



WR-28 Waveguide Low Noise Amplifier, Ka Band, 26.5 GHz to 40 GHz, 30 dB Gain, 18 dBm P1dB, UG-599/U Flange

## Waveguide Low Noise Amplifiers - PEWGA3201

### Features

- WR-28 Waveguide Low Noise Amplifier
- 26.5 GHz to 40 GHz
- UG-599/U Flange
- Ka Band
- Small Signal Gain 33 dB typ
- Noise Figure 2.8 dB typ
- VSWR 2.0:1 typ
- Output P1dB +18 dBm typ
- Output Psat +23.8 dBm
- DC Bias +8V @ 280 mA typ
- Max RF Input Power (CW) +10 dBm
- 50 Ohm Design
- RF Input and Output Waveguide Flange UG-599/U
- Solder Pins for DC Bias Voltage and Ground
- Operational Temperature Range -40°C to +80°C
- Rugged and Compact Aluminum Gold Plated Package Design

### Applications

- Test & Measurement
- Military & Commercial Communications
- Military Electronic Systems
- Research & Development

### Description

The PEWGA3201 is a WR-28 Waveguide Low Noise Amplifier, operating across the Ka Band from 26.5 GHz to 40 GHz. This 50 Ohm design exhibits impressive typical performance which includes 33 dB gain, 2.8 dB noise figure, and +18 dBm P1dB. Maximum RF input power (CW) is +10 dBm, and DC bias is +8 Vdc at 280 mA typ. The rugged and small size aluminum package design is gold plated and supports a UG-599/U waveguide flange pattern at RF input and output ports. Solder pins are used for DC bias voltage and ground. The module operates across a wide temperature range from -40°C to +80°C.

### Electrical Specifications (TA = +25°C, DC Voltage = 8Vdc, DC Current = 280mA)

Description	Minimum	Typical	Maximum	Units
Frequency	26.5		40	GHz
Small Signal Gain		33		dB
P1 dB		18		dBm
Psat		+24		dBm
Noise Figure		2.8	3	dB
VSWR		2:1		
RF Input Power			10	dBm
Operating DC Voltage <sup>1,4</sup>	6	8	12	Volts
Operating DC Current		280		mA
Input Power (CW)			10	dBm
Operating Temperature Range	-40		80	°C

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-28 Waveguide Low Noise Amplifier, Ka Band, 26.5 GHz to 40 GHz, 30 dB Gain, 18 dBm P1dB, UG-599/U Flange PEWGA3201](#)



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### Electrical Specification Notes:

- 1.) DC Supply must be able to source at least 0.6A DC at startup
- 2.) Open and short-circuit loads are not recommended at the amplifier output.
- 3.) Ensure proper 50 Ohm load before turning the amplifier "ON".
- 4.) Reverse biasing will destroy the amplifier
- 5.) Do not put any foreign objects inside the waveguide. Warranty Void.

### Mechanical Specifications

#### Size

Length	1.5 in [38.1 mm]
Width	1.5 in [38.1 mm]
Height	0.937 in [23.8 mm]
Weight	0.2 lbs [90.72 g]
Body Material and Plating	Aluminum, Gold
Design	
DC Bias Connector	
Flange	UG-599/U

### Biasing Up and Power Down Procedure

Biasing Up Procedure		Power Down Procedure	
Step 1	Connect Ground Pin	Step 1	Turn OFF RF input
Step 2	Apply DC Supply Voltage	Step 2	Turn OFF DC Supply Voltage
Step 3	Turn ON RF input	Step 3	Remove Ground

### Environmental Specifications

#### Temperature

Operating Range	-40 to 80 deg C
Storage Temperature	-40 to 100 deg C

**Compliance Certifications** (see [product page](#) for current document)

### Plotted and Other Data

Notes:

