ResoNix

GUS

Subwoofer Line

Precision-Engineered for Compact, Sealed Enclosures

Revision: August 15, 2026

Thank you for choosing ResoNix!

We're a small company that takes a lot of pride in doing things differently, and doing them to the highest level possible. Every part of this subwoofer was designed, tested, and refined by us with one goal in mind—to offer a truly high-performance product that stands out not because of marketing hype, but because of real engineering, along with measurable and audible results.

We know how many options are out there, so we don't take it lightly that you chose to support us and what we're doing. Whether you're building a competition-level system, chasing the cleanest low end possible, or just want something that performs the way a subwoofer should without having to second-guess where your hard-earned money went, we're confident you're going to be impressed.

If you have any questions about your order, shipping, or anything general, feel free to reach out at **customerservice@resonixsoundsolutions.com**. For technical questions about setup, performance, or enclosure design, email **tech@resonixsoundsolutions.com**. Or if you'd rather speak to a real human on the phone (yes, we have real humans!), call us at **845-737-6649**.

Thanks again for your support. We're excited for you to hear what this thing can really do.

— **Nick Apicella**
Owner & Founder
ResoNix Sound Solutions

Warranty Information

All ResoNix subwoofers include a **one-year limited warranty** for the **original purchaser** only. This warranty covers manufacturer defects in materials or workmanship. If something fails due to how it was built, and not how it was used, we'll take care of it.

This warranty **does not cover abuse or user error**, including, but not limited to:

- Burnt or overheated voice coils
- Physical damage from overpowering
- Damage caused by over-excursion or bottoming out
- Failure due to improperly designed enclosures (too large or small, no subsonic filter when needed, etc.)
- Improper wiring or impedance mismatch
- Water or moisture damage
- Use outside of intended or recommended applications

To file a claim, send an email to **supportspecialist@resonixsoundsolutions.com** or give us a call at **845-737-6649**. Make sure you have your original order number available. We'll walk you through the next steps and let you know if we need the subwoofer returned for inspection.

If we determine the failure was due to a genuine manufacturer defect, we'll cover our choice of a repair or replacement at no cost, including return shipping.

ResoNix reserves the right to inspect, limit, or deny warranty claims at our sole discretion based on factors including, but not limited to the condition of the product, the information provided, and other factors.

Design Philosophy & Engineering Notes

GUS Series Subwoofers

The ResoNix GUS (Geometrically Uncompromised Subwoofer) line, also named after my cat Gustavo, was designed to solve a very specific problem: how to achieve serious output with proper low frequency extension with extremely low distortion in a small sealed enclosure, all without the mechanical or thermal compromises that most shallow and ultra-shallow subwoofers are prone to. Many subwoofers that claim to work in small boxes fall short in output and low frequency extension, struggle under real power, and/or suffer from high distortion. The GUS Series was built to avoid all of those sacrifices.

At the heart of the design is a low-distortion overhung motor, chosen for its compact size and strong motor force, which is critical for high excursion and performance in small sealed enclosures. A neodymium magnet is located in the pole piece and generates extreme levels of magnetic flux in the gap. This results in strong BL and precise control over the moving mass, even at high excursion.

The motor structure is designed to maximize motor force (BL^2/Re), and the GUS lineup delivers values that exceed even some SPL-focused subwoofers. For example, the GUS-15 D4 has a motor force value of ~210, which is higher than many subwoofers built strictly for output. Pair that with a moving mass of 669 grams, and you get a motor force-to-mass ratio of 0.313 — right at the upper end of what's typical for most subwoofers (most subwoofers land in the 0.25 to 0.35 range, and higher is better). The point is, high moving mass is not a drawback here like many would normally think when using a motor design like this. In small sealed applications, 1w/1m sensitivity is far less relevant, and this motor configuration keeps the driver efficient, clean, and well-controlled, even in very small enclosures.

To manage heat and eddy currents, we use a titanium voice coil former paired with copper windings. Titanium has low thermal conductivity, which works in our favor. It acts as a heat shield, keeping high temperatures generated by the voice coil away from the pole and magnet, helping preserve magnetic flux during heavy use. Instead of soaking into the motor core, heat is pushed outward into a **custom, patent pending shorting ring design** that fully surrounds the outer perimeter of the gap. This ring is press-fit into the outer diameter of the motor and allows the voice coil windings to radiate heat directly into the copper and aluminum rather than the structure of the motor. That shorting ring reduces and flattens inductance, helps reduce distortion, and acts as a heat sink to fight thermal compression during extended use.

The suspension system is designed for long, linear excursion without early compliance limitations that typically plague shallow subwoofers.

- **GUS-10**: 2.5" coil with 8" spider
- **GUS-12**: 3" coil with 9.25" spider
- **GUS-15**: 4" coil with dual 11" spider

Each size delivers the stroke and control needed to maintain performance at high output levels without mechanical noise or nonlinear behavior.

In short, the ResoNix GUS lineup was built to outperform anything even remotely close to its category. It isn't the cheapest, and it also isn't the most expensive, but it offers unmatched performance, engineering, and value. Like everything we build, the GUS lineup of subwoofers was designed to fill a real gap in the market, one that nobody else was addressing properly. That gap is exactly what pushed me to design and offer a subwoofer line of our own, built on real engineering instead of typical marketing fluff.

Suggested Use Case

The ResoNix GUS subwoofers were developed to address a segment of the market that I felt was missing. I wanted a subwoofer that was not only capable of high output, low frequency extension, low distortion, and overall wide bandwidth in a truly compact sealed enclosure, but also had a shallow mounting depth for broader installation flexibility.

While GUS is focused on sound quality, it is by no means limited in output. Its high linear excursion, exceptionally low distortion, wide bandwidth, and class-leading output capability allow it to deliver the performance expected from a much larger conventional subwoofer, while maintaining the shallow mounting depth and small enclosure requirements that make it practical for space-constrained installations.

The GUS subwoofers excel in extremely small sealed enclosures while still achieving output and low-end performance that would typically require significantly more airspace. It is also incredibly flexible for sealed enclosure applications. Whether you're installing it as the only subwoofer in the system, using it as a front-subwoofer being paired with rear subwoofers to bypass typical subwoofer and midbass cancellations, or mounting it in a front location where space is tight as the only subwoofer in the system, our GUS series handles it with ease. Its shallow depth and clean response from infra-sonic frequencies to well beyond 250 Hz allow it to blend seamlessly into a wide range of system designs. As long as the enclosure is sealed and built to the recommended net airspace, GUS will perform exceptionally.

