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Bricks Product Series (10-12-2018)

Model Number	Part Number
ADV-301-13A	12884-300
ADV-301-13A-2	12958-300
ADV-301-13A-3	12978-300
ADV-301-13A-4	13100-300
ADV-301-13A-5	13200-300
ADV-301-13A-6	21000-300
ADV-301-13A-95	12987-300
ADV-301-111	12876-300
ADV-301-107-2	12880-300
ADV-301-103	12983-300
ADV-301-103-1	16900-300
ADV-301-103-3A	12910-300



ADV-301-13A and ADV-301-103-3A Pictured

General:

The Brick Product Series Video Amplifier is a broadband amplifier with flat frequency response from 30 Hz to 30.0 MHz. This Video Amplifier was originally designed for missile applications and is now used extensively in fighter, helicopter, UAV, fixed wing aircraft and military ground vehicle applications. The Brick Series has separate adjustable gain controls for each output. More than 1000 units have been delivered to major platform prime manufacturers.

Configuration

The Outline and Mounting Drawings for each of the Brick Series listed above are attached. These designs represent a family of **Brick** units with different power and video connectors, and electrical configurations but with the same functional and environmental characteristics. A matrix of the current configurations is included with this data sheet. Eon can configure the **Brick** units with any additional configuration desired. Eon has also designed and developed a line of **Compact** units that have similar functional characteristics but are housed in lower profile chassis and have different power, video connector configurations and no user gain control. They are described in a separate data sheet.

Specifications:

Signal Input/Output: Single-ended or Differential

Gain: Adjustable

Finish: (except for screws, base and connectors): Gold Chromate with black silkscreen

Input Voltage: 18-36 VDC

Power Consumption: 1.5 - 2.5 Watts depending on configuration

Input Impedance: 75 Ohm Standard (Other impedances available. Specify when ordering)

Input Signal Amplitude: 0.5 to 5.0V peak-to-peak

Input Overload: 10V peak-to-peak

Phase Characteristics: Non-Inverting

Output Signal Amplitude: Single ended outputs 0.5V to 3.0V peak-to-peak

Gain adjustable 0.25-2. Maximum amplitude 3V peak-to-peak

Bandwidth: Flat within $\pm 0.4\text{dB}$ from 30Hz to 30.0MHz at 1V peak-to-peak output, gain = 1

Noise: 0.01 peak-to-peak at 1V peak-to-peak output, gain = 1

Harmonic Distortion: Less than 2.5% at 1V peak-to-peak output, gain = 1

Current: Less than 100 milliamps

Ripple: Less than 1.5V peak-to-peak

Reverse Polarity Protection: Provided

50 VDC Transient @ 100mSec

Weight: 1.0 lb (nominal)

Qualification (Data available upon request):

Power: Mil-Std-704D, 1275

Environmental: Mil-Std-810G

Temperature:

Storage: -55° to $+85^{\circ}\text{C}$

Functional: -40° to $+71^{\circ}\text{C}$

Short Time Operating: $+85^{\circ}\text{C}$

Altitude: Non-Pressurized Area, Cl 1 per MIL-E-5400T (0-50,000Ft)

Humidity: DO-160C, Cat A

MIL-STD-810E Method 507.3, Procedure III (Aggravated), 10ea 24 hr cycles

Salt Fog: MIL-STD-810E Method 509.3, Procedure I

Sand and Dust: MIL-STD-810E Method 510.3, Procedure I

Acceleration: Operational: $\pm 6.5\text{G}$'s, Non-operational: $\pm 9\text{G}$'s

Endurance Sine on Random Vibration:

MIL-STD-810F Method 514.5 Category 13 and IF-3AA0-08002B.

Rapid Decompression: MIL-STD-810E Method 500.3 para II-3.3 Procedure III

Functional and Crash Safety Shock Testing:

DO-160C Section 7 Impulse, 6 G's Operational, 15 G's Crash Safety.