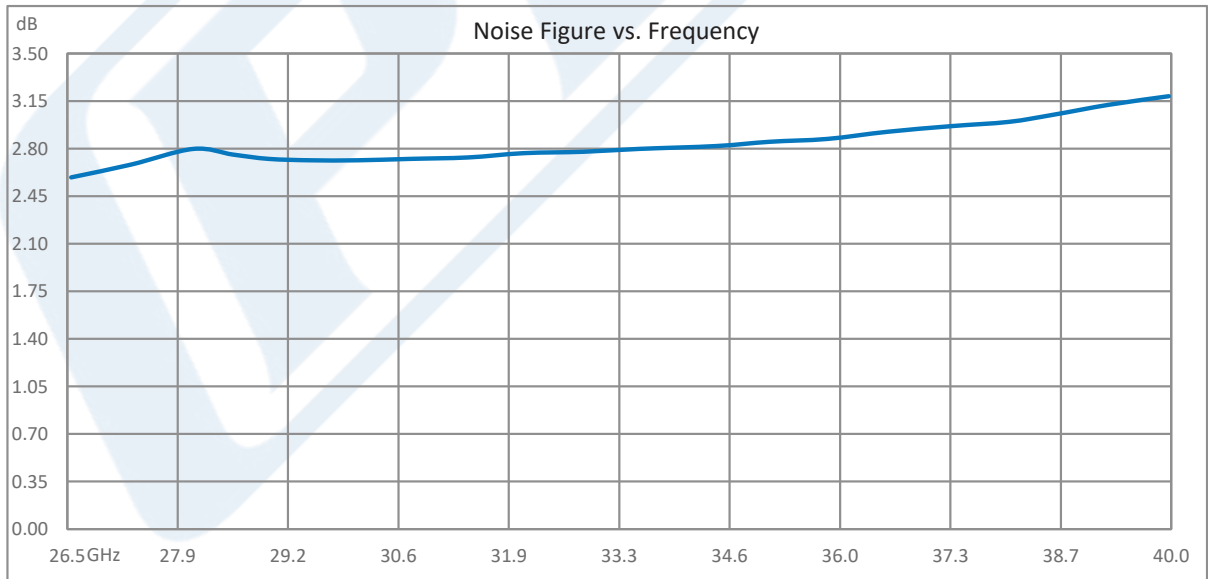
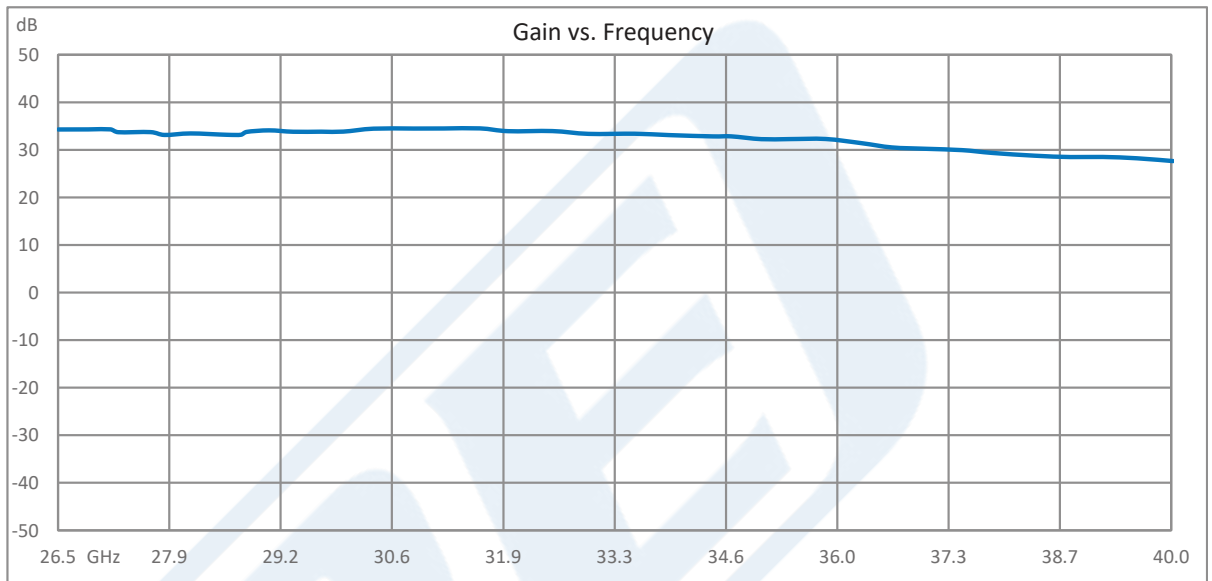
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Typical Performance Data



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## Waveguide Low Noise Amplifiers - PEWGA3201

