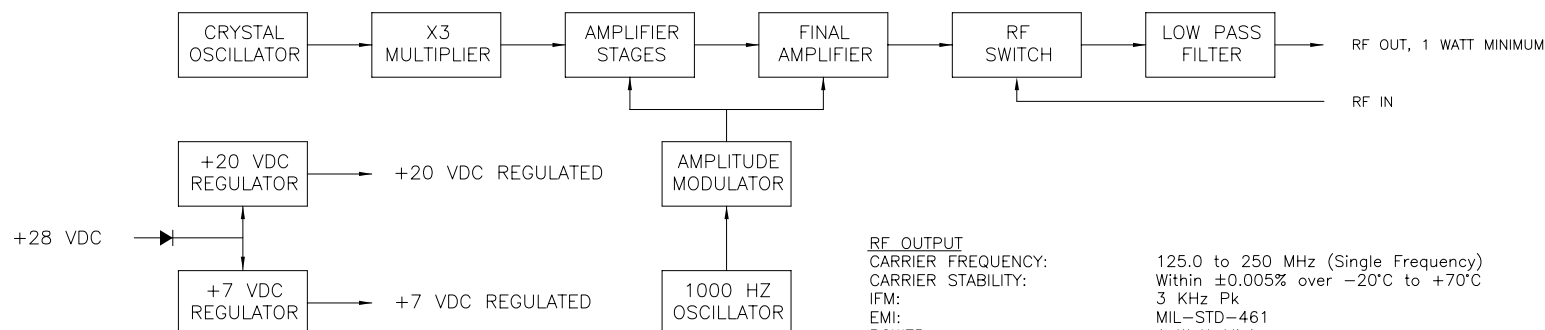


Beacon Transmitter Model EBT-07 Series

7 Cubic Inches 1 Watt

Amplitude Modulated Single Frequency 28 VDC

Protected by One or More of the following Patents:
 US: 5,091,706, 5,097,230, 5,311,152, 5,497,509, 5,802,462, 6,404,292, 6,411,237, 6,417,738, 6,650,180, 6,683,499, 6,690,238, 6,747,517, and 6,771,133.
 Canadian: 2,033,861, 2,033,878, 2,080,013, 2,097,042, 2,235,091, and 2,308,209.
 Other US and Canadian Patents Pending.



RF OUTPUT

CARRIER FREQUENCY: 125.0 to 250 MHz (Single Frequency)
 CARRIER STABILITY: Within $\pm 0.005\%$ over -20°C to $+70^{\circ}\text{C}$
 IFM: 3 KHz Pk
 EMI: MIL-STD-461
 POWER: 1 Watt Minimum
 VSWR: 1.5:1 Maximum
 IMPEDANCE: 50 Ohms Nominal
 OPEN/SHORT PROTECTION: No Damage Caused by Open or Short of Infinite Duration
 HARMONIC & SPURIOUS LEVEL: In Accordance with Latest IRIG Specifications

AMPLITUDE MODULATION

FREQUENCY: 1000 Hz $\pm 10\%$
 DEPTH: 20% Minimum, 40% Maximum
 CHOP RATE: 3.5 ± 1.5 Hz

POWER REQUIREMENTS

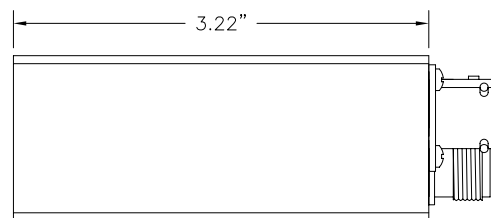
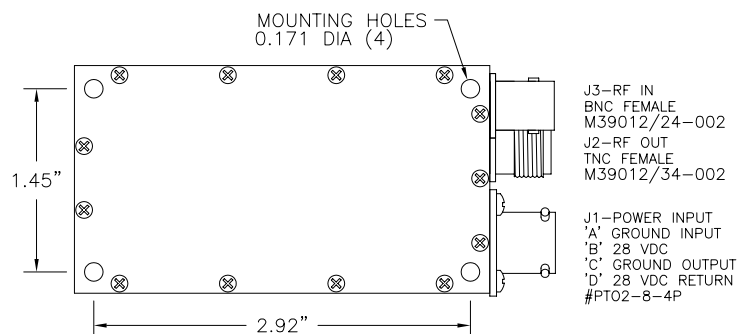
INPUT VOLTAGE: $+28 \pm 4$ VDC: Reverse Polarity Protected
 INPUT CURRENT: 250 Milliamps Maximum

ENVIRONMENTAL SPECIFICATIONS

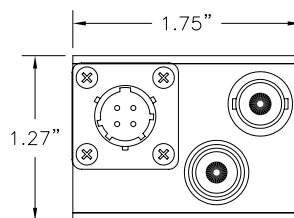
TEMPERATURE: Operating: -20°C to $+70^{\circ}\text{C}$; Storage: -54°C to $+125^{\circ}\text{C}$
 VIBRATION: 14 G's, Random, Standard Haystack, 20 Hz to 2 KHz, 3 Axes
 SHOCK: 1/2 Sine, 100 G's Pk, 11 ms, 3 Axes
 ACCELERATION: 100 G's, 3 Axes
 ALTITUDE: Unlimited
 HUMIDITY: To 95% at any Temperature forming Frost or Condensation