While their T/S parameters technically suggest that vented-enclosure use is possible, we personally recommend sealed enclosures ONLY for the GUS subwoofers. Sealed enclosures offer more predictable behavior, better control, and improved transient response over vented enclosures. Vented designs often introduce issues like a narrower frequency response, reduced ultra-low-frequency extension, and peaks that often combine with cabin gain in an undesirable part of the spectrum. **In automotive environments, these compromises provide little benefit and can work against proper system design and tuning when truly accurate signal reproduction is the goal.** Yes, Infinite Baffle is also great, but that is not recommended for the GUS series subwoofers.

If you are planning a front subwoofer installation and absolute minimum mounting depth is required, or if your goal is to use one of our subwoofers as a dedicated front-subwoofer and optimize performance only in the 40 to 120 Hz range without the need for deep sub-bass extension, our PTR series may be worth considering over the GUS series. It is optimized for ultra-low distortion where even shallower mounting depth is needed. For systems that require full subwoofer bandwidth with no high-pass filter from a small enclosure, our GUS series remains the best option.

If you are building an infinite baffle installation, the GUS series is not designed for that application. For true infinite baffle setups such as rear deck or trunk baffle installs, we recommend using our Odin series, which is developed specifically for infinite baffle use.

Power and Basic Specs

The GUS series subwoofers are available in dual-2 ohm and dual-4 ohm voice coil configurations. Note that the GUS-10 D2 and D4 intentionally use different recommended enclosure volumes, while the GUS-12 and GUS-15 D2 and D4 variants share the same enclosure recommendations. **They feature pole venting, side venting, and pusher-cone venting,** providing extensive airflow throughout the motor structure. Because the GUS does not rely on the rear pole vent for cooling or airflow, no clearance behind the pole vent is required. The rear of the motor can be placed directly against the enclosure wall, even fully blocking the pole vent, without negatively affecting cooling or performance.

Specification	GUS-10	GUS-12	GUS-15
RMS Power Handling	500 watts	800 watts	1500 watts
Recommended Sealed Volume *Net Internal Airspace, D2 / D4*	0.25 – 0.8 ft³ (optimal: **D2** 0.4 / **D4** 0.6 ft³)	0.4 – 1.1 ft³ (optimal: 0.75 ft³ for D2 & D4)	0.8 – 2.3 ft³ (optimal: 1.4 ft³ for D2 & D4)
Voice Coil	Dual-2 & Dual-4	Dual-2 & Dual-4	Dual-2 & Dual-4
Frequency Range (+/–3dB)*	< 20 Hz – 600 Hz	<15 Hz – 500 Hz	<10 Hz – 350 Hz
Sensitivity (1W/1m): D2/D4	81.6 / 82.15 dB	82.35 / 83.2 dB	83.5 / 84.4 dB
Mounting Depth	3.99" (101.5 mm)	4.54" (115.3 mm)	5.81" (147.5 mm)
Cutout Diameter	9.26" (235.08 mm)	11.16" (283.57 mm)	13.97" (354.91 mm)
Overall Diameter	10.93" (277.5 mm)	12.99" (330 mm)	15.71" (399 mm)
Bolt Pattern	8 × Ø6.3 mm on Ø256 mm PCD	8 × Ø6.5 mm on Ø304 mm PCD	8 × Ø6.5 mm on Ø375 mm PCD
Volume Displacement	0.031 ft³	0.046 ft³	0.072 ft³
Weight	11.5 lbs	16 lbs	22 lbs
Voice Coil Diameter	2.5 in	3 in	4 in
Spider Diameter	8 in	9.25 in	11 in
Linear Xmax	18 mm	20 mm	25 mm
Xmech	20 mm	24 mm	28 mm

**Low-end frequency range is estimated in the optimal enclosure size with in-vehicle cabin gain; high-end frequency range is based on free-air response.*

Enclosure Design Notes

While the GUS1.7 T/S parameters technically suggest that vented-enclosure use is possible, we strongly recommend sealed enclosures. Vented designs require nearly the same overall volume as a sealed enclosure designed for two of the same drivers, all while sealed enclosures offer better transient response, smoother low-end extension, and avoid the tuning-related peaks that are unnecessary in cars due to cabin gain.

Lining the enclosure walls with **ResoNix Fiber Mat** is recommended to reduce standing waves and internal energy, is easy to work with, and absorbs energy more effectively than polyfill, which is also fine to use.

Enclosure shape and exact dimensions are not critical. Build it to fit your installation, as long as the final internal airspace is at or near the recommended volume.

Subsonic filters or high-pass filters are not needed nor recommended when using our recommended sealed enclosure size. These subwoofers are designed to play low with control, and filtering them defeats the point. Please just be mindful of enclosure size and the amount of power applied. Below are the recommended enclosure sizes and the corresponding acceptable amount of power applied.

A QTC of 0.707 is considered ideal, but with cabin gain in a vehicle, values sometimes up to around 1.0 can work well and still allow usable output into subsonic frequencies. Smaller enclosures naturally limit excursion, which makes them safe for higher power applications, but thermal limits still need to be considered. For larger enclosures, please be mindful of the amount of power applied, as excursion is less controlled due to increased low frequency sensitivity. Stick to the recommended power ratings based on the enclosure size you're using.

Sealed Box Behavior

Net Internal Airspace Per Driver

Specification	GUS 10	GUS 12	GUS 15
Recommended & Optimal	D2: 0.4 ft³, D4: 0.6 ft³ for a QTC of 0.707, recommended power of 500 watts RMS (mechanical limit).	0.75 ft³ for a QTC of 0.707 (D2 & D4), recommended power of 800 watts RMS (mechanical limit).	1.4 ft³ for a QTC of 0.707 (D2 & D4), recommended power of 1500 watts RMS (mechanical limit).
Minimum Recommended	0.25 ft³ for D2, and 0.3 ft³ for D4 for a QTC of 0.875, recommended power of 650 watts RMS (thermal limit).	0.4 ft³ for a QTC of 0.875 (D2 & D4), recommended power of 1200 watts RMS (thermal limit).	0.8 ft³ for a QTC of 0.875 (D2 & D4), recommended power of 2000 watts RMS (thermal limit).
Maximum Recommended	0.65 ft³ for a QTC of 0.58 for D2, recommended power of 300 watts. 0.8 ft³ for a QTC of 0.64 for D4, recommended power of 300 watts.	1.1 ft³ for a QTC of 0.6, recommended power of 500 watts. (D2 & D4).	2.3 ft³ for a QTC of 0.6, recommended power of 1000 watts. (D2 & D4).

