

WR-42 Waveguide Antenna, 18 GHz to
26.5 GHz Frequency Range, 10 dBi Gain, UG-597/U
Flange, Integrated Cage-Style Mount

Waveguide Antennas Technical Data Sheet

PE1WAN042-10

Features

- WR-42 Rectangular Waveguide Interface
- 18 GHz to 26.5 GHz
- 10 dBi Nominal Gain
- UG-597/U Cover Flange
- K Band
- Ruggedized Aluminum Cage-Style Mount
- Integrates with Positioning Systems

Applications

- Antenna Measurements
- Wireless Communication
- Laboratory Use
- Microwave Radio Systems

Description

The PE1WAN042-10 K Band standard gain horn antenna (also known as waveguide horn) from Pasternack has a nominal gain of 10 dBi. This WR-42 standard gain horn has a UG-597/U type flange and integrated cage-style mount. The mount is a ruggedized aluminum mounting solution that integrates with test and measurement positioning systems, ensuring precise alignment and protection of the antenna. The Pasternack 10 dBi WR-42 horn antenna operates from 18 GHz to 26.5 GHz. The WR-42 PE1WAN042-10 waveguide horn is powder coated Aluminum for added protection and corrosion resistance. It is part of over 40,000 RF, microwave and millimeter wave components available from Pasternack.

Waveguide standard gain horn antennas are used in a wide variety of applications due to their high power handling capability, low loss, high directivity, and near constant electrical performance. Pasternack's WR-42 standard gain horns are available in 10, 15 and 20 dBi models with pyramidal shape and rectangular input. Our WR-42 standard gain horn antennas can ship worldwide the same day as it is purchased as with our other available RF parts.

Configuration

Design	WR-42
Polarization	Linear

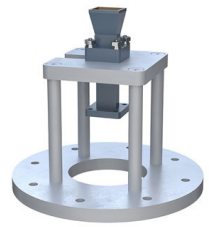
Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	18		26.5	GHz
Nominal Gain		10		dBi
Horizontal Half Power Beam Width		52.1		Degrees
Vertical Half Power Beam Width		51.6		Degrees
VSWR		1.3:1		

Mechanical Specifications

Size	
Length	2.44 in [61.98 mm]
Width	2.44 in [61.98 mm]
Height	4.33 in [109.98 mm]
Weight	0.6715 lbs [304.59 g]

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-42 Waveguide Antenna, 18 GHz to 26.5 GHz Frequency Range, 10 dBi Gain, UG-597/U Flange, Integrated Cage-Style Mount PE1WAN042-10](#)



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Waveguide Interface

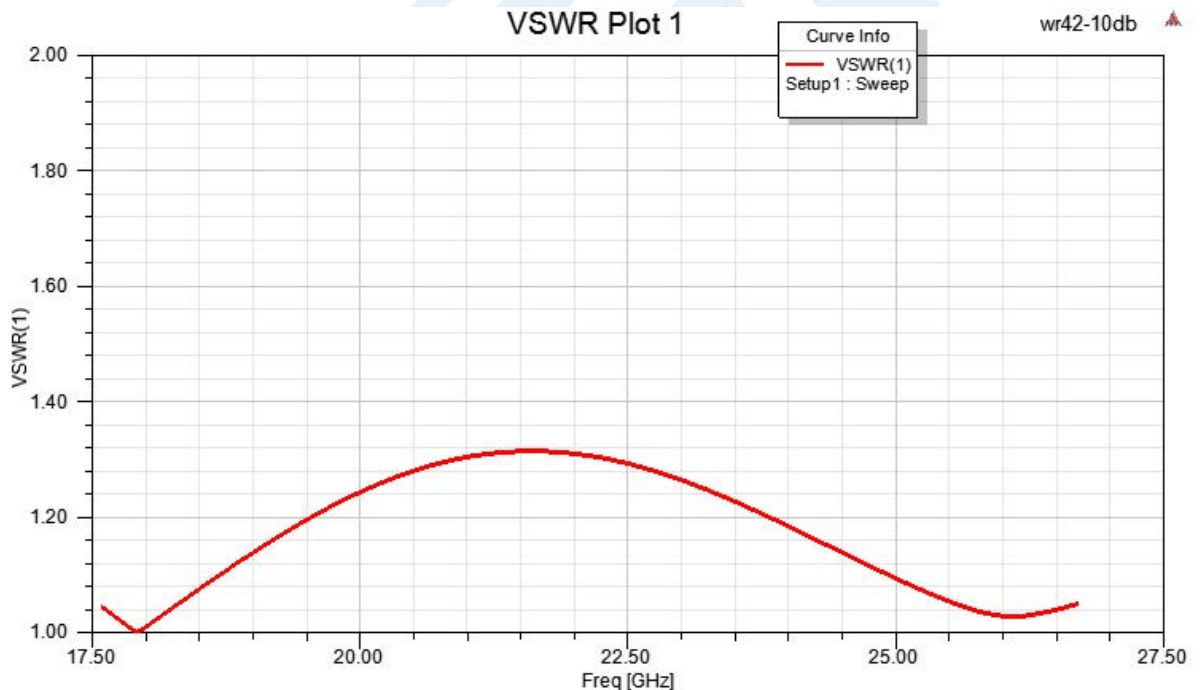
Waveguide Size
Flange Type
Flange Designation
Body Material and Plating