EMI: Mil-Std-461

Conducted Emissions, CE101

Conducted Emissions, CE102

Radiated Emissions, RE101

Radiated Emissions, RE102

Conducted Susceptibility, CS101

Conducted Susceptibility, CS114

RF Conducted Susceptibility, RFCS

Radiated Susceptibility, RS103

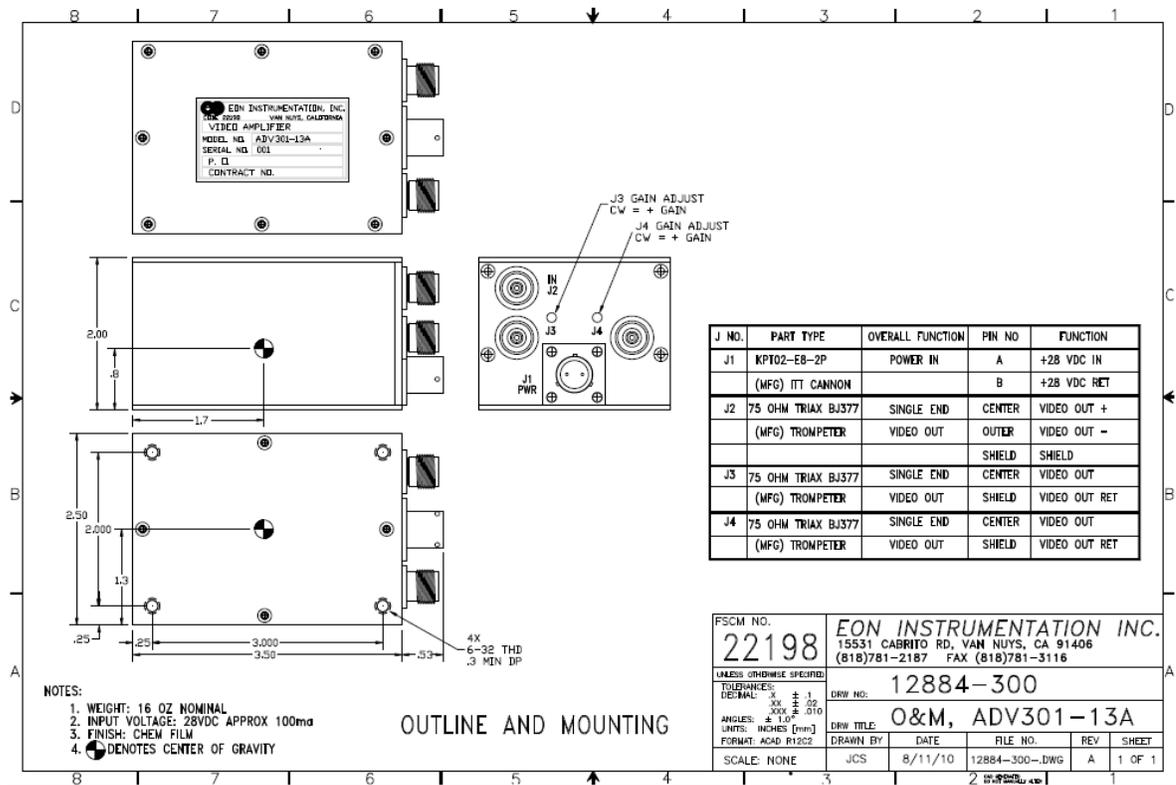
RF Radiated Susceptibility

Electrostatic Discharge, ESD

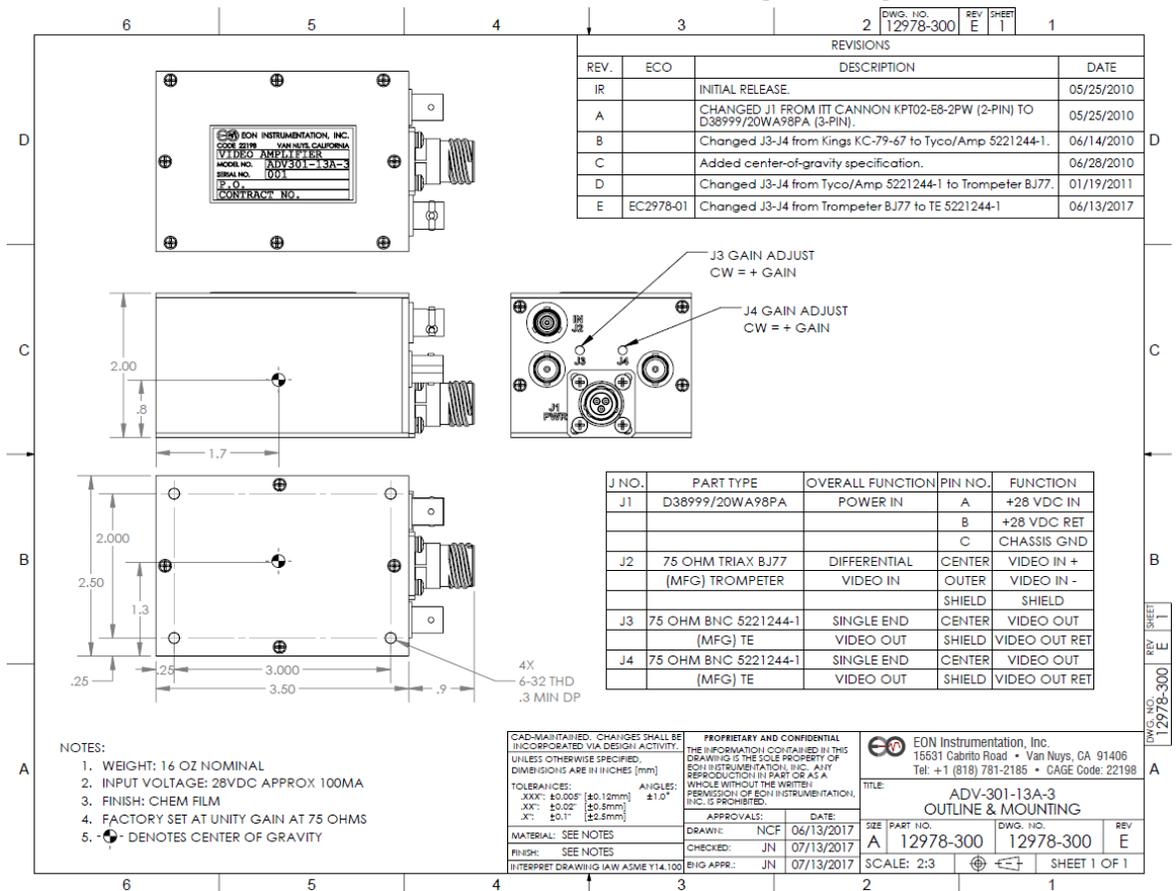
Lightning Induced Transient Susceptibility, LITS