Break-in & Pre-Conditioning Notes

Yes, break-in is real, but it's not what most people think. You don't need to baby the subwoofer or go through a slow ramp-up routine. It's completely fine to play your system normally right out of the box, even at high volume.

That said, like any mechanical system with soft parts, there is a break-in period where the suspension compliance (CMS) changes slightly. This affects the Thiele/Small parameters and results in a minor shift in how the subwoofer behaves. Most of this happens very early on, but should be fully stable within 20 hours of high-excursion use, and once it's settled in, those changes stop.

During this break in period you might notice a small change in sound, usually a slight increase in low-frequency extension and a more relaxed feel as the suspension loosens up. It will not be a dramatic transformation, but it is worth being aware of. After about 20 hours of high-excursion use, the driver is considered fully broken in and the T/S parameters will have stabilized.

There's no special break-in track or sine sweep needed. Just install it, play music the way you normally would (or jam the f**k out with your awesome new subwoofer!), and let it break in naturally over time.

We always encourage fully tuning the system right out of the box so you can immediately enjoy it at its highest capability, but final tuning adjustments should be checked for and made if needed once the subwoofer is fully broken in.

Dos and Don'ts for Installation

Getting your subwoofer installed and mounted properly isn't complicated, but there are a few key things you should keep in mind to avoid performance issues or damage.

DO	DON'T
Use a flat, rigid mounting surface and enclosure. I personally suggest Baltic Birch. Flexible or resonant baffles and enclosures introduce distortion. It would be a shame to compromise such a high-performing subwoofer with an enclosure that resonates. With its high moving mass and motor force, GUS requires a more rigid enclosure than typical subwoofers.	Don't over-torque your mounting screws. It's unnecessary and only increases the risk of issues like stripped threads or cracked baffles. A hair more than snug is perfect.
Use our supplied mounting hardware. While we will not void your warranty for not using our supplied mounting screws, we do suggest using them. They're free, they're beefy, they fit, and they hold well. There is no reason to not use them.	Don't use this subwoofer in an infinite baffle setup, no matter what nonsense you might see online. These subwoofers are specifically designed for small sealed enclosures, and running them IB will push them beyond their excursion limits and reduce overall performance. Use the **ResoNix Odin** subwoofers if you want a subwoofer designed for infinite baffle.
Maintain front clearance: • **2.15" (55 mm)** for the **GUS-10** • **2.36" (60 mm)** for the **GUS-12** • **2.56" (65 mm)** for the **GUS-15** *Front clearance measured from the baffle surface*	Don't ignore our recommended power limits. Just because the internet says every subwoofer needs more power than rated doesn't mean it's true. Our ratings are not conservative. If you want to push the limits, call us first and we'll tell you what's realistic and what's too risky.
Make sure the subwoofer is properly sealed to the baffle. A custom rubber gasket is included around the mounting flange of the GUS series subwoofers so no gasketing tape is needed. Just make sure it makes a proper seal to the baffle.	Don't guess if you're unsure about anything. Just reach out, please. We are genuinely always happy to help, and will help save a lot of potential frustration.
And lastly, **DO enjoy it! And don't forget to tell your friends! :)** Once everything is installed and dialed in, play the hell out of it and enjoy what a genuinely good subwoofer can do. If you're happy with your GUS, or any of our other products, share your build, tag us in photos or videos, and help spread the word. Word of mouth goes a very long way for a small company like ours and helps us keep developing products like this.	And please, **DON'T do this subwoofer a disservice**. Please make sure your install is solid and that nothing in the vehicle is rattling or resonating. Using a low-distortion subwoofer in an untreated vehicle interior defeats the entire point. Properly treating the space with **ResoNix sound treatment materials** keeps resonance low, allowing the subwoofer to shine without the added distortions from the vehicle itself. Follow our **ResoNix Buyers Guide** if you are unsure of what to use and where to use it. In almost all cases, poor subwoofer performance is from incorrect/poor installation, or poor tuning. We are more than happy to give guidance, so be sure to reach out if you aren't 100% confident on how to give this subwoofer everything it deserves.

TS Parameters

We use Large Cold T/S parameters measured with a Klippel LSI because they are captured at realistic operating levels and better predict real-world output and excursion. Small-signal parameters are measured at very low excursion and current, making them less representative of how a subwoofer actually behaves in use.

Also, don't rely on a Dayton DATS for accurate T/S parameters on subwoofers. Its low-level measurement signal may "work" for smaller drivers, but its measurement drive level is too low to reliably capture data on large drivers.

GUS-10 D2

Table Parameters at x=0 (rest position)

Symbol	Large + Cold	Unit	Comment
FS	20.37	Hz	Driver resonance frequency
QTS	0.34		Total Q-factor considering $R_e(T_v)$ and R_{ms} at f_s
QES	0.34		Electrical Q-factor at f_s considering $R_e(T_v)$ only
QMS	13.53		Mechanical Q-factor at f_s considering R_{ms} only
RE	0.97 (parallel)	Ω	Voice coil resistance considering the voice coil temperature ΔT_v
LE	0.265	mH	Voice coil inductance at the coil's rest position
BL	9.593	N/A	Force factor at the rest position (Bl product)
MMS	254.981	g	Moving mass including air load
CMS	0.24	mm/N	Mechanical compliance of the driver suspension at f_s
SD	346.36	cm²	Effective sound radiation area. Used to display V_{as}, η_0, and L_m
VAS	36.634	liters	Equivalent air volume of suspension
XMAX	18	mm	Linear mechanical excursion (70%:BL)
XMECH	20	mm	Excursion mechanical limitation

T/S, LSI, and TRF parameters are provided as measured reference data and are subject to normal manufacturing tolerances, break-in, test conditions, and future production revisions. Published values may vary from unit to unit and are not guaranteed for every individual driver.