WR-42
Square Cover
UG-597/U
Aluminum, Gray

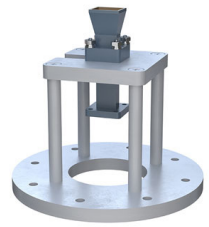
Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

Typical Performance Data



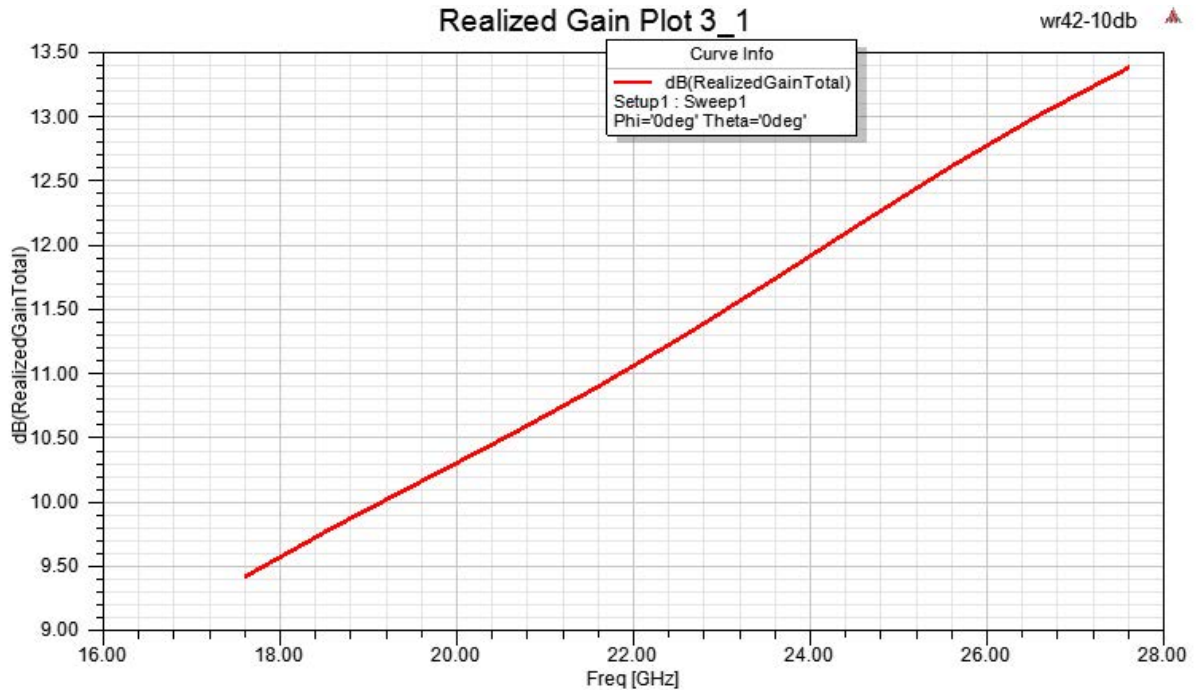
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-42 Waveguide Antenna, 18 GHz to 26.5 GHz Frequency Range, 10 dBi Gain, UG-597/U Flange, Integrated Cage-Style Mount PE1WAN042-10](#)