MTBF: 82,000 – 96,000Hrs

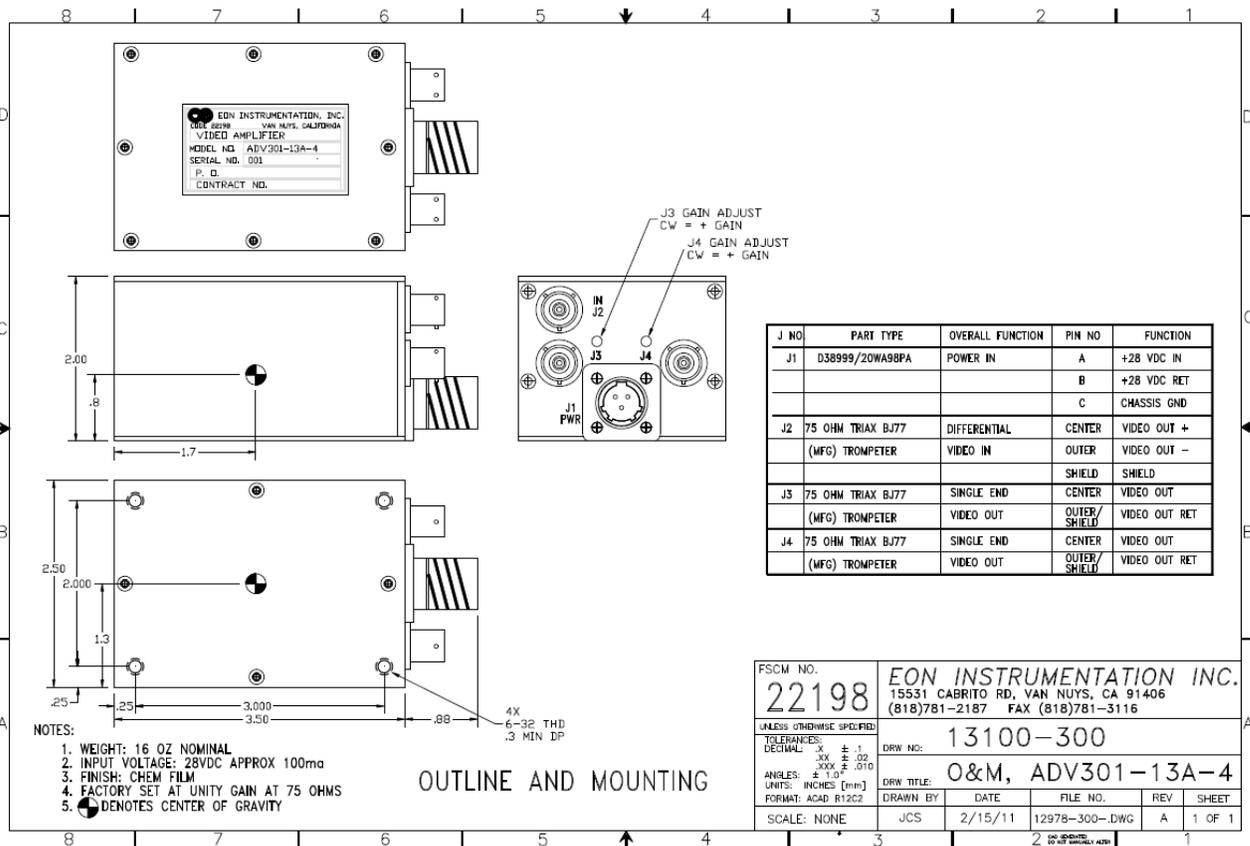
Outline and Mounting Drawings:



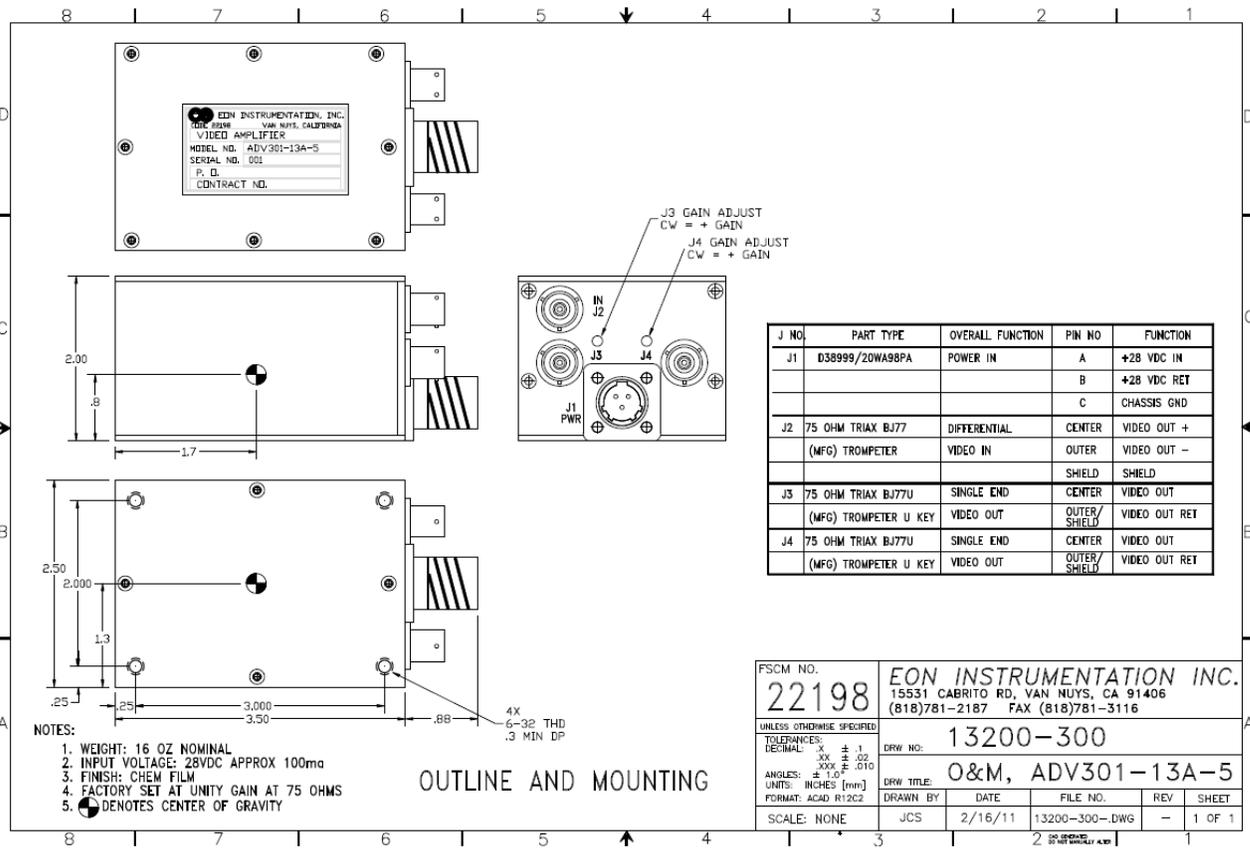
ADV-301-13A Outline and Mounting Drawing