TS Parameters

GUS-10 D4

Table Parameters at x=0 (rest position)

Symbol	Large + Cold	Unit	Comment
FS	21.76	Hz	Driver resonance frequency
QTS	0.39		Total Q-factor considering $R_e(T_v)$ and R_{ms} at f_s
QES	0.40		Electrical Q-factor at f_s considering $R_e(T_v)$ only
QMS	16.25		Mechanical Q-factor at f_s considering R_{ms} only
RE	1.89 (parallel)	Ω	Voice coil resistance considering the voice coil temperature ΔT_v
LE	0.425	mH	Voice coil inductance at the coil's rest position
BL	12.093	N/A	Force factor at the rest position (Bl product)
MMS	227.233	g	Moving mass including air load
CMS	0.24	mm/N	Mechanical compliance of the driver suspension at f_s
SD	346.36	cm²	Effective sound radiation area. Used to display V_{as}, η_0, and L_m
VAS	36.035	liters	Equivalent air volume of suspension
XMAX	18	mm	Linear mechanical excursion (70%:BL)
XMECH	20	mm	Excursion mechanical limitation

T/S, LSI, and TRF parameters are provided as measured reference data and are subject to normal manufacturing tolerances, break-in, test conditions, and future production revisions. Published values may vary from unit to unit and are not guaranteed for every individual driver.

TS Parameters

GUS-12 D2

Table Parameters at x=0 (rest position)

Symbol	Large + Cold	Unit	Comment
FS	14.51	Hz	Driver resonance frequency
QTS	0.28		Total Q-factor considering $R_e(T_v)$ and R_{ms} at f_s
QES	0.29		Electrical Q-factor at f_s considering $R_e(T_v)$ only
QMS	7.66		Mechanical Q-factor at f_s considering R_{ms} only
RE	1.03 (parallel)	Ω	Voice coil resistance considering the voice coil temperature ΔT_v
LE	0.39	mH	Voice coil inductance at the coil's rest position
BL	11.436	N/A	Force factor at the rest position (Bl product)
MMS	402.797	g	Moving mass including air load
CMS	0.30	mm/N	Mechanical compliance of the driver suspension at f_s
SD	490.87	cm²	Effective sound radiation area. Used to display V_{as}, η_0, and L_m
VAS	101.07	liters	Equivalent air volume of suspension
XMAX	20	mm	Linear mechanical excursion (70%:BL)
XMECH	24	mm	Excursion mechanical limitation

T/S, LSI, and TRF parameters are provided as measured reference data and are subject to normal manufacturing tolerances, break-in, test conditions, and future production revisions. Published values may vary from unit to unit and are not guaranteed for every individual driver.

TS Parameters

GUS-12 D4

Table Parameters at x=0 (rest position)

Symbol	Large + Cold	Unit	Comment
FS	14.54	Hz	Driver resonance frequency
QTS	0.28		Total Q-factor considering $R_e(T_v)$ and R_{ms} at f_s
QES	0.28		Electrical Q-factor at f_s considering $R_e(T_v)$ only
QMS	9.08		Mechanical Q-factor at f_s considering R_{ms} only
RE	1.70 (parallel)	Ω	Voice coil resistance considering the voice coil temperature ΔT_v
LE	0.49	mH	Voice coil inductance at the coil's rest position
BL	13.634	N/A	Force factor at the rest position (Bl product)
MMS	339.842	g	Moving mass including air load
CMS	0.35	mm/N	Mechanical compliance of the driver suspension at f_s
SD	490.87	cm²	Effective sound radiation area. Used to display V_{as}, η_0, and L_m
VAS	119.347	liters	Equivalent air volume of suspension
XMAX	20	mm	Linear mechanical excursion (70%:BL)
XMECH	24	mm	Excursion mechanical limitation

T/S, LSI, and TRF parameters are provided as measured reference data and are subject to normal manufacturing tolerances, break-in, test conditions, and future production revisions. Published values may vary from unit to unit and are not guaranteed for every individual driver.

TS Parameters

GUS-15 D2

Table Parameters at x=0 (rest position)

Symbol	Large + Cold	Unit	Comment
FS	14.11	Hz	Driver resonance frequency
QTS	0.31		Total Q-factor considering $R_e(T_v)$ and R_{ms} at f_s
QES	0.32		Electrical Q-factor at f_s considering $R_e(T_v)$ only
QMS	21.7		Mechanical Q-factor at f_s considering R_{ms} only
RE	1.10 (parallel)	Ω	Voice coil resistance considering the voice coil temperature ΔT_v
LE	0.54	mH	Voice coil inductance at the coil's rest position
BL	15.01	N/A	Force factor at the rest position (Bl product)
MMS	731.602	g	Moving mass including air load
CMS	0.17	mm/N	Mechanical compliance of the driver suspension at f_s
SD	804.25	cm²	Effective sound radiation area. Used to display V_{as}, η_0, and L_m
VAS	157.94	liters	Equivalent air volume of suspension
XMAX	25	mm	Linear mechanical excursion (70%:BL)
XMECH	28	mm	Excursion mechanical limitation

T/S, LSI, and TRF parameters are provided as measured reference data and are subject to normal manufacturing tolerances, break-in, test conditions, and future production revisions. Published values may vary from unit to unit and are not guaranteed for every individual driver.

TS Parameters

GUS-15 D4

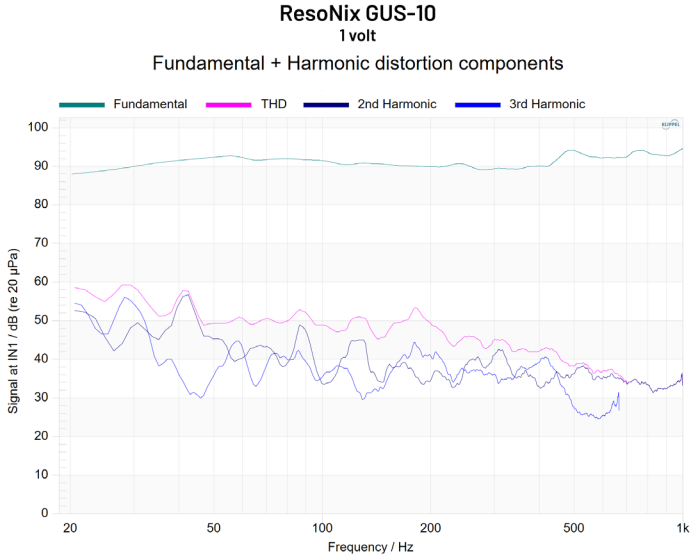
Table Parameters at x=0 (rest position)