PHYSICAL CHARACTERISTICS

DIMENSIONS: Per Outline Drawing
 WEIGHT: 10 oz. Maximum



RF HEAT SINK



DATE	05 07 14	 EMHISER RESEARCH, INC. 2705 OLD HIGHWAY 40 WEST TEL: 775-345-2705 P.O. BOX 189 VERDI, NEVADA FAX: 775-345-2484 89439-0189 U.S.A. EMAIL: INFO@EMHISER.COM
DWN	L3	
APVD		
QC		
CAGE CODE IDENT NO. 60666		BEACON TRANSMITTER, 1 WATT SINGLE FREQUENCY, AMPLITUDE MODULATED 125.0 TO 250.0 MHZ MODEL NO. EBT-07 SERIES

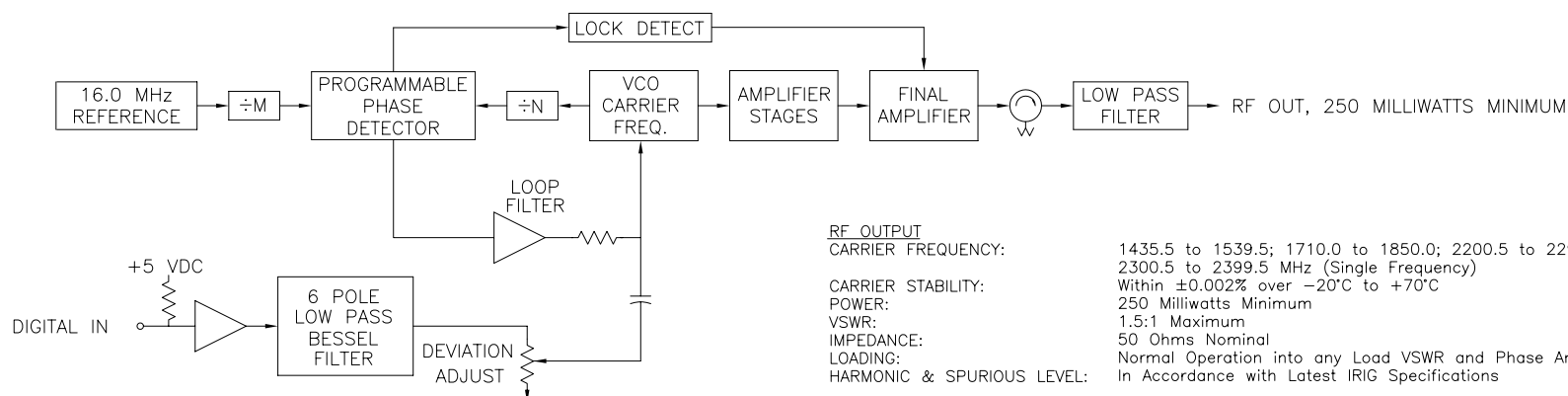


Digital Transmitter Model EDT-D1DEA Series

1.3 Cubic Inches 250 Milliwatts

AC Coupled Single Frequency 12 VDC

Protected by One or More of the following Patents:
 US: 5,091,706, 5,097,230, 5,311,152, 5,497,509, 5,802,462, 6,404,292, 6,411,237, 6,417,738, 6,650,180, 6,683,499, 6,690,238, 6,747,517, and 6,771,133.
 Canadian: 2,033,861, 2,033,878, 2,080,013, 2,097,042, 2,235,091, and 2,308,209.
 Other US and Canadian Patents Pending.



RF OUTPUT

CARRIER FREQUENCY:
 CARRIER STABILITY:
 POWER:
 VSWR:
 IMPEDANCE:
 LOADING:
 HARMONIC & SPURIOUS LEVEL:

1435.5 to 1539.5; 1710.0 to 1850.0; 2200.5 to 2299.5;
 2300.5 to 2399.5 MHz (Single Frequency)
 Within $\pm 0.002\%$ over -20°C to $+70^{\circ}\text{C}$
 250 Milliwatts Minimum
 1.5:1 Maximum
 50 Ohms Nominal
 Normal Operation into any Load VSWR and Phase Angle
 In Accordance with Latest IRIG Specifications

DIGITAL INPUT

LEVELS:
 BIT RATE:
 CONDITIONING:
 DEVIATION:
 DEVIATION NON-LINEARITY:
 INCIDENTAL AM:
 INCIDENTAL FM:
 INPUT IMPEDANCE:

TTL Compatible
 100 Bits/Sec to 15 Mbits/Sec Maximum
 6 Pole Bessel Low Pass Filter
 Factory Set to 0.70 X Specified Bit Rate
 Factory Set to ± 0.35 X Specified Bit Rate
 1.0% Maximum BSL for ± 0.35 X Specified Bit Rate
 5% Maximum
 10 KHz RMS Maximum
 10 KOhms Minimum to +5 VDC

POWER REQUIREMENTS

INPUT VOLTAGE:
 INPUT CURRENT:

11 to 14 VDC: Reverse Polarity Protected
 250 Milliamps Maximum

ENVIRONMENTAL SPECIFICATIONS

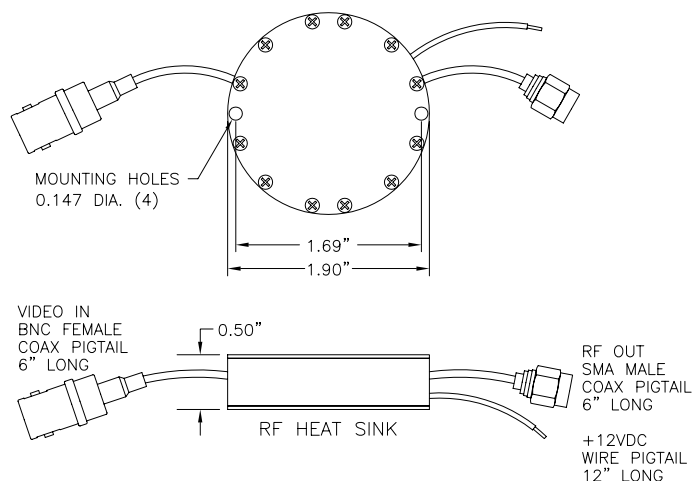
TEMPERATURE:
 VIBRATION:
 SHOCK:
 ACCELERATION:
 ALTITUDE:
 HUMIDITY:

Operating: -20°C to $+70^{\circ}\text{C}$; Storage: -54°C to $+125^{\circ}\text{C}$
 14 G's, Random, Standard Haystack, 20 Hz to 2 KHz, 3 Axes
 1/2 Sine, 100 G's Pk, 11 mS, 3 Axes
 100 G's, 3 Axes
 Unlimited
 To 95% at any Temperature forming Frost or Condensation

PHYSICAL CHARACTERISTICS

DIMENSIONS:
 WEIGHT:

Per Outline Drawing
 1.5 oz. Maximum



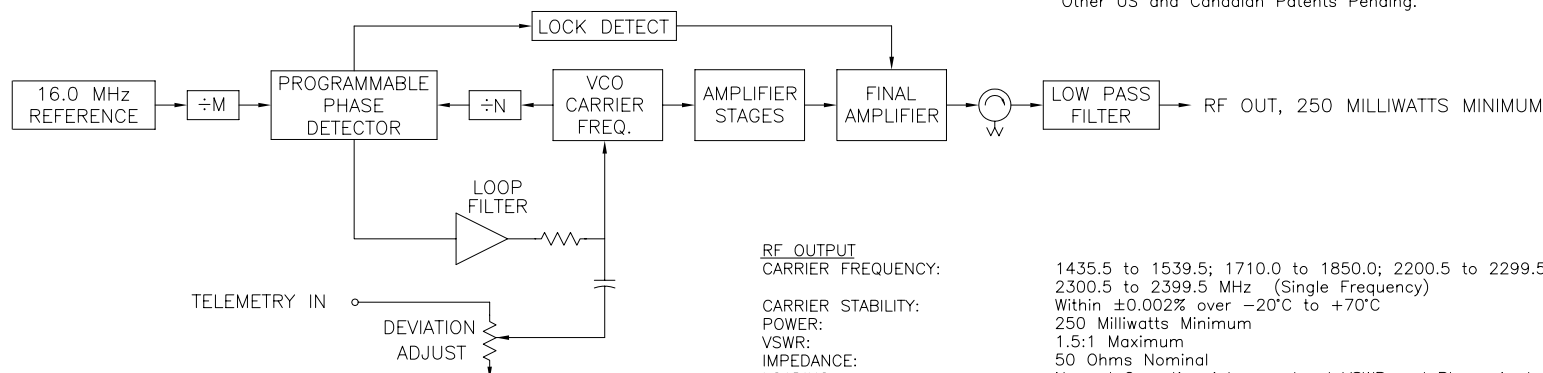
DATE	05 07 14	 EMHISER RESEARCH, INC. 2705 OLD HIGHWAY 40 WEST TEL: 775-345-2705 P.O. BOX 189 VERDI, NEVADA FAX: 775-345-2484 89439-0189 U.S.A. EMAIL: INFO@EMHISER.COM
DWN	L3	
APVD		
QC		
CAGE CODE IDENT NO. 60666		DIGITAL TRANSMITTER, 250 mW SINGLE FREQUENCY, AC COUPLED 1435.5 TO 2399.5 MHZ (4 BANDS) MODEL NO. EDT-D1DEA SERIES

Telemetry Transmitter Model ETT-D1DEA Series

1.3 Cubic Inches 250 Milliwatts

AC Coupled Single Frequency 12 VDC

Protected by One or More of the following Patents:
 US: 5,091,706, 5,097,230, 5,311,152, 5,497,509, 5,802,462, 6,404,292, 6,411,237, 6,417,738, 6,650,180, 6,683,499, 6,690,238, 6,747,517, and 6,771,133.
 Canadian: 2,033,861, 2,033,878, 2,080,013, 2,097,042, 2,235,091, and 2,308,209.
 Other US and Canadian Patents Pending.