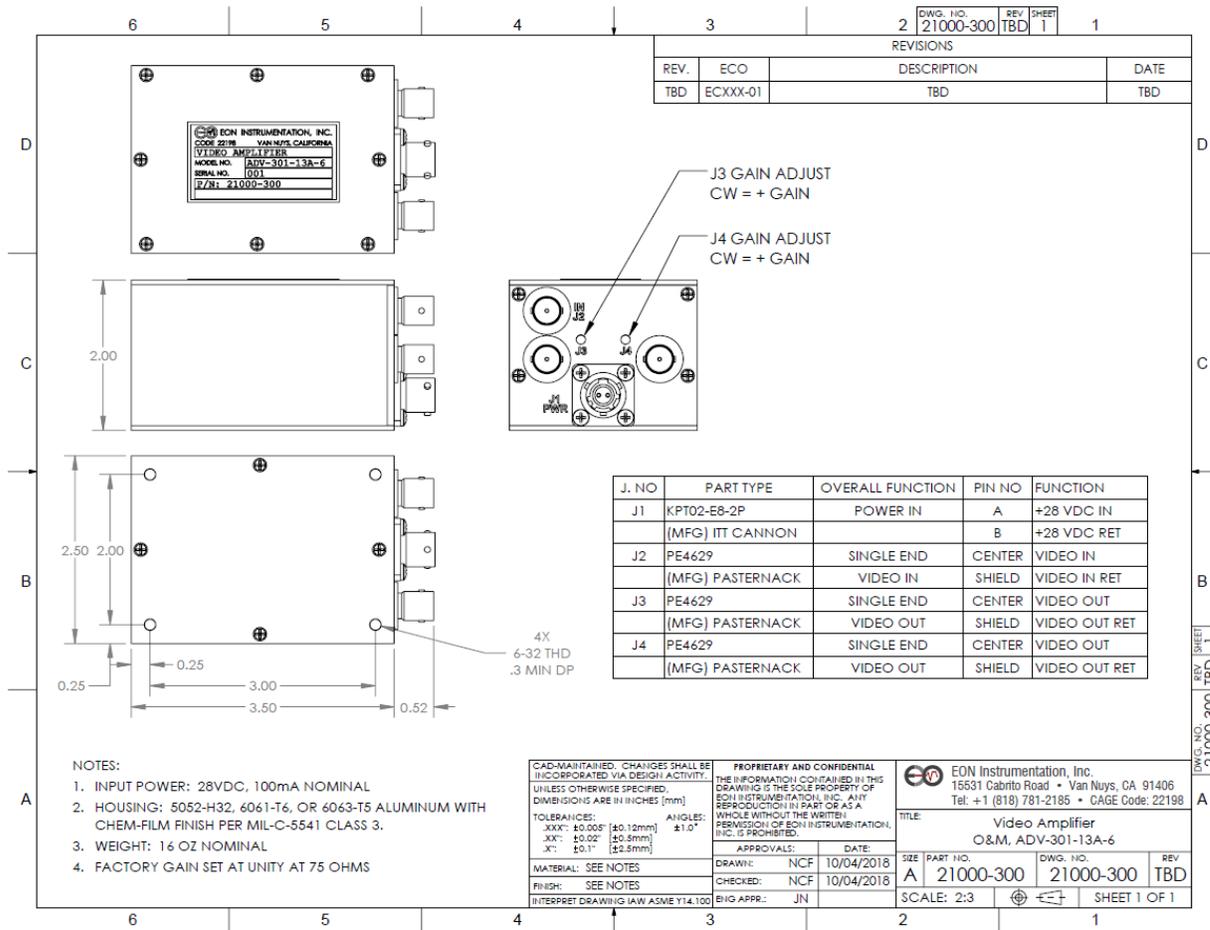
ADV-301-13A-3 Outline and Mounting Drawing