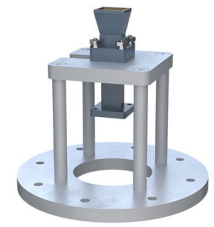
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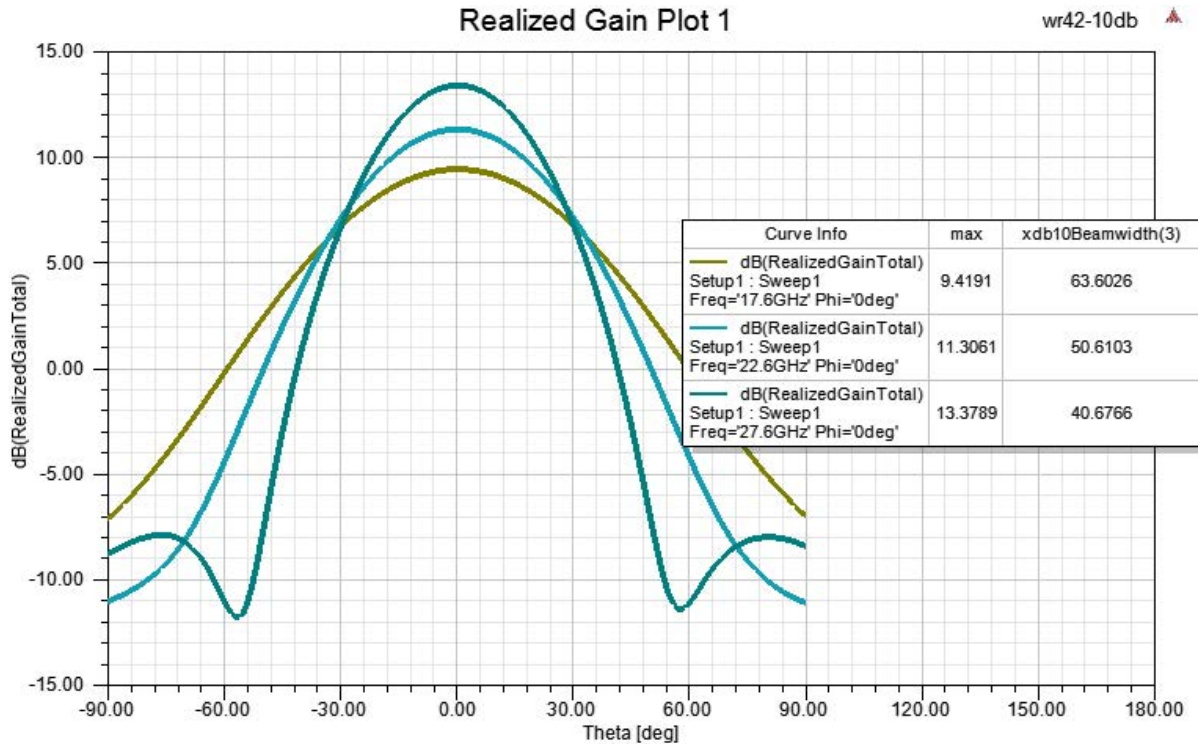
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-42 Waveguide Antenna, 18 GHz to 26.5 GHz Frequency Range, 10 dBi Gain, UG-597/U Flange, Integrated Cage-Style Mount PE1WAN042-10](#)



