



550VMA COMMERCIAL AGILE VIDEO MODULATOR



The DRACOM 550VMA agile video modulator is a vestigial sideband dual conversion design with synthesized RF output. The 550VMA is designed to accept video and audio baseband signals from a satellite receiver, TV camera, or any compatible input.

- Synthesized operation provides complete frequency agility, allowing front panel selection of any standard CATV channel or UHF TV channel from 54 MHz to 550 MHz
- FCC required channel frequency offsets for aeronautical channels are set by front panel switches. Offset of 0, +12.5 kHz or +25 kHz are programmable.
 - Accepts standard (syn. Negative) polarity video at 0.7 to 1.5 Vp-p level.
 - High quality IF SAW filter eliminates adjacent channel interference.
- IF loop-through capability provides an IF loop prior to channel conversion which provides the capability to replace the standard internally generated IF output with an alternate source composite IF or allows insertion of IF scrambling equipment.

550VMA Agile Video Modulator

Specifications:

550VMA	
RF	
Frequency Range:	82 CATV channels: 54 through 550 MHz, 2 through 78, 95 through 99 UHF broadcast channels: 14 through 27
F.C.C. Frequency Offsets:	Programmable by front panel switches for 0, +12.5 KHz or +25 kHz for aeronautical channels. See programming chart.
Output Level:	+55 dBmV minimum, (typically adjustable from +40 to +55 dBmV).
Output Impedance:	75 ohms; return loss of 12 dB
A/V Ratio:	Audio Carrier -20 to -10 dB referenced to video carrier, adjustable
Frequency Stability, Visual	Within ± 5 kHz of assigned channel frequency.
Aural Intercarrier Frequency:	4.5 MHz, ± 5 kHz
Spurious Outputs:	-60 dBc minimum, -56 dBc worst case, measured at -15 dB A/V ratio and with modulator output level of +55 dBmV
In-Channel C/N:	60 dB typical



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Broadband Noise:	-72 dBc @ ± 12 MHz offset, -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 $\pm 5\%$ (10 to 90% APL)
Differential Phase:	Less than $\pm 5^\circ$ (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, -3 dB, referenced to 75 μ Sec. Pre-emphasis curve.
4.5 MHz Inter-carrier Stability:	± 5 kHz, 0° to $+50^\circ$ C. (32° to 122° F)
Total Harmonic Distortion:	1.5% maximum.
Hum and Noise:	-60 dB minimum, referenced to 25 kHz peak deviation.
Composite IF Loop	
IF Frequency:	45.75 MHz visual carrier, 41.25 MHz aural carrier. Loop output is after SAW filtering.
Loop Level:	+28 dBmV (visual carrier)
Loop Impedance:	75 ohms, return loss of 12 dB minimum
General	
AC Power Input:	115 VAC $\pm 10\%$, 60 Hz, 20 watts.
Operating Temperature Range:	0° to 50° C ($+32^\circ$ to $+122^\circ$ F), ambient.
Dimensions:	1.75" (h) x 19" (w) x 10.2" (d) 44 mm (h) x 481 mm (w) x 256mm (d)
Weight:	5.8 lbs. (2.6 kg.)
Connectors:	Video input, Input loop and RF output are all

type F. Audio input is RCA phono. Phone to F adapter is provided to allow for RCA phone video input.

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