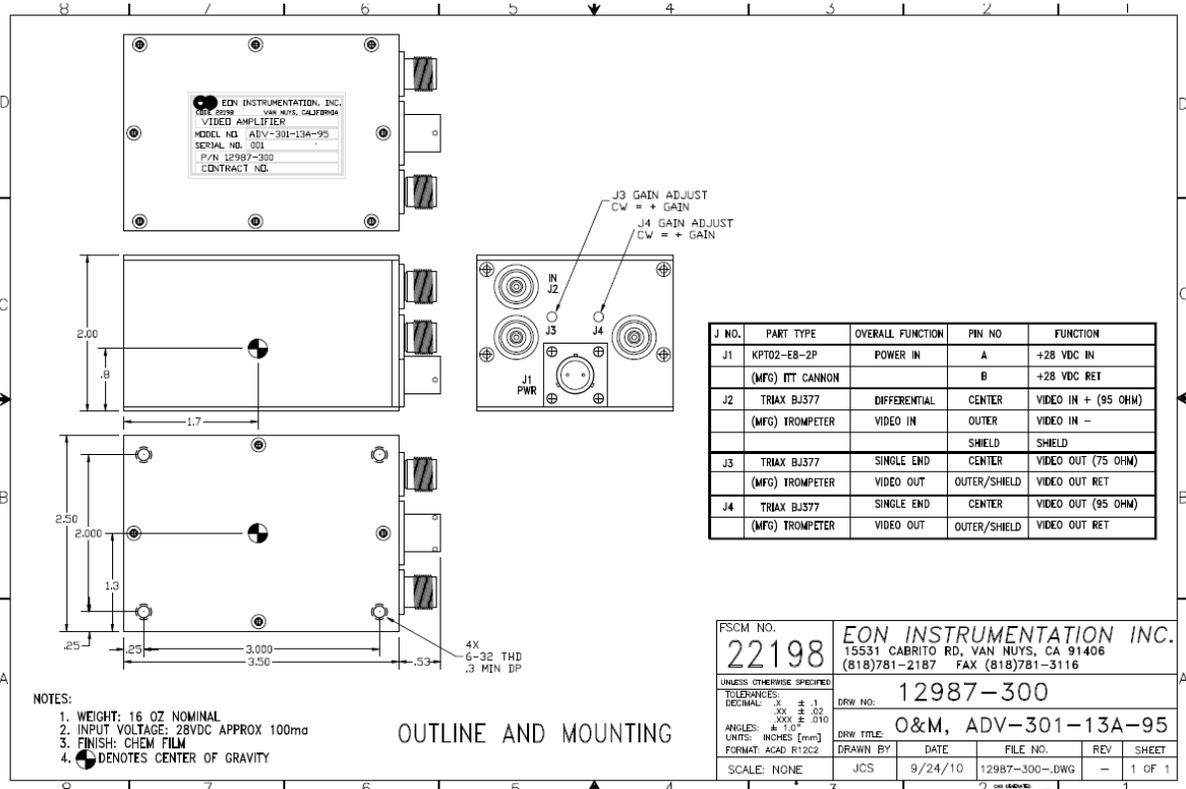
ADV-301-13A-4 Outline and Mounting Drawing



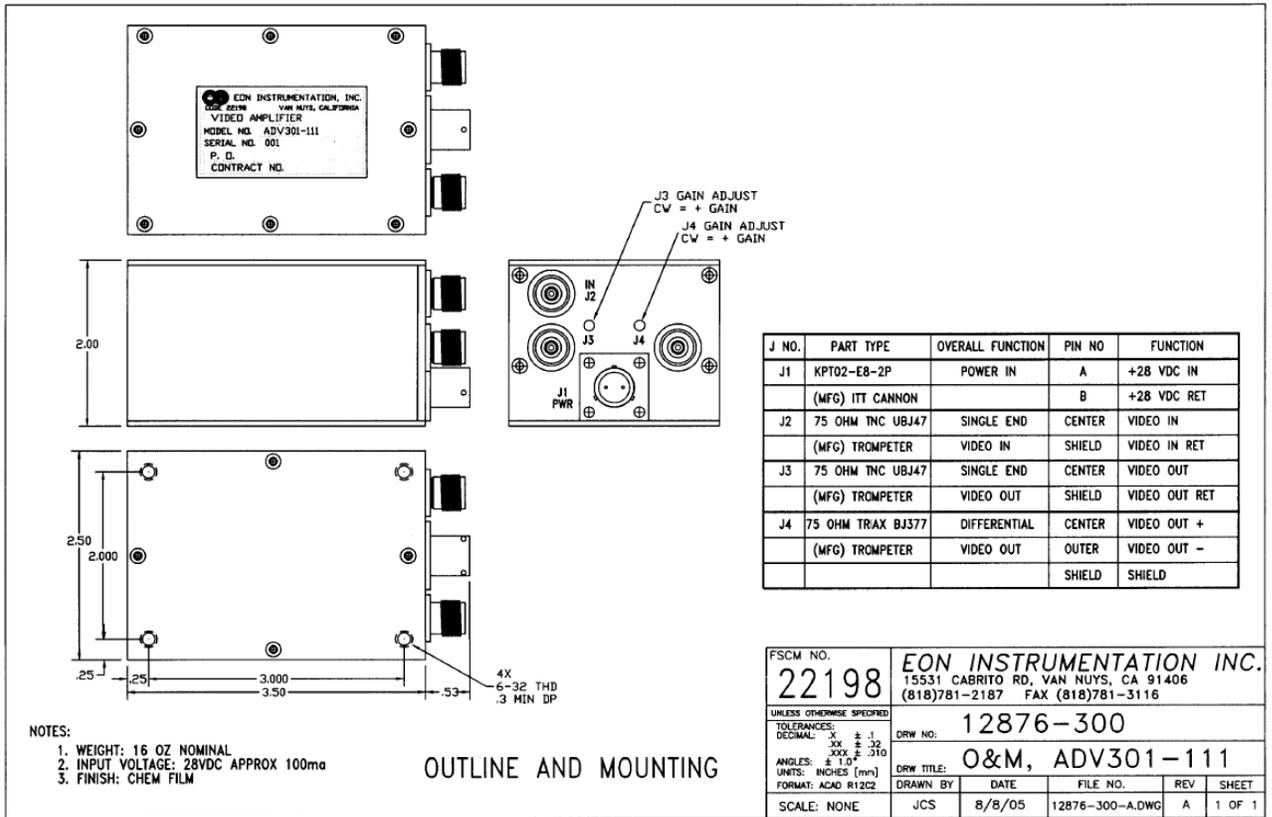
ADV-301-13A-5 Outline and Mounting Drawing



