



Waveguide Converter Mixer WR-28 from 26.5 GHz to 40 GHz, IF from DC to 13.5 GHz and LO Power of +13 dBm, UG-599/U Flange, Ka Band

Waveguide Converter Mixers - PEWGMX1001

Features

- WR-28 Waveguide Downconverter Mixer
- Band
- RF/LO Frequency: 26.5 GHz to 40 GHz
- IF Frequency: DC to 13.5 GHz
- Ka Band
- LO Drive: +13 dBm
- Conversion Loss: 10 dB typ
- Isolation: 30 dB typ
- RF Input Power: +17 dBm max
- 50 Ohm Double Balanced Design
- RF/LO Port Waveguide Flange UG-599/U
- IF Port: SMA Female
- Operational Temperature Range -10°C to +45°C
- Rugged and Compact Gold Plated Aluminum Package Design
- RoHS Compliant

Applications

- Test & Measurement
- Military & Commercial
- Communications
- Electronic Warfare
- ELINT
- Research & Development

Description

The PEWGMX1001 is a WR-28 Waveguide Down Converter Mixer, operating across the Ka Band from 26.5 GHz to 40 GHz. The IF frequency band is DC to 13.5 GHz with a nominal LO drive level of +13 dB. Typical performance for the 50 Ohm double balanced mixer design includes 10 dB conversion loss and 30 dB isolation, with a maximum RF input power level of +17 dBm. The rugged and small size gold plated aluminum package supports a UG-599/U waveguide flange pattern at RF and LO ports, and an SMA female connector at the IF port. The mixer design is RoHS compliant and operates across a temperature range from -10°C to +45°C.

Electrical Specifications (@ +25°C)

| Description | Minimum | Typical | Maximum | Units |
|--------------------|---------|---------|---------|-------|
| Frequency Range | 26.5 | | 40 | GHz |
| LO Frequency Range | 26.5 | | 40 | GHz |
| IF Frequency Range | DC | | 13.5 | GHz |
| RF to LO Isolation | | 30 | | dB |
| Conversion Loss | | 10 | | dB |
| LO Port Power | | 13 | | dBm |

Electrical Specification Notes:

- 1.) Do not put any foreign objects inside the waveguide. Warranty will be voided
- 2.) Open and short-circuit loads are not recommended at the mixer output
- 3.) Ensure proper 50 Ohm load before applying RF

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Waveguide Converter Mixer WR-28 from 26.5 GHz to 40 GHz, IF from DC to 13.5 GHz and LO Power of +13 dBm, UG-599/U Flange, Ka Band PEWGMX1001](#)



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Mechanical Specifications

Size

| | |
|---------------------------|---------------------|
| Length | 1.5 in [38.1 mm] |
| Width | 1.5 in [38.1 mm] |
| Height | 1.3 in [33.02 mm] |
| Weight | 0.156 lbs [70.76 g] |
| Body Material and Plating | Aluminum, Gold |

Absolute Maximum Rating

| Parameter | Rating |
|--------------------------|-----------------|
| Operating Temperature | -10°C to +45°C |
| Storage Temperature | -40°C to +100°C |
| (LO+RF) Input Power (CW) | +17 dBm |

Configuration

| Description | RF Port | LO Port | IF Port |
|------------------|----------|----------|------------|
| Type | WR-28 | WR-28 | SMA Female |
| Waveguide Flange | UG-599/U | UG-599/U | |

Environmental Specifications

Temperature

| | |
|-----------------|-------------------|
| Operating Range | -10 to +45 deg C |
| Storage Range | -40 to +100 deg C |

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

Plotted and Other Data

Notes:

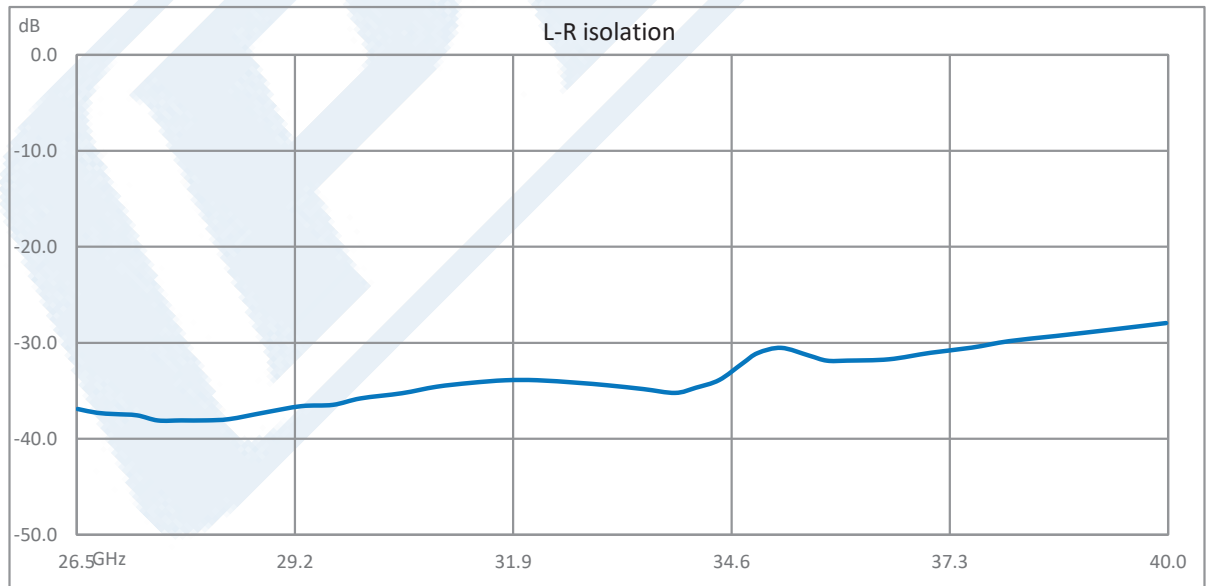
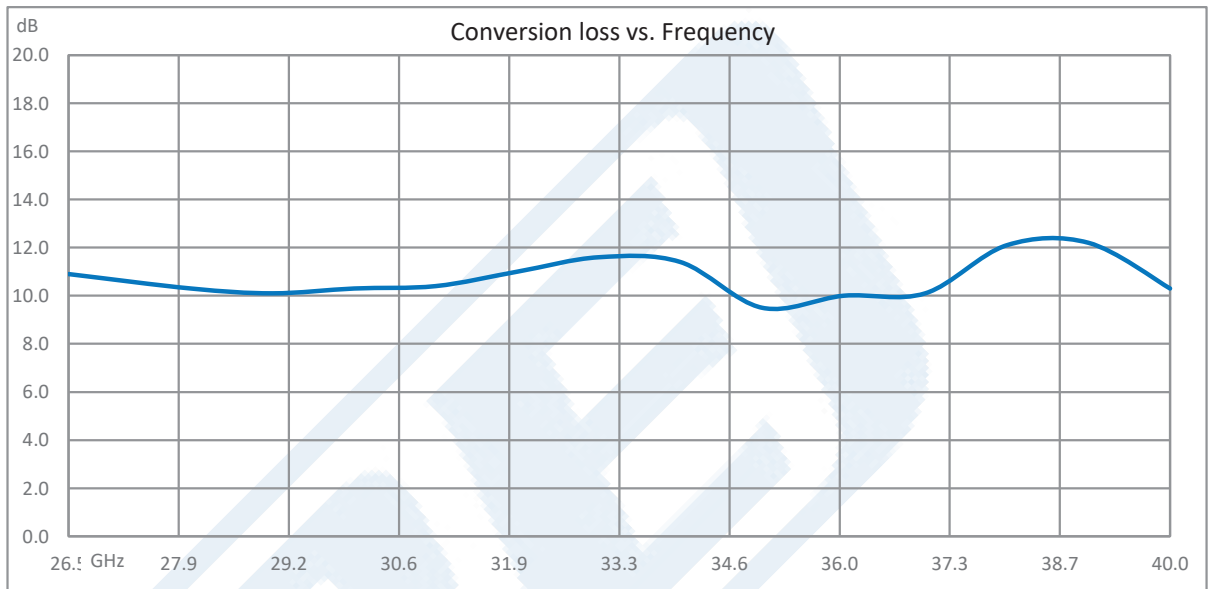
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Waveguide Converter Mixer WR-28 from 26.5 GHz to 40 GHz, IF from DC to 13.5 GHz and LO Power of +13 dBm, UG-599/U Flange, Ka Band PEWGMX1001](#)



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Typical Performance Data



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Waveguide Converter Mixer WR-28 from 26.5 GHz to 40 GHz, IF from DC to 13.5 GHz and LO Power of +13 dBm, UG-599/U Flange, Ka Band 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.