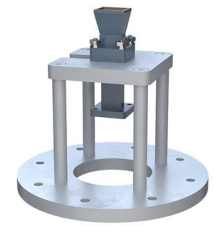
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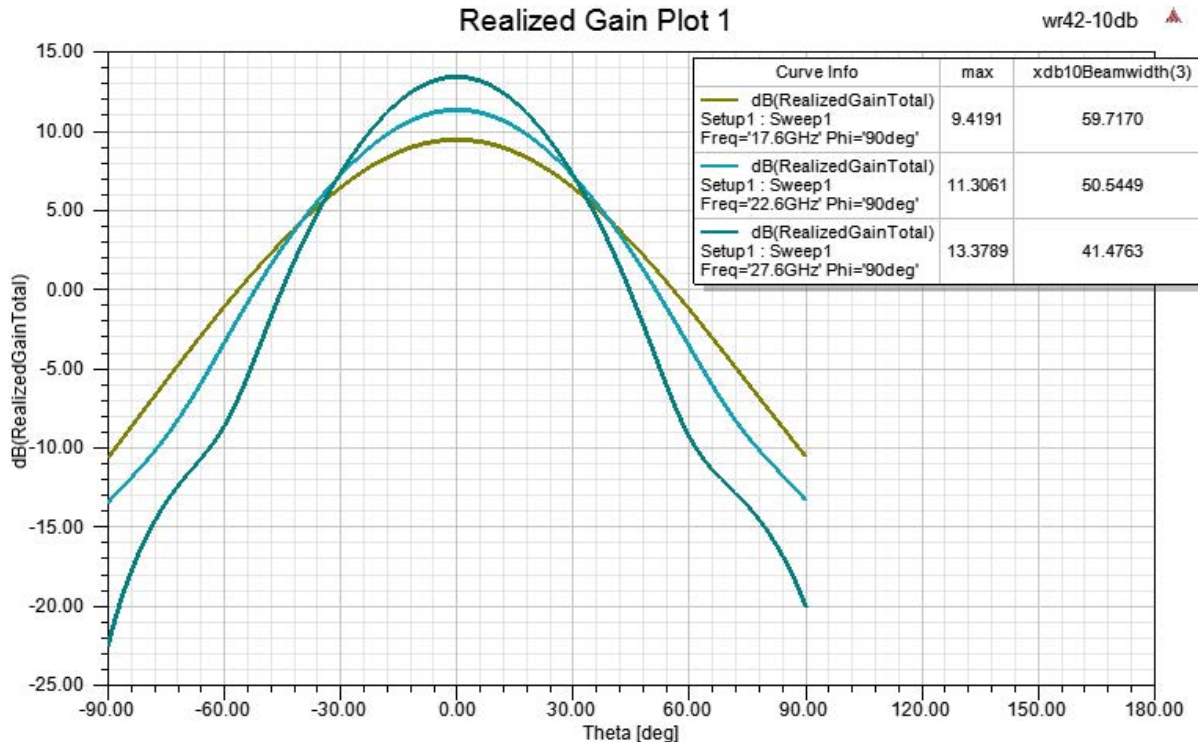
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-42 Waveguide Antenna, 18 GHz to 26.5 GHz Frequency Range, 10 dBi Gain, UG-597/U Flange, Integrated Cage-Style Mount PE1WAN042-10](#)



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WR-42 Waveguide Antenna, 18 GHz to 26.5 GHz Frequency Range, 10 dBi Gain, UG-597/U Flange, Integrated Cage-Style Mount 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.