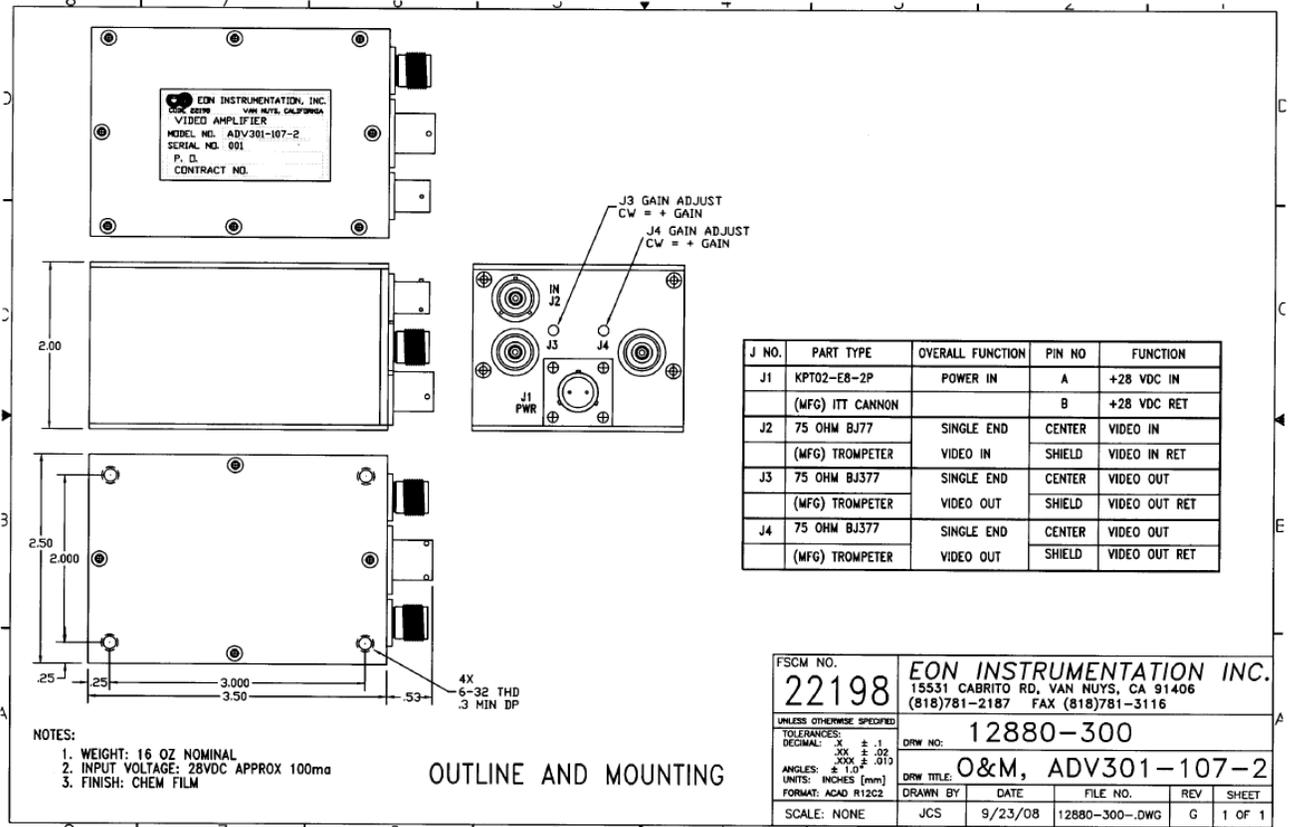
ADV-301-13A-6 Outline and Mounting Drawing