RF OUTPUT

CARRIER FREQUENCY:

CARRIER STABILITY:

POWER:

VSWR:

IMPEDANCE:

LOADING:

HARMONIC & SPURIOUS LEVEL:

1435.5 to 1539.5; 1710.0 to 1850.0; 2200.5 to 2299.5;
 2300.5 to 2399.5 MHz (Single Frequency)
 Within $\pm 0.002\%$ over -20°C to $+70^{\circ}\text{C}$
 250 Milliwatts Minimum
 1.5:1 Maximum
 50 Ohms Nominal
 Normal Operation into any Load VSWR and Phase Angle
 In Accordance with Latest IRIG Specifications

TM MODULATION INPUT

FREQUENCY RESPONSE:

PEAK DEVIATION:

DEVIATION NON-LINEARITY:

DEVIATION SENSITIVITY:

HARMONIC DISTORTION:

INCIDENTAL AM:

INCIDENTAL FM:

INPUT IMPEDANCE:

100 Hz to 1.0 MHz ± 1.5 db
 ± 1.0 MHz Maximum
 1.0% Maximum BSL for ± 750 KHz Deviation
 Factory Set at ± 500 KHz/1V RMS @ 1435.5 to 1539.5 MHz;
 ± 750 KHz/1V RMS @ 1710.0 to 1850.0; 2200.5 to 2399.5 MHz
 1.0% Maximum for ± 750 KHz Deviation
 5% Maximum
 10 KHz RMS Maximum
 10 KOhms Minimum

POWER REQUIREMENTS

INPUT VOLTAGE:

INPUT CURRENT:

11 to 14 VDC: Reverse Polarity Protected
 250 Milliamps Maximum

ENVIRONMENTAL SPECIFICATIONS

TEMPERATURE:

VIBRATION:

SHOCK:

ACCELERATION:

ALTITUDE:

HUMIDITY:

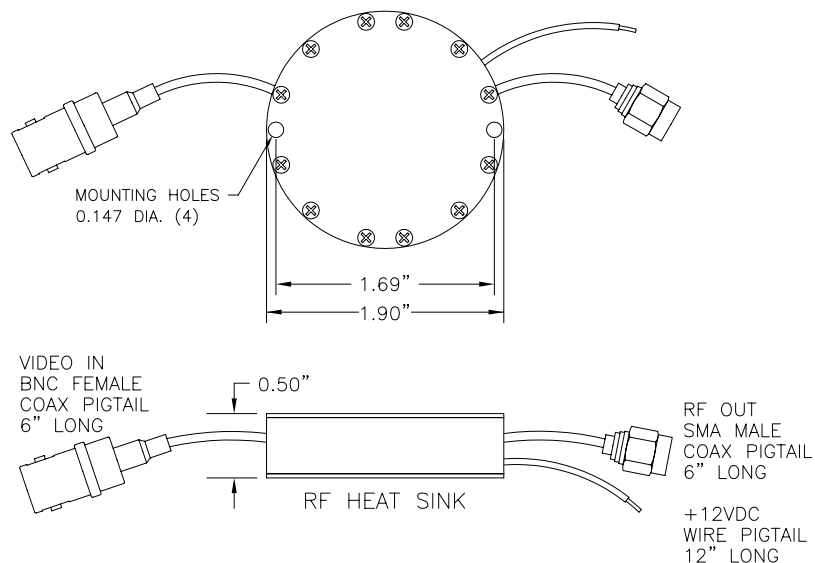
Operating: -20°C to $+70^{\circ}\text{C}$; Storage: -54°C to $+125^{\circ}\text{C}$
 14 G's, Random, Standard Haystack, 20 Hz to 2 KHz, 3 Axes
 1/2 Sine, 100 G's Pk, 11 ms, 3 Axes
 100 G's, 3 Axes
 Unlimited
 To 95% at any Temperature forming Frost or Condensation

PHYSICAL CHARACTERISTICS

DIMENSIONS:

WEIGHT:

Per Outline Drawing
 1.5 oz. Maximum



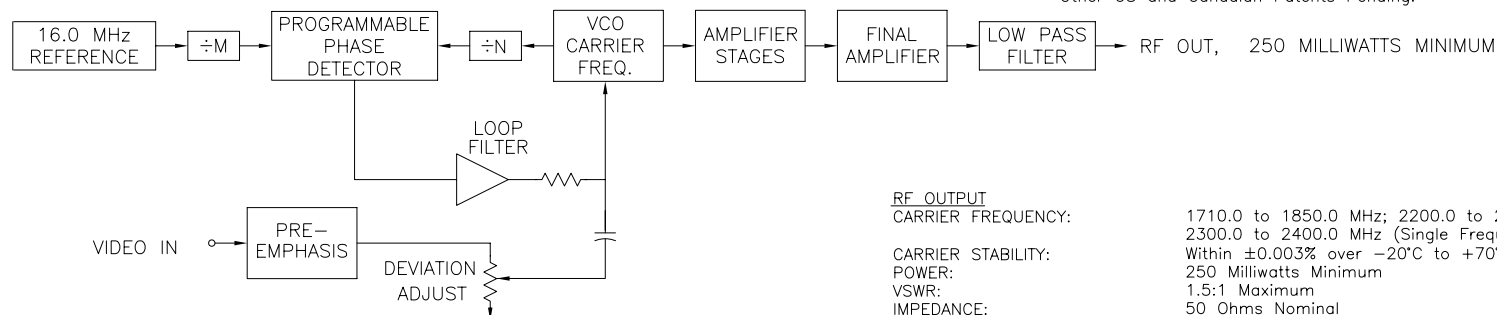
DATE	05 07 14	 EMHISER RESEARCH, INC. 2705 OLD HIGHWAY 40 WEST TEL: 775-345-2705 P.O. BOX 189 VERDI, NEVADA FAX: 775-345-2484 89439-0189 U.S.A. EMAIL: INFO@EMHISER.COM
DWN	L3	
APVD		
QC		
CAGE CODE IDENT NO.	60666	TELEMETRY TRANSMITTER, 250 mW SINGLE FREQUENCY, AC COUPLED 1435.5 TO 2399.5 MHZ (4 BANDS)
		MODEL NO. ETT-D1DEA SERIES

Video Transmitter Model EVT-D1DEA Series

Pre-emphasis 1.3 Cubic Inches 250 Milliwatts

AC Coupled Single Frequency 12 VDC

Protected by One or More of the following Patents:
 US: 5,091,706, 5,097,230, 5,311,152, 5,497,509, 5,802,462, 6,404,292, 6,411,237, 6,417,738, 6,650,180, 6,683,499, 6,690,238, 6,747,517, and 6,771,133.
 Canadian: 2,033,861, 2,033,878, 2,080,013, 2,097,042, 2,235,091, and 2,308,209.
 Other US and Canadian Patents Pending.



RF OUTPUT

CARRIER FREQUENCY:

1710.0 to 1850.0 MHz; 2200.0 to 2299.0;
 2300.0 to 2400.0 MHz (Single Frequency)

CARRIER STABILITY:

Within $\pm 0.003\%$ over -20°C to $+70^{\circ}\text{C}$

POWER:

250 Milliwatts Minimum

VSWR:

1.5:1 Maximum

IMPEDANCE:

50 Ohms Nominal

LOADING:

Normal Operation into any Load VSWR and Phase Angle

OPEN/SHORT PROTECTION:

Internal Isolator

HARMONIC & SPURIOUS LEVEL:

In Accordance with Latest IRIG Specifications

VIDEO MODULATION INPUT

FREQUENCY RESPONSE:

10 Hz to 4.5 MHz ± 1.5 dB; 6 Hz to 6.0 MHz ± 3.0 dB

PRE-EMPHASIS:

Specify

PEAK DEVIATION:

8 MHz Pk-Pk

DEVIATION SENSITIVITY:

Factory Set to 8.0 MHz Pk-Pk/1V Pk-Pk at Crossover

HARMONIC DISTORTION:

2% Maximum

INCIDENTAL AM:

5% Maximum

INCIDENTAL FM:

10 KHz RMS Maximum

INPUT IMPEDANCE:

75 Ohms, Shunted by 30pF Maximum

ENVIRONMENTAL SPECIFICATIONS

TEMPERATURE:

Operating: -20°C to $+70^{\circ}\text{C}$; Storage: -54°C to $+125^{\circ}\text{C}$

VIBRATION:

14 G's, Random, Standard Haystack, 20 Hz to 2 KHz, 3 Axes

SHOCK:

1/2 Sine, 100 G's Pk, 11 mS, 3 Axes

ACCELERATION:

100 G's, 3 Axes

ALTITUDE:

Unlimited

HUMIDITY:

To 95% at any Temperature forming Frost or Condensation

POWER REQUIREMENTS

INPUT VOLTAGE:

11 to 14 VDC: Reverse Polarity Protected

INPUT CURRENT:

250 Milliamps Maximum

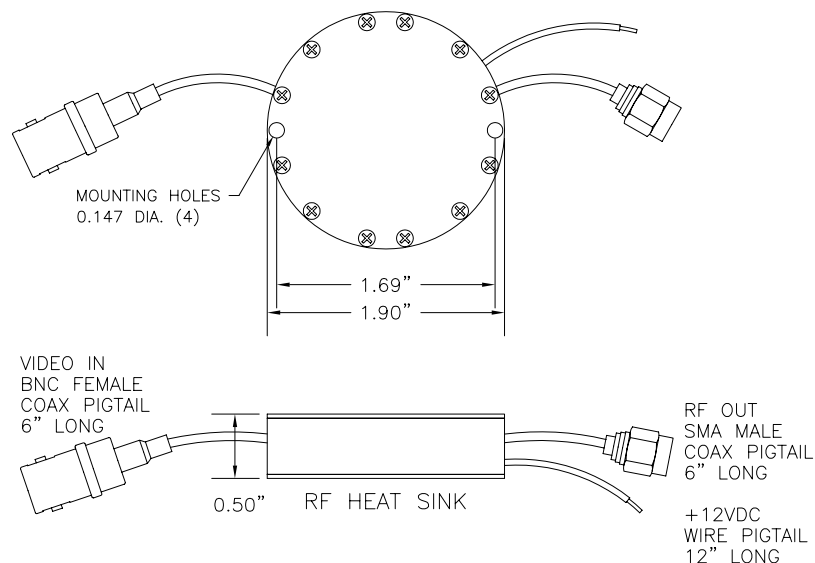
PHYSICAL CHARACTERISTICS

DIMENSIONS:

Per Outline Drawing

WEIGHT:

1.5 oz. Maximum



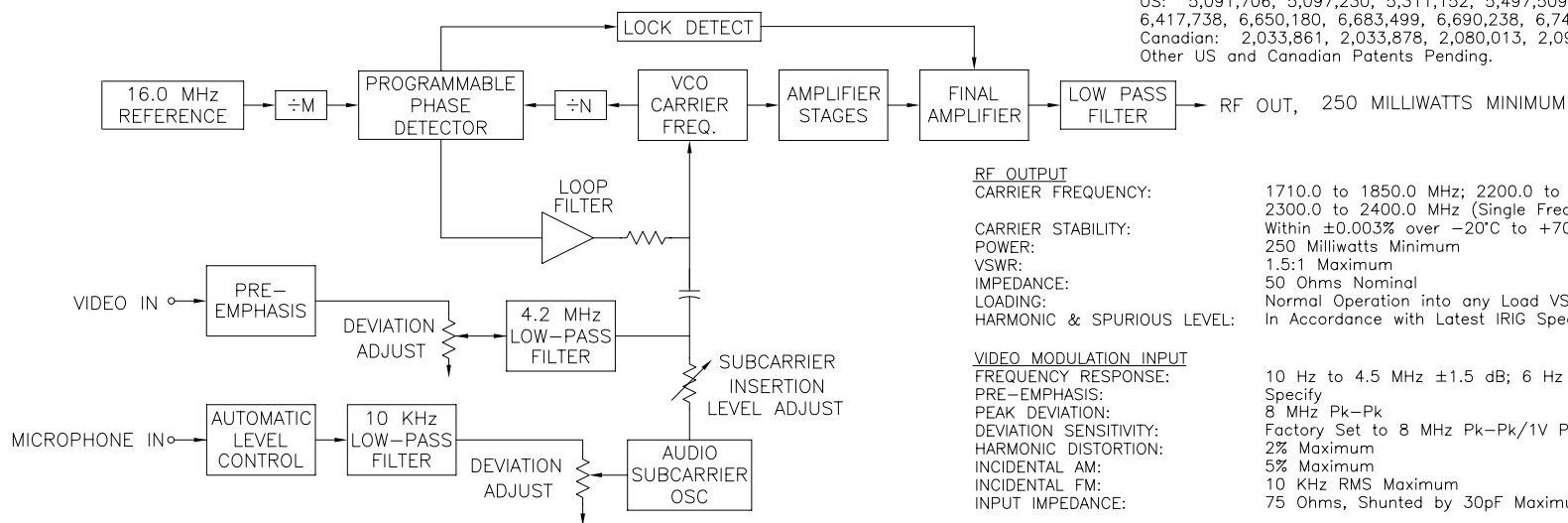
DATE	05 07 14	 EMHISER RESEARCH, INC. 2705 OLD HIGHWAY 40 WEST TEL: 775-345-2705 P.O. BOX 189 VERDI, NEVADA FAX: 775-345-2484 89439-0189 U.S.A. EMAIL: INFO@EMHISER.COM
DWN	L3	
APVD		
QC		
CAGE CODE IDENT NO.	60666	VIDEO TRANSMITTER/P-E, 250 mW SINGLE FREQUENCY, AC COUPLED 1710.0 TO 2400.0 MHZ (3 BANDS)
MODEL NO. EVT-D1DEA SERIES		

Video Transmitter Model EVT-D2DEA Series

Pre-Emphasis Subcarrier 2.7 Cubic Inches 250 Milliwatts

AC Coupled Single Frequency 12 VDC

Protected by One or More of the following Patents:
 US: 5,091,706, 5,097,230, 5,311,152, 5,497,509, 5,802,462, 6,404,292, 6,411,237, 6,417,738, 6,650,180, 6,683,499, 6,690,238, 6,747,517, and 6,771,133.
 Canadian: 2,033,861, 2,033,878, 2,080,013, 2,097,042, 2,235,091, and 2,308,209.
 Other US and Canadian Patents Pending.