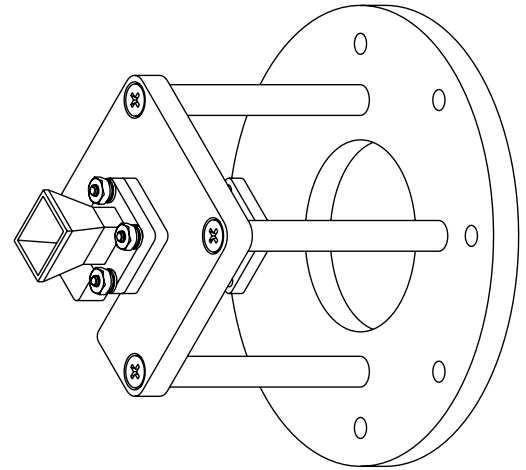
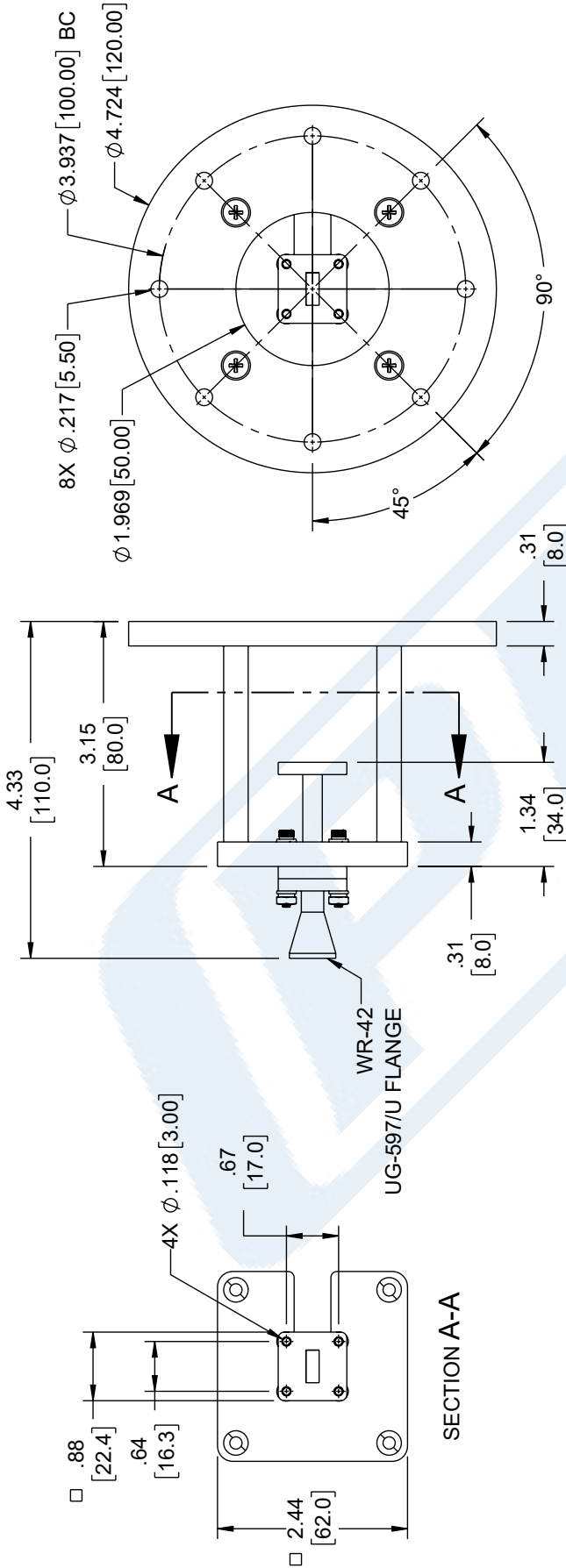
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-42 Waveguide Antenna, 18 GHz to 26.5 GHz Frequency Range, 10 dBi Gain, UG-597/U Flange, Integrated Cage-Style Mount PE1WAN042-10](https://www.pasternack.com/wr-42-waveguide-antenna-18-ghz-to-26.5-ghz-frequency-range-10-dbi-gain-ug-597-u-flange-integrated-cage-style-mount-pe1wan042-10-p.aspx)

URL: <https://www.pasternack.com/wr-42-waveguide-antenna-18-ghz-to-26.5-ghz-frequency-range-10-dbi-gain-ug-597-u-flange-integrated-cage-style-mount-pe1wan042-10-p.aspx>

The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. Pasternack reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Pasternack does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Pasternack does not assume any liability arising out of the use of any part or documentation.