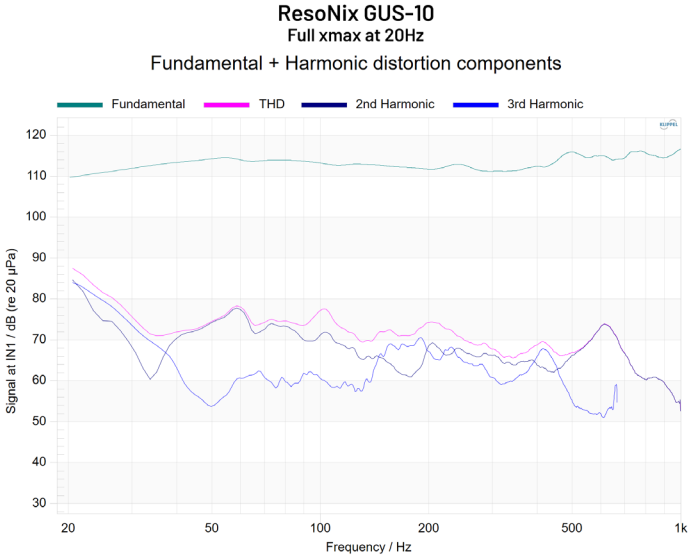
Symbol	Large + Cold	Unit	Comment
FS	17.11	Hz	Driver resonance frequency
QTS	0.34		Total Q-factor considering $R_e(T_v)$ and R_{ms} at f_s
QES	0.34		Electrical Q-factor at f_s considering $R_e(T_v)$ only
QMS	16.45		Mechanical Q-factor at f_s considering R_{ms} only
RE	1.94 (parallel)	Ω	Voice coil resistance considering the voice coil temperature ΔT_v
LE	0.55	mH	Voice coil inductance at the coil's rest position
BL	20.165	N/A	Force factor at the rest position (Bl product)
MMS	669.468	g	Moving mass including air load
CMS	0.13	mm/N	Mechanical compliance of the driver suspension at f_s
SD	804.25	cm²	Effective sound radiation area. Used to display V_{as}, η_0, and L_m
VAS	117.47	liters	Equivalent air volume of suspension
XMAX	25	mm	Linear mechanical excursion (70%:BL)
XMECH	28	mm	Excursion mechanical limitation

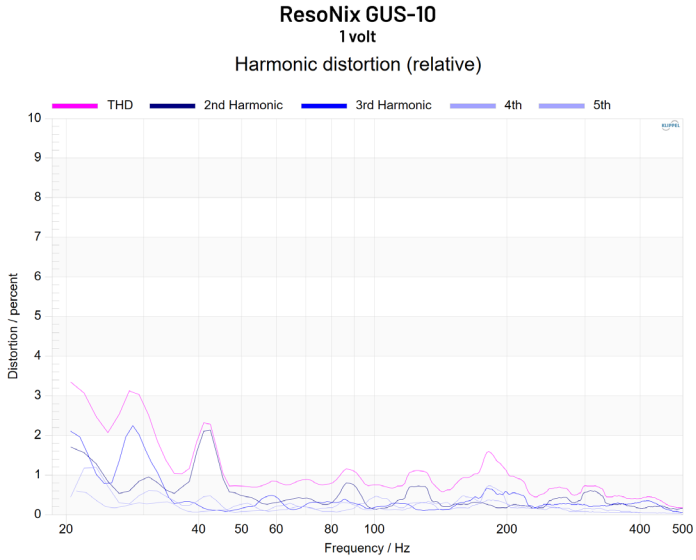
T/S, LSI, and TRF parameters are provided as measured reference data and are subject to normal manufacturing tolerances, break-in, test conditions, and future production revisions. Published values may vary from unit to unit and are not guaranteed for every individual driver.

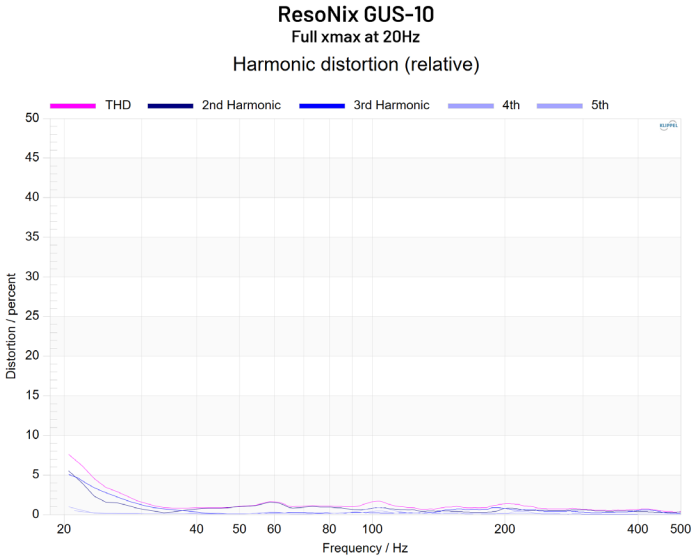
Klippel TRF data

Both the 1V and the full-xmax TRF plots are provided, so you can compare them directly. The test method is identical, only the drive level changes. The 1V graphs show the baseline free-air response and harmonic behavior at very low excursion. The full-xmax graphs repeat the same sweep with the driver pushed to its 70% BL excursion limit, which is a much better representation of how the subwoofer behaves when it is actually being pushed to its full potential. All measurements are done on the Klippel TRF, taken free-air with an on-axis nearfield microphone positioned at 1/10th the cone diameter plus 2 inches, using 1/6-octave smoothing, with frequency response shown to 1 kHz and distortion shown to 500 Hz. Each model includes both frequency response plots (with THD plus harmonic components) and relative distortion plots (THD and individual harmonics represented as a percentage of the fundamental), so you can see not just the shape of the curve, but how distortion content and output cleanliness change as level increases.



