300V MF COMMERCIAL FIXED CHANNEL VIDEO MODULATOR

The DRACOM 300VMF fixed channel video modulator is a quality vestigial sideband heterodyne audio/video modulator that provides a modulated visual and aural RF carrier output on any single channel up to 300 MHz. The 300VMF is designed to accept video and audio baseband signals from a satellite receiver, TV camera, or any compatible input.

- Heterodyne conversion system, in conjunction with the use of a SAW filter, insures optimum vestigial selectivity for adjacent channel headends.
- Accepts standard (sync. Negative) polarity video at 0.7 to 1.5 Vp-p level.
- All level controls are located on the front panel.
- High output power to +55 dBmV.
- A convenient monitor port is provided.
- All aeronautical channels are offset positive with a tolerance of ± 5 kHz as required by FCC rules.

300VMF Fixed Channel Video Modulator Specifications:

300VMF+	
RF	
Frequency Range:	54-300 MHz
Channel Available:	VHF: 2 through 13 Midband: 14 through 22 (a-I) and 95 through 99 (A5-A1) Superband: 23 through 36 (j_w)
F.C.C. Frequency Offsets:	All aeronautical channels offset positive with a tolerance of ±5 kHz
Output Level:	+55 dBmV minimum, (typically adjustable from +40 to +55 dBmV).
Output Impedance:	75 ohms; return loss of 14 dB
A/V Ratio:	Audio Carrier -20 to -10 dB referenced to video carrier, adjustable
Frequency Stability, Visual	Within ±10 kHz of assigned channel frequency. Within ±5 kHz of assigned channel frequency of FCC offset channels

Aural Intercarrier Frequency:	4.5 MHz, ±5 kHz
Spurious Outputs:	-60 dBc minimum, measured at -15 dB A/V ratio and with modulator output level of +55 dBmV
In-Channel C/N:	-60 dB
Broadband Noise:	-80 dBc @ ±30 MHz or greater spacings. (Specified levels are referenced to the video carrier and measured in a 4 MHz bandwidth.)
Video	
Input Level for 87.5%:	1 Vp-p ±3 dB, manual gain adjust with front panel control
Input Impedance:	75 ohms, return loss of 18 dB minimum
Frequency Response:	Flat ±2 dB from 30 Hz to 4.2 MHz
Video S/N:	60 dB minimum, luminance weighted
L/C Delay:	Within 50 nanoseconds of 0 nanoseconds L/C delay (complies with FCC rule 76.605).
Differential Gain:	Less than ±5% (10 to 90% APL)
Differential Phase:	Standard: Less than ± 5° (10 to 90% APL). By special order: Less than ±3° (10 to 90% APL).
Audio	
Input Level for 25 kHz Peak Deviation:	140 mV minimum. Manual gain adjustment with front panel control.
Input Impedance:	10K Ohms, unbalanced.
Pre-emphasis:	75 µ Sec.
Frequency Response:	20 Hz to 15 kHz, +1, -5 dB, referenced to 75 µ Sec. Pre-emphasis curve.
4.5 MHz Intercarrier Stability:	± 5 kHz, 0° C to + 50° C.
Total Harmonic Distortion:	1.5% maximum.
Hum and Noise:	-60 dB minimum, referenced to 25 kHz peak deviation.
General	
AC Power Input:	115 VAC ± 10%, 60 Hz, 10 watts.
Operating Temperature Range:	0° to 50° C (+32° to +122° F), ambient.
Dimensions:	1.75" (h) x 19" (w) x 4.0" (d) 44 mm (h) x 481 mm (w) x 100 mm (d)
Weight:	3.5 lbs. (1.6 kg.)
Connectors:	Video input, Audio Input, monitor and RF output are all type F.