### Absolute Maximum Rating

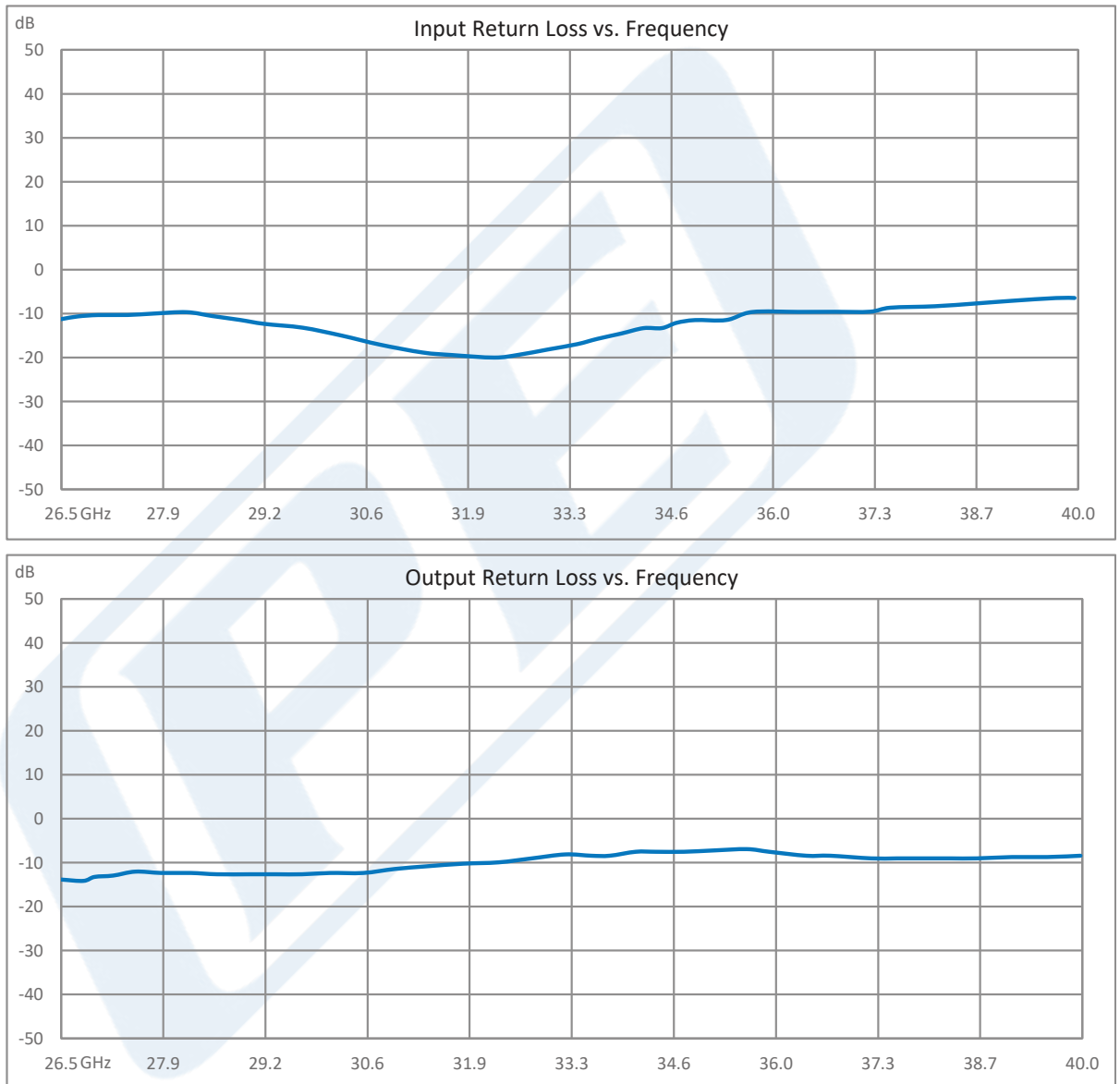
Parameter	Rating
Operating Temperature	-40°C to +80°C
Storage Temperature	-40°C to +100°C
Total Power Dissipation	4.5W
Input Power (CW)	+10dBm
DC Operating Voltage	+12Vdc