RF OUTPUT

CARRIER FREQUENCY: 1710.0 to 1850.0 MHz; 2200.0 to 2299.0 MHz
 2300.0 to 2400.0 MHz (Single Frequency)
 CARRIER STABILITY: Within $\pm 0.003\%$ over -20°C to $+70^{\circ}\text{C}$
 POWER: 250 Milliwatts Minimum
 VSWR: 1.5:1 Maximum
 IMPEDANCE: 50 Ohms Nominal
 LOADING: Normal Operation into any Load VSWR and Phase Angle
 HARMONIC & SPURIOUS LEVEL: In Accordance with Latest IRIG Specifications

VIDEO MODULATION INPUT

FREQUENCY RESPONSE: 10 Hz to 4.5 MHz ± 1.5 dB; 6 Hz to 6.0 MHz ± 3.0 dB
 PRE-EMPHASIS: Specify
 PEAK DEVIATION: 8 MHz Pk-Pk
 DEVIATION SENSITIVITY: Factory Set to 8 MHz Pk-Pk/1V Pk-Pk at Crossover
 HARMONIC DISTORTION: 2% Maximum
 INCIDENTAL AM: 5% Maximum
 INCIDENTAL FM: 10 KHz RMS Maximum
 INPUT IMPEDANCE: 75 Ohms, Shunted by 30pF Maximum

SUBCARRIER & S/C MODULATION INPUT

SUBCARRIER FREQUENCY: 4.83, 5.80, 6.20, 6.80, 7.50 MHz
 SUBCARRIER STABILITY: Within $\pm 1\%$ Maximum over 0°C to $+50^{\circ}\text{C}$
 FREQUENCY RESPONSE: 20 Hz to 10 KHz
 PEAK DEVIATION: 300 KHz Pk-Pk
 DEVIATION SENSITIVITY: Factory Set to 75 KHz Pk-Pk/-70 thru -20 dBm at 10kHz
 DEVIATION NON-LINEARITY: $\pm 3\%$ Maximum; 20 Hz - 10 KHz Rate to ± 75 KHz Deviation
 HARMONIC DISTORTION: 5% Maximum from 20 Hz to 10 KHz
 INSERTION LEVEL: Factory Set to -26 dBc

ENVIRONMENTAL SPECIFICATIONS

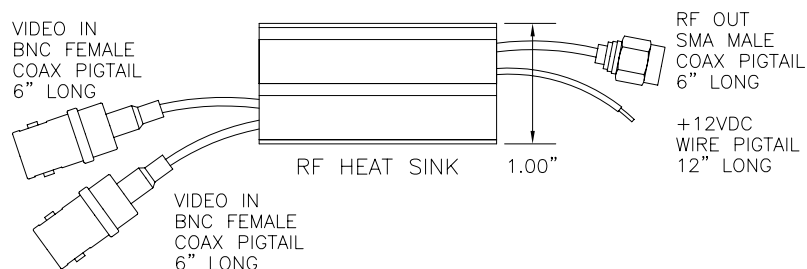
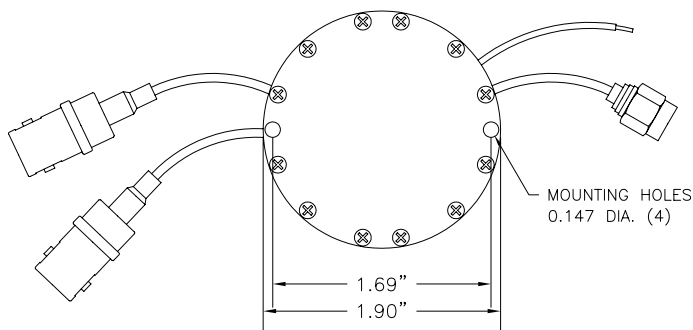
TEMPERATURE: Operating: -20°C to $+70^{\circ}\text{C}$; Storage: -54°C to $+125^{\circ}\text{C}$
 VIBRATION: 14 G's, Random, Standard Haystack, 20 Hz to 2 KHz, 3 Axes
 SHOCK: 1/2 Sine, 100 G's Pk, 11 mS, 3 Axes
 ACCELERATION: 100 G's, 3 Axes
 ALTITUDE: Unlimited
 HUMIDITY: To 95% at any Temperature forming Frost or Condensation

POWER REQUIREMENTS

INPUT VOLTAGE: 11 to 14 VDC: Reverse Polarity Protected
 INPUT CURRENT: 300 Milliamps Maximum

