0%	LPV-4000	4070 Watts/4.11kVA/0.98
FM Noise	-60 dB		
AM Noise	-60dB		
Frequency Response	±1 dB		
Deviation	25KHz Mono, 50 KHz Stereo or per CCIR Requirements		

¹Measured at Output of Mask Filter

Specifications Subject to Change