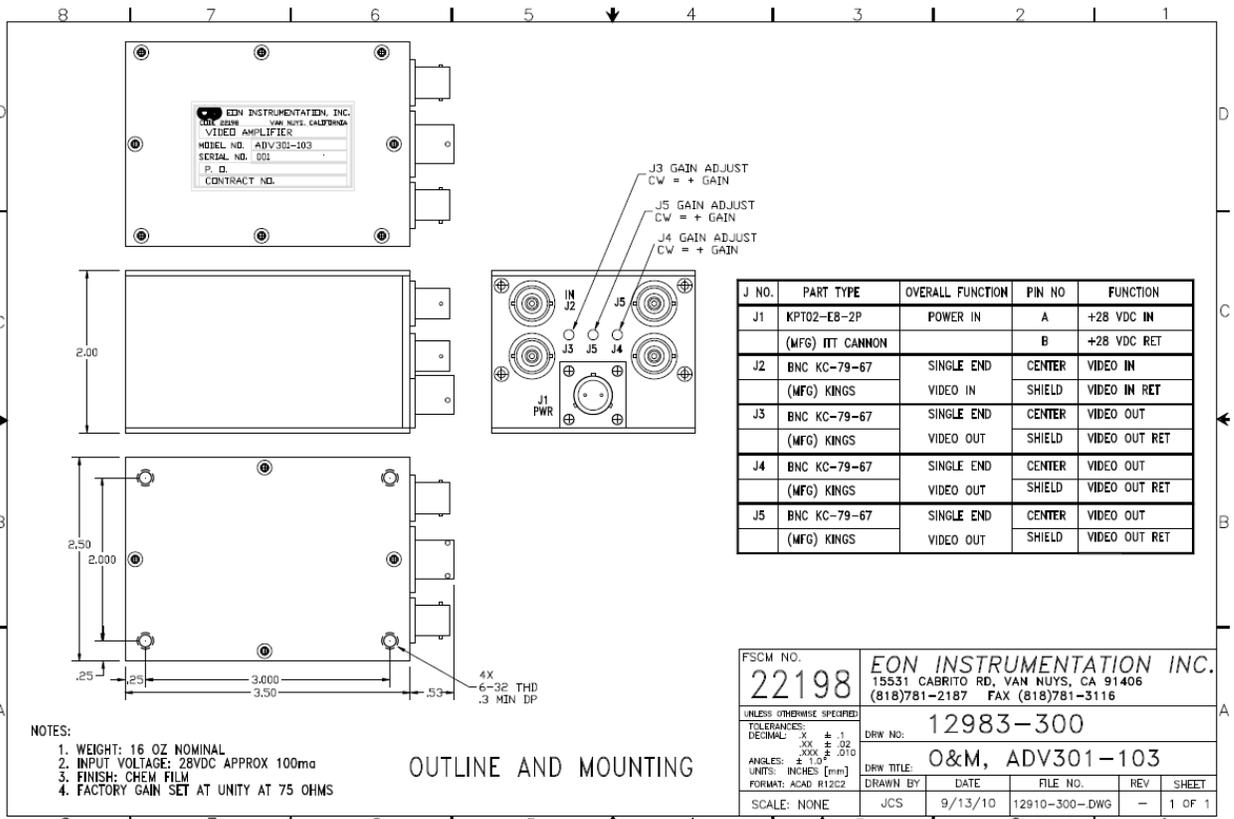
ADV-301-13A-95 Outline and Mounting Drawing



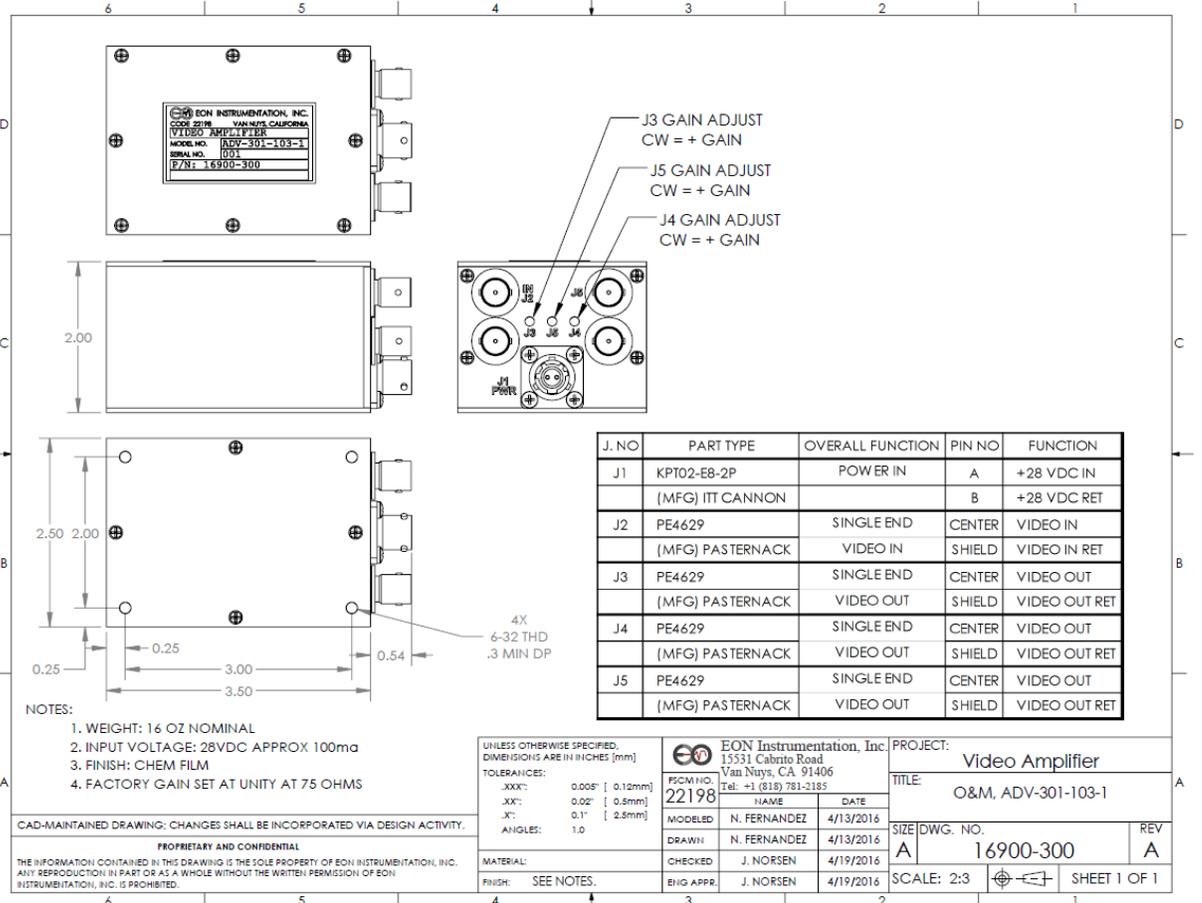
ADV-301-111 Outline and Mounting Drawing