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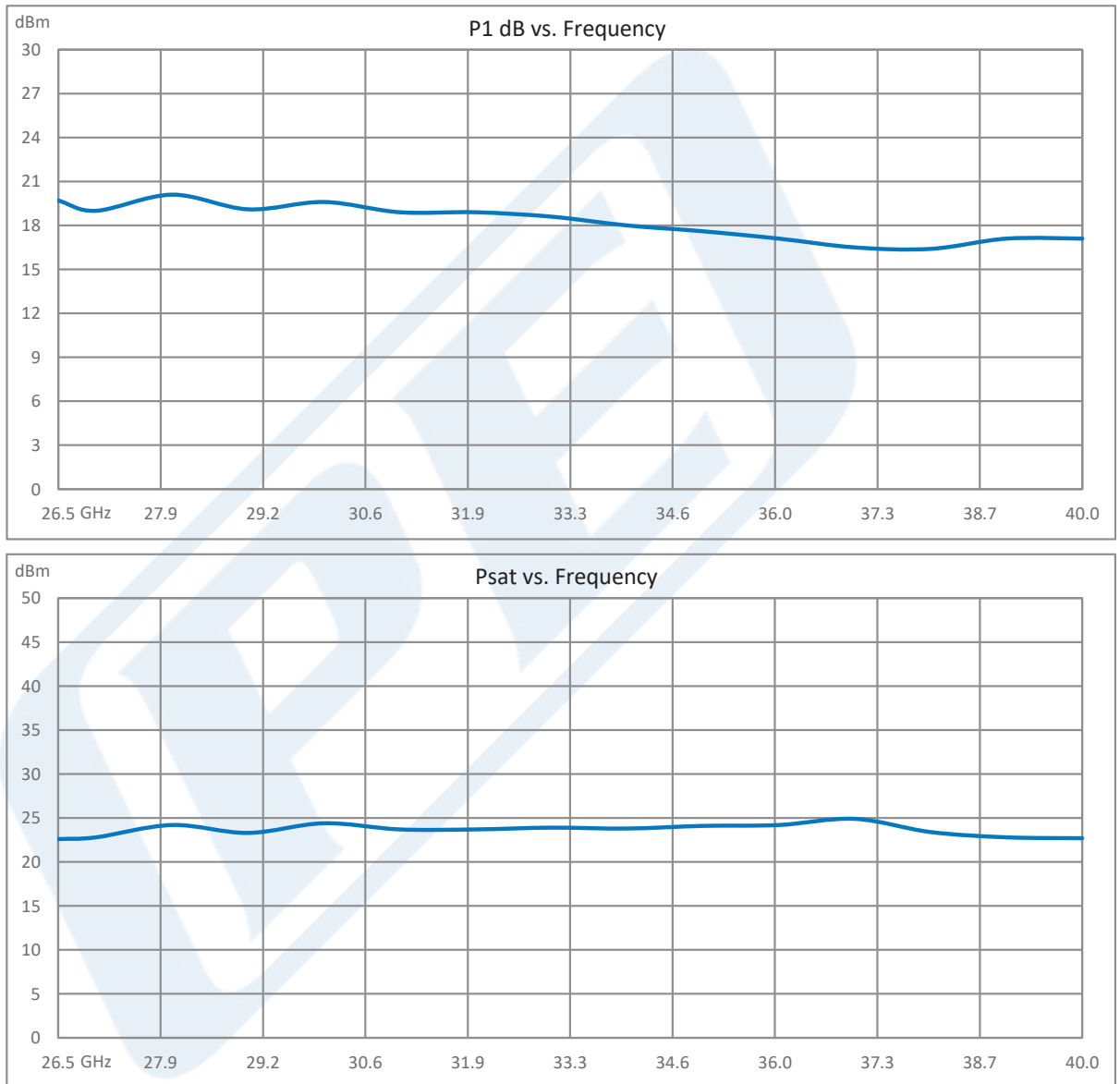


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## Waveguide Low Noise Amplifiers - PEWGA3201

WR-28 Waveguide Low Noise Amplifier, Ka Band, 26.5 GHz to 40 GHz, 30 dB Gain, 18 dBm P1dB, UG-599/U Flange from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

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URL: <https://www.pasternack.com/wr-28-waveguide-low-noise-amplifier-ka-band-40-ghz-pewga3201-p.aspx>