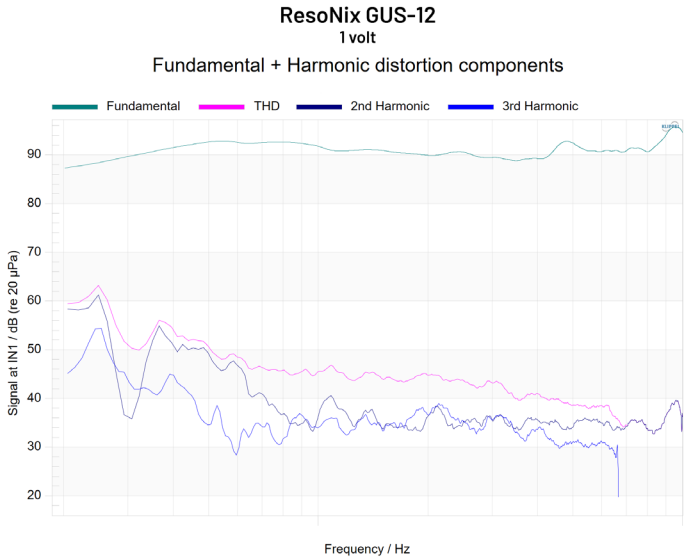


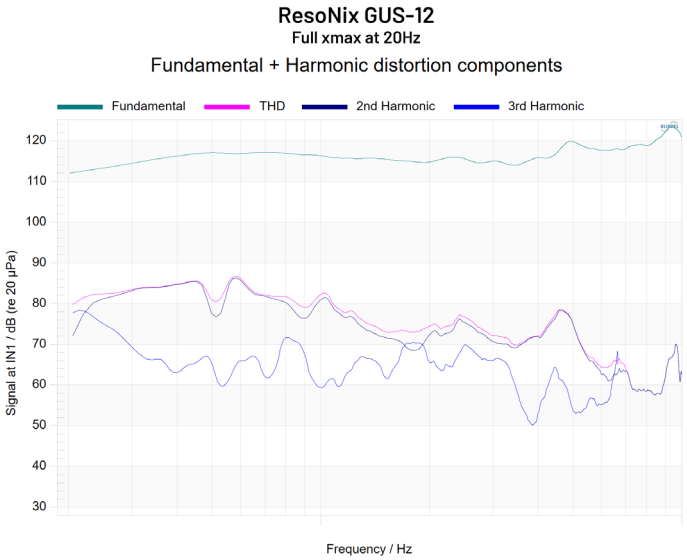


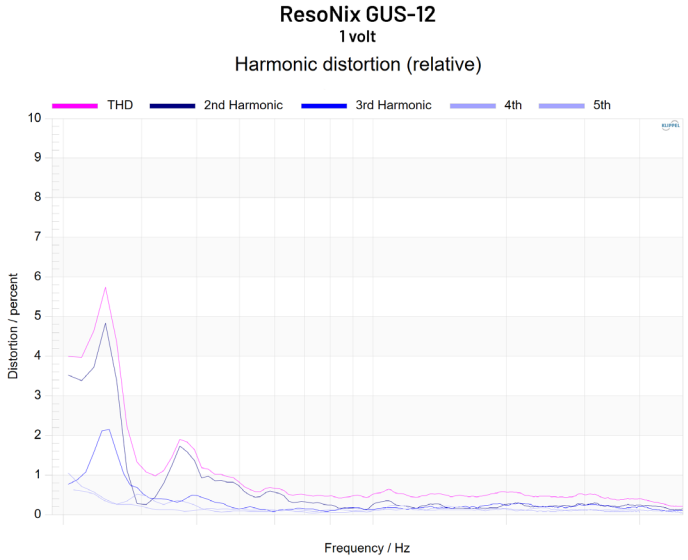


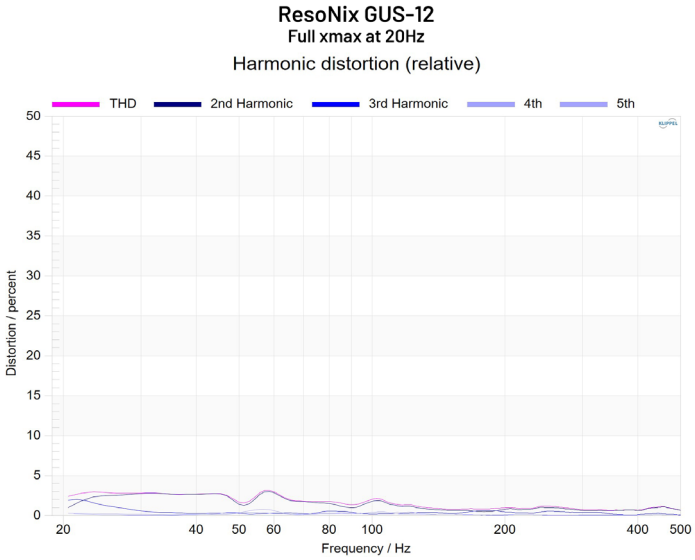
T/S, LSI, and TRF parameters are provided as measured reference data and are subject to normal manufacturing tolerances, break-in, test conditions, and future production revisions. Published values may vary from unit to unit and are not guaranteed for every individual driver.

Klippel TRF data (continued – GUS-12)