PHYSICAL CHARACTERISTICS

DIMENSIONS: Per Outline Drawing
 WEIGHT: 2 oz. Maximum

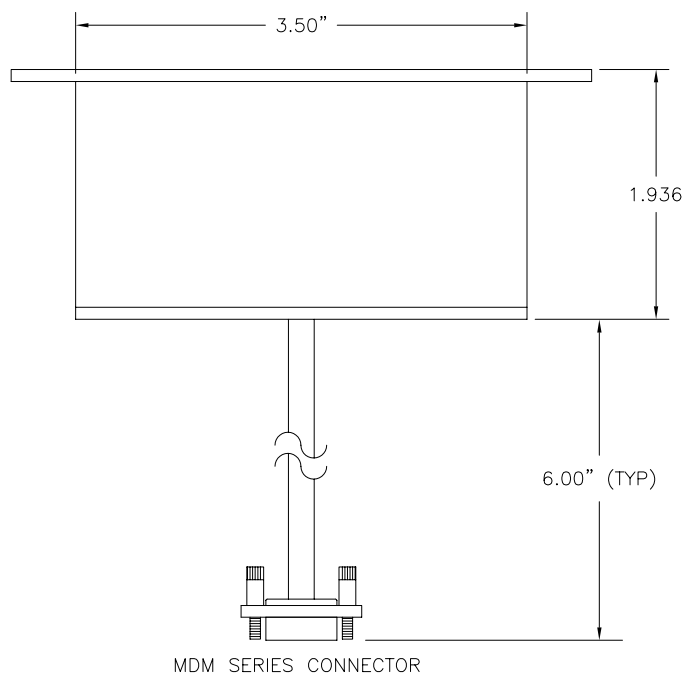
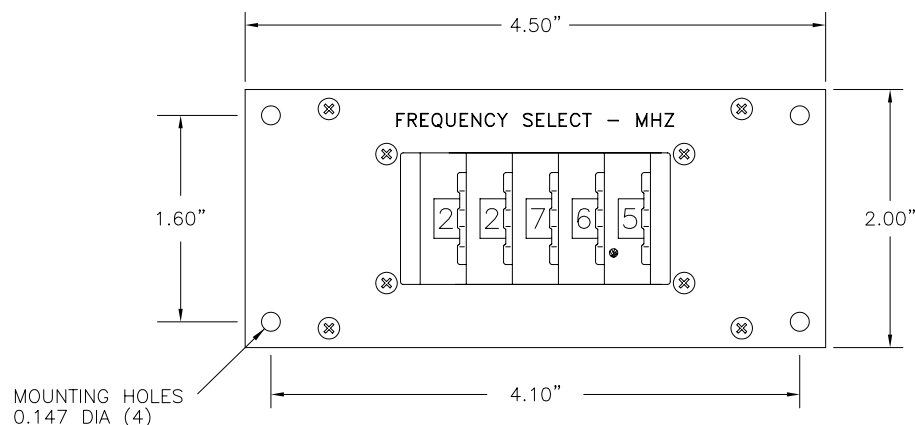


DATE	05 07 14	 EMHISER RESEARCH, INC. 2705 OLD HIGHWAY 40 WEST TEL: 775-345-2705 P.O. BOX 189 VERDI, NEVADA FAX: 775-345-2484 89439-0189 U.S.A. EMAIL: INFO@EMHISER.COM
DWN	L3	
APVD		
QC		
CAGE CODE IDENT NO.	60666	VIDEO TRANSMITTER/P-E/SC, 250 mW SINGLE FREQUENCY, AC COUPLED 1710.0 TO 2400.0 MHZ (3 BANDS)
		MODEL NO. EVT-D2DEA SERIES

Frequency Selection Switch

Matched to Any Channelized Transmitter or Receiver

BCD/Binary/Octal/Hexadecimal Codes Standard or Complementary



OPTIONS
ON/OFF CONTROL:
BIT RATE SELECTION:

Via Toggle Switch
Via Additional Thumbwheel Switch

ENVIRONMENTAL SPECIFICATIONS

TEMPERATURE:
VIBRATION:
SHOCK:
ACCELERATION:
ALTITUDE:
HUMIDITY:

Operating: -20°C to +70°C; Storage: -54°C to +125°C
14 G's, Random, Standard Haystack, 20 Hz to 2 KHz, 3 Axes
1/2 Sine, 100 G's Pk, 11 mS, 3 Axes
100 G's, 3 Axes
Unlimited
To 95% at any Temperature forming Frost or Condensation

PHYSICAL CHARACTERISTICS

DIMENSIONS:
WEIGHT:

13 Cubic Inches, Per Outline Drawing
12 oz. Maximum

DATE	05 07 14	 EMHISER RESEARCH, INC. 2705 OLD HIGHWAY 40 WEST TEL: 775-345-2705 P.O. BOX 189 VERDI, NEVADA FAX: 775-345-2484 89439-0189 U.S.A. EMAIL: INFO@EMHISER.COM
DWN	L3	
APVD		
QC		
CAGE CODE IDENT NO.	60666	FREQUENCY SELECTION SWITCH BCD/BINARY/OCTAL/HEXADECIMAL ANY FREQUENCY BAND MODEL NO. ESA-13 SERIES