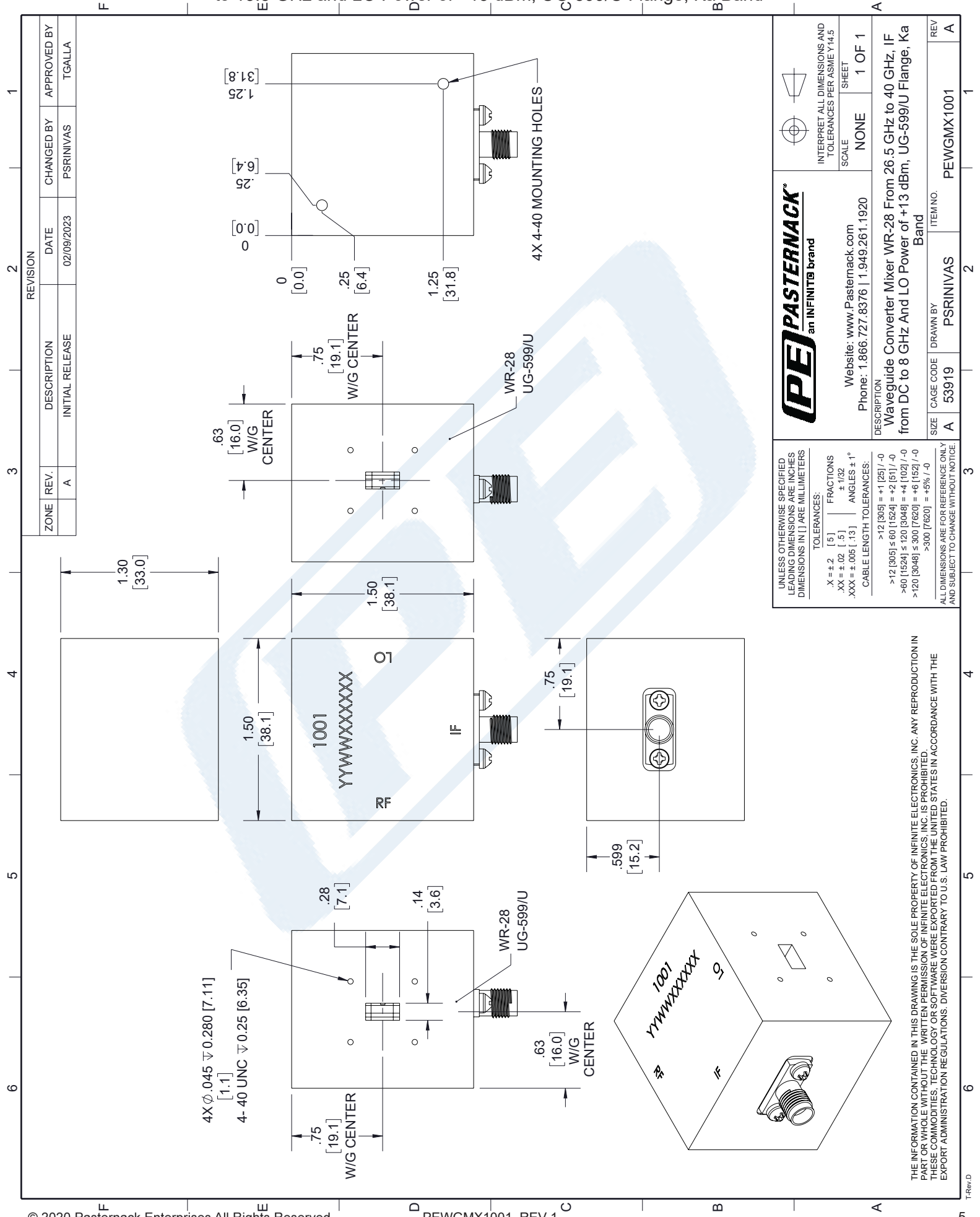
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URL: <https://www.pasternack.com/waveguide-mixer-wr-28-26.5-40-ghz-if-8-ghz-pewgmx1001-p.aspx>

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PEWGMX1001 CAD Drawing

Waveguide Converter Mixer WR-28 from 26.5 GHz to 40 GHz, IF from DC to 13.5 GHz and LO Power of +13 dBm, UG-599/U Flange, Ka Band



| ZONE | REV. | DESCRIPTION | DATE | CHANGED BY | APPROVED BY |
|------|------|-----------------|------------|------------|-------------|
| | A | INITIAL RELEASE | 02/09/2023 | PSRINIVAS | TGALLA |

| REVISION | 1 | 2 | 3 | 4 | 5 | 6 |
|----------|---|---|---|---|---|---|
| | | | | | | |

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DESCRIPTION
Waveguide Converter Mixer WR-28 From 26.5 GHz to 40 GHz, IF from DC to 8 GHz And LO Power of +13 dBm, UG-599/U Flange, Ka Band

SIZE A CAGE CODE 53919 DRAWN BY PSRINIVAS ITEM NO. PEWGMX1001 REV A

INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5

SCALE NONE SHEET 1 OF 1

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

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

ALL DIMENSIONS ARE FOR REFERENCE ONLY AND SUBJECT TO CHANGE WITHOUT NOTICE

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