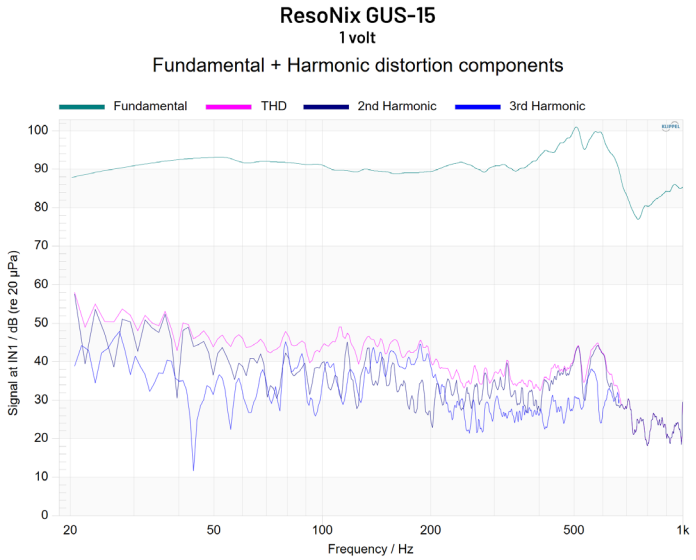


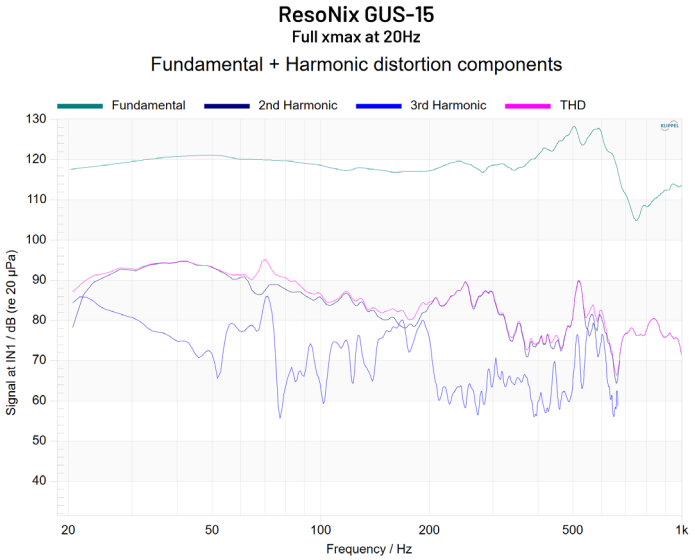


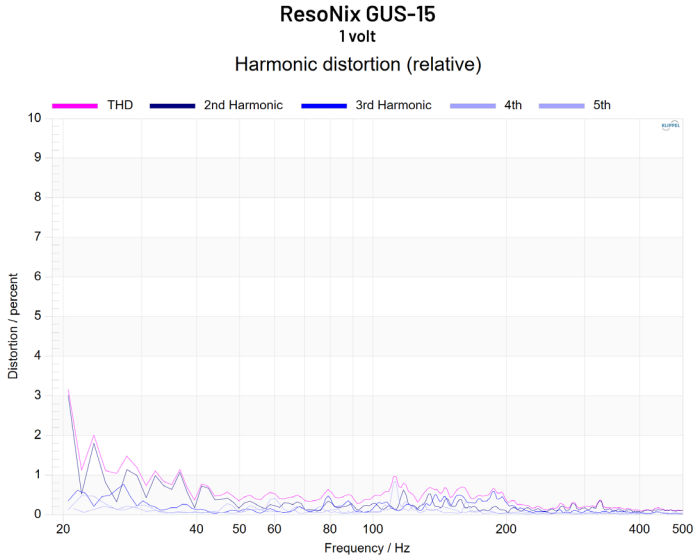


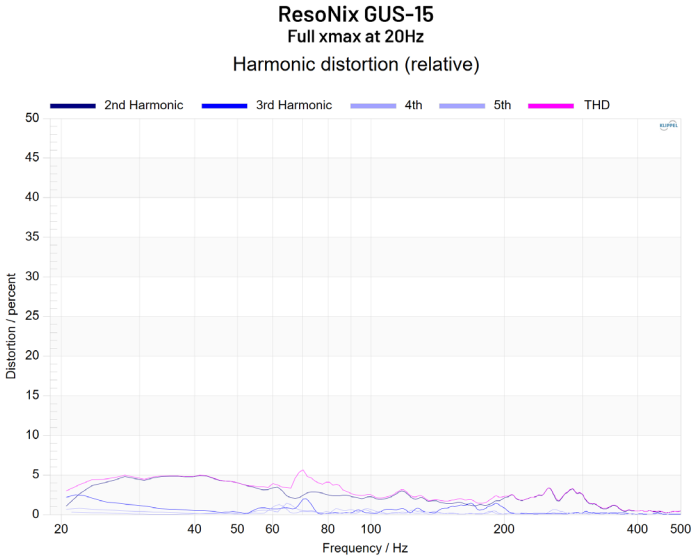
T/S, LSI, and TRF parameters are provided as measured reference data and are subject to normal manufacturing tolerances, break-in, test conditions, and future production revisions. Published values may vary from unit to unit and are not guaranteed for every individual driver.

Klippel TRF data (continued – GUS-15)