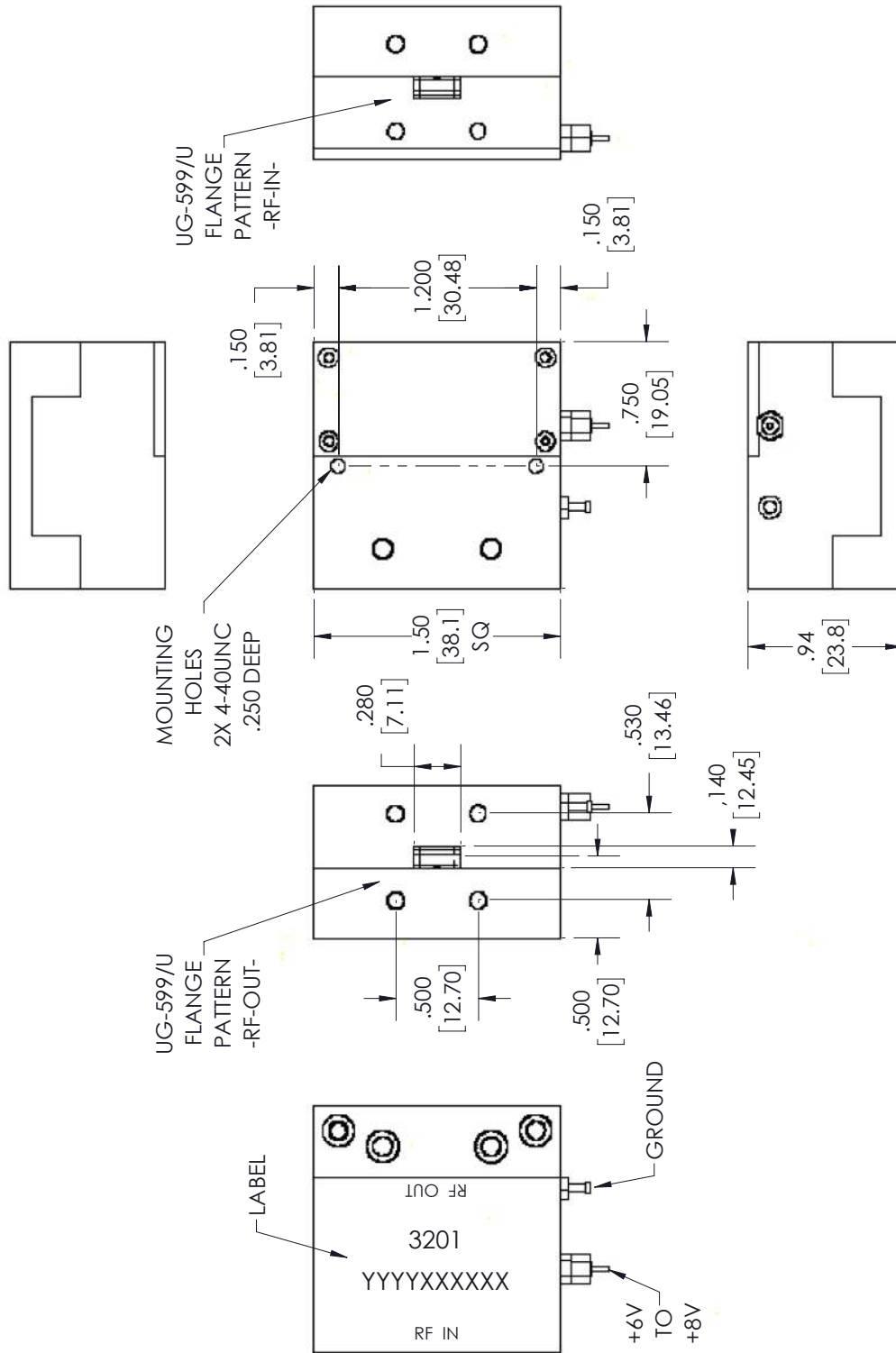
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# PEWGA3201 CAD Drawing

WR-28 Waveguide Low Noise Amplifier, Ka Band, 26.5 GHz to 40 GHz, 30 dB Gain, 18 dBm P1dB, UG-599/U Flange

REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL RELEASE	03/11/2022
		APPROVED
		TGALLA



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E-mail: sales@pasternack.com

UNLESS OTHERWISE SPECIFIED  
LEADING DIMENSIONS ARE INCHES  
DIMENSIONS IN [ ] ARE MILLIMETERS

TOLERANCES:  
 .X = ±.2 [5.08] FRACTIONS  
 .XX = ±.02 [.51] ±.1/32  
 .XXX = ±.005 [.13] ANGLES ± 1°  
 CABLE LENGTH (L) TOLERANCES:  
 L ≤ 12 [305] = +1 [25] / -0  
 12 [305] < L ≤ 60 [1524] = +2 [51] / -0  
 60 [1524] < L ≤ 120 [3048] = +4 [102] / -0  
 120 [3048] < L ≤ 300 [7620] = +6 [152] / -0  
 300 [7620] < L = +5%L / -0

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THIRD-ANGLE PROJECTION

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SHEET 1 OF 1  
SCALE N/A

REV A

ITEM NO. PEWGA3201

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