BLONDER TONGUE

MICM Series

Micro Channel Modulator

MICM series of products are fixed-channel analog audio/video modulators available in the following models:

MICM-45D: Is available in NTSC channels 2-79 and 95-99 (54-550 MHz). This 5th generation of the MICM series, equipped with the CALMTones feature, utilizes an Audio AGC (Automatic Gain Control) solution that eliminates variations in loudness level that may be present among various program sources.

MICM-45DS: Is the same as MICM-45D but with stereo audio output.

Features

- Prohibits commercials that accompany broadcast programs from:
  (i) having modulation levels substantially higher than the broadcast program; and
  (ii) having an average maximum loudness substantially higher than that of the broadcast program.
- Provides consistent audio level among all broadcast programs on different channels and among different programs within the same channel
- Compact design allows for deployment of 12 channels in 2RU
- Utilizes SAW filters for improved performance
- Die-cast chassis for RFI immunity
- Integrated Stereo encoder

Ordering Information

Model	Stock #	Description
MICM-45D	7797D	Fixed-channel Audio/Video Modulator, Audio AGC, +45 dBmV, 54-550 MHz
MICM-45DS	7797DS	Fixed-channel Audio/Video Modulator, Audio AGC, Stereo, +45 dBmV, 54-550 MHz
MIRC-12V	7715	Rack Chassis (holds up to 12 modulators)
MIPS-12C	7722C	100-240 VAC; 50/60 Hz power supply (one per chassis)

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toner
cable equipment, inc.
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Specifications

INPUT

Video Connector:	"F" Female
Impedance:	75 Ω
Return Loss:	20 dB
Input Level:	1.0 volt Peak-to-Peak (87.5% depth of modulation)
Frequency Response:	1.0 dB Peak-to-Valley (fv to fv+4.2 MHz)
Peak to Peak Video-to-RMS Hum Ratio:	64 dB
Signal-to-Noise Ratio:	65 dB (Weighted; 4 MHz bandwidth)
Differential Gain:	2.0% (87.5% depth of modulation)
Differential Phase:	2.0 degree (87.5% depth of modulation)
Chrominance/Luminance Delay:	Per FCC Requirements
Mono Audio (standard) Connector:	RCA
Input Impedance:	Greater than 10 kΩ, unbalanced
Input Level: (for 25 kHz deviation)	0.5 to 4.0 volt peak-to-peak (constant AGC range)
Frequency Range:	50 Hz to 12 kHz
Frequency Response:	± 0.5 dB
Total Harmonic Distortion:	1% @ 25 kHz deviation
Signal-to-Noise Ratio:	70 dB
Stereo Audio (optional) Connector:	RCA
Input Impedance:	Greater than 10 kΩ, unbalanced
Input Sensitivity: (for 55 kHz peak deviation)	0.5 to 4.0 volt peak-to-peak (AGC Range with pilot tone)
Frequency Response:	+/-0.75 dB (50 Hz to 12 kHz)
Separation:	20 dB @ 50 Hz to 10 kHz

OUTPUT Modes 1 & 2

Connector:	"F" Female
Impedance:	75 Ω
Return Loss:	15 dB
Frequency Range:	54 to 550 MHz (NTSC CATV Ch. 2 -79 and 95-99)
Power Level:	+45 dBmV
Power Level Range:	10 dB continuously adjustable
Carrier-to-Noise:(In Channel)	63 dB
Broadband Noise:	-90 dBc (@ +45 dBmV output level, 4 MHz band.)
Spurious Outputs:	-66 dBc
Aural/Visual Carrier Ratio:	-11 to -19 dB continuously adjustable
4.5 MHz Aural Inter-carrier Frequency Tolerance:	±250 Hz; 32 to 122 °F (0 to 50 °C)
Visual Carrier Frequency Tolerance Standard Channels:	±10 kHz; 32 to 122 °F (0 to 50 °C)
FCC Aeronautical Channels:	±5 kHz; 32 to 122 °F (0 to 50 °C)

GENERAL

Dimensions (W x D x H)	
MICM Modules:	1.0 x 7.78 x 3.5 inches (25 x 198 x 89 mm)
MIPS-12C Power Supply:	4.6 x 7.5 x 3.5 inches (106 x 191 x 89 mm)
MIRC-12V Chassis:	19 x 12.0 x 5.25 inches (483 x 305 x 133 mm)
Power	
MIPS-12C Power Supply:	100-240 VAC; 50/60 Hz
Power Dissipation:	~ 3 W (per MICM Module)
Weight	
MICM Module:	0.65 lbs (0.3 kg)
Fully Loaded Chassis:	18.2 lbs (8.3 kg)
Operating Temperature:	32 to 122 °F (0 to 50 °C)
Storage Temperature:	-13 to 158 °F (-25 to 70 °C)
Operating Humidity:	0 to 95% RH @ 35 °C max, non-condensing
Storage Humidity:	0 to 95% RH @ 35 °C max, non-condensing

ALARMS / MONITORING / CONTROL

Front-Panel Indicators	
Power:	Green LED
Stereo:	Red LED (when equipped)
Front-Panel Control	
Output Level :	Potentiometer
Video Level:	Potentiometer
Audio Level:	Potentiometer
Aural Carrier Level:	Potentiometer

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