PE1WAN042-10 CAD Drawing

WR-42 Waveguide Antenna, 18 GHz to 26.5 GHz Frequency Range,
10 dBi Gain, UG-597/U Flange, Integrated Cage-Style Mount



PE PASTERNAK an INFINITI® brand		Website: www.Pasternack.com Phone: 1.866.727.8376 1.949.261.1920	INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5 SCALE: NONE SHEET: 1 OF 1
DESCRIPTION: WR-42 WAVEGUIDE ANTENNA, 18 GHZ TO 26.5 GHZ FREQUENCY RANGE, 10 DBI GAIN, UG-597/U FLANGE WITH PRE-INSTALLED CAGE-STYLE MOUNT		CAGE CODE: 53919 DRAWN BY: HBAKKE ITEM NO.: PE1WAN042-10	REV: A

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

TOLERANCES:

X = ±.2 [5]	FRACTIONS
XX = ±.02 [0.5]	± 1/32
XXX = ±.005 [0.13]	ANGLES ± 1°

CABLE LENGTH TOLERANCES:

>12 [305] ≤ 512 [1303]	± 1/32 / -0
>512 [1303] ≤ 1024 [2603]	± 1/16 / -0
>1024 [2603] ≤ 1536 [3913]	± 1/8 / -0
>1536 [3913] ≤ 2048 [5208]	± 1/4 / -0
>2048 [5208] ≤ 3072 [7811]	± 3/8 / -0
>3072 [7811] ≤ 4096 [10414]	± 1/2 / -0
>4096 [10414] ≤ 5120 [13017]	± 3/4 / -0
>5120 [13017] ≤ 6144 [15600]	± 1 / -0
>6144 [15600] ≤ 7168 [18192]	± 1 1/4 / -0
>7168 [18192] ≤ 8192 [20784]	± 1 1/2 / -0
>8192 [20784] ≤ 9216 [23376]	± 1 3/4 / -0
>9216 [23376] ≤ 10240 [25968]	± 2 / -0
>10240 [25968] ≤ 11264 [28560]	± 2 1/4 / -0
>11264 [28560] ≤ 12288 [31152]	± 2 1/2 / -0
>12288 [31152] ≤ 13312 [33744]	± 2 3/4 / -0
>13312 [33744] ≤ 14336 [36336]	± 3 / -0
>14336 [36336] ≤ 15360 [38928]	± 3 1/4 / -0
>15360 [38928] ≤ 16384 [41520]	± 3 1/2 / -0
>16384 [41520] ≤ 17408 [44112]	± 3 3/4 / -0
>17408 [44112] ≤ 18432 [46704]	± 4 / -0
>18432 [46704] ≤ 19456 [49296]	± 4 1/4 / -0
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>22528 [57072] ≤ 23552 [59664]	± 5 1/4 / -0
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>24576 [62256] ≤ 25600 [64848]	± 5 3/4 / -0
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>26624 [67440] ≤ 27648 [70032]	± 6 1/4 / -0
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>28672 [72624] ≤ 29696 [75216]	± 6 3/4 / -0
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>30720 [77808] ≤ 31744 [80400]	± 7 1/4 / -0
>31744 [80400] ≤ 32768 [82992]	± 7 1/2 / -0
>32768 [82992] ≤ 33792 [85584]	± 7 3/4 / -0
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>34816 [88176] ≤ 35840 [90768]	± 8 1/4 / -0
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>38912 [98544] ≤ 39936 [101136]	± 9 1/4 / -0
>39936 [101136] ≤ 40960 [103728]	± 9 1/2 / -0
>40960 [103728] ≤ 41984 [106320]	± 9 3/4 / -0
>41984 [106320] ≤ 43008 [108912]	± 10 / -0
>43008 [108912] ≤ 44032 [111504]	± 10 1/4 / -0
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>46080 [116688] ≤ 47104 [119280]	± 11 / -0
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>54272 [137424] ≤ 55296 [140016]	± 13 / -0
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>56320 [142608] ≤ 57344 [145200]	± 13 1/2 / -0
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>59392 [150384] ≤ 60416 [152976]	± 14 1/4 / -0
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>68608 [173712] ≤ 69632 [176304]	± 16 1/2 / -0
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>81920 [207408] ≤ 82944 [210000]	± 19 3/4 / -0
>82944 [210000] ≤ 83968 [212592]	± 20 / -0
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