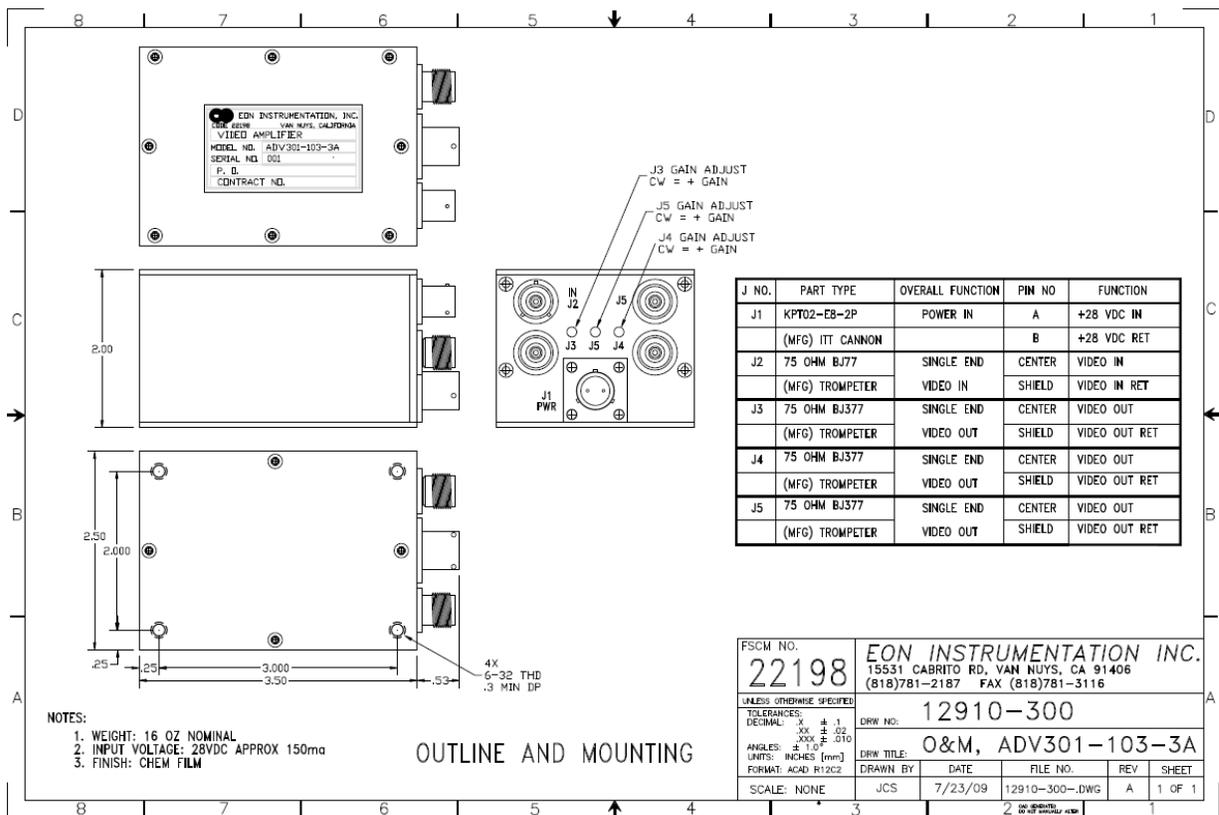
ADV-301-107-2 Outline and Mounting Drawing



ADV-301-103 Outline and Mounting Drawing



ADV-301-103-1 Outline and Mounting Drawing



ADV-301-103-3A Outline and Mounting Drawing

Connector Specifications:

		J1	J2	J3	J4	J5
Model Number	Part Number	POWER	INPUT	OUTPUT	OUTPUT	OUTPUT
ADV-301-13A	12884-300	KPT02-E8-2P	BJ377	BJ377	BJ377	NA
ADV-301-13A-2	12958-300	D38999/20FA98PN	BJ77	BJ377	BJ377	NA
ADV-301-13A-3	12978-300	D38999/20WA98PA	BJ77	5221244-1	5221244-1	NA
ADV-301-13A-4	13100-300	D38999/20WA98PA	BJ77	BJ77	BJ77	NA
ADV-301-13A-5	13200-300	D38999/20WA98PA	BJ77	BJ77U	BJ77U	NA
ADV-301-13A-6	21000-300	KPT02-E8-2P	PE4629	PE4629	PE4629	NA
ADV-301-13A-95	12987-300	KPT02-E8-2P	BJ377 (95)	BJ377	BJ377 (95)	NA
ADV-301-111	12876-300	KPT02-E8-2P	UBJ47	UBJ47	BJ377	NA
ADV-301-107-2	12880-300	KPT02-E8-2P	BJ77	BJ377	BJ377	NA
ADV-301-103	12983-300	KPT02-E8-2P	KC-79-67	KC-79-67	KC-79-67	KC-79-67
ADV-301-103-1	16900-300	KPT02-E8-2P	PE4629	PE4629	PE4629	PE4629
ADV-301-103-3A	12910-300	KPT02-E8-2P	BJ77	BJ377	BJ377	BJ377

NOTES:

1. 5221244-1 is a TE Connectivity BNC Part Number.
2. Trompeter Part Numbers:
 - UBJ47 TNC Bulkhead Threaded
 - BJ77 TWINAX 3-Lug Bulkhead
 - BJ77U TWINAX 3-Lug Bulkhead (Keyed U Position)
 - BJ377 TWINAX Threaded
3. KPT02-E8-2P is an ITT Canon Part Number.
4. KC-79-67 is a Kings BNC Part Number.
5. All Bricks have adjustable Gain on each channel.
6. Upon request, customer can have various combinations of connector input and outputs.