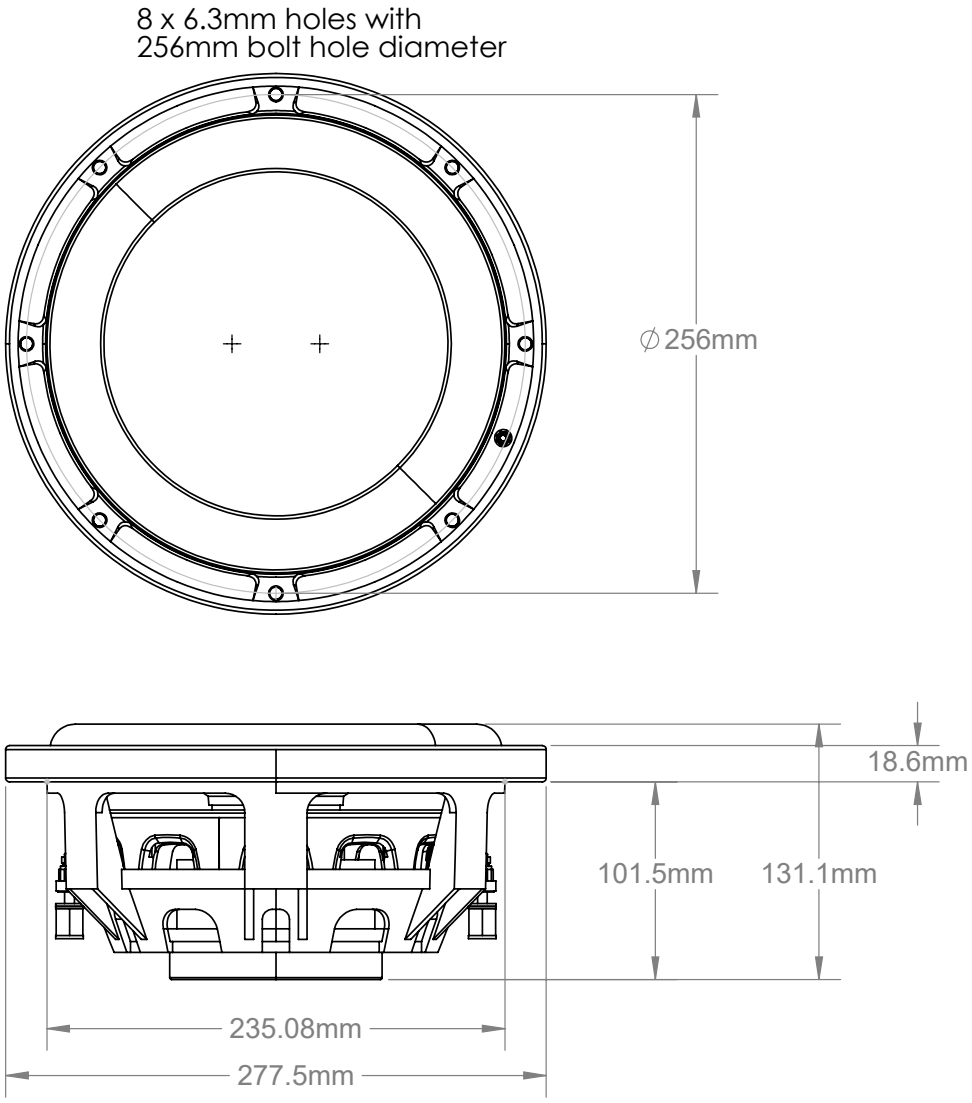


T/S, LSI, and TRF parameters are provided as measured reference data and are subject to normal manufacturing tolerances, break-in, test conditions, and future production revisions. Published values may vary from unit to unit and are not guaranteed for every individual driver.

GUS-10 Measurements

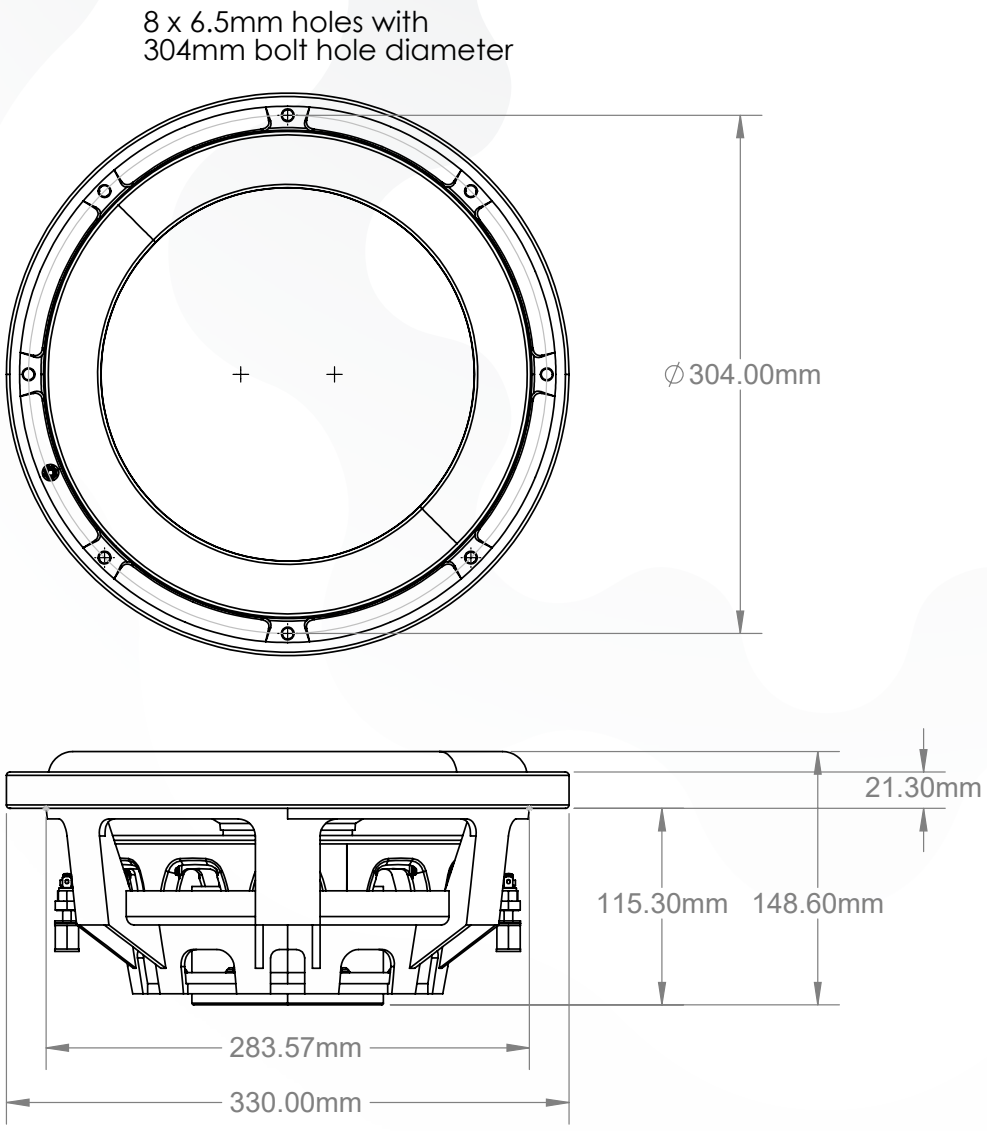
These specifications are based on our CAD models and represent the intended geometry of each driver. As with any manufactured part, tolerances come into play, changes are possible, and small deviations can occur from unit to unit. It is the user's responsibility to verify all critical dimensions and clearances before finalizing an enclosure, baffle, or mounting solution.

Specification	GUS 10
Mounting Depth	3.99" (101.5 mm)
Cutout Diameter	9.26" (235.08 mm)
Overall Diameter	10.93" (277.5 mm)
Mounting Hole Pattern	8 x 6.3 mm / Ø 256 mm
Front Clearance Required	2.15" (55 mm) from baffle



GUS-12 Measurements

Specification	GUS 12
Mounting Depth	4.54" (115.3 mm)
Cutout Diameter	11.16" (283.57 mm)
Overall Diameter	12.99" (330 mm)
Mounting Hole Pattern	8 x 6.5 mm / Ø 304 mm
Front Clearance Required	2.36" (60 mm) from baffle



GUS-15 Measurements

Specification	GUS 15
Mounting Depth	5.81" (147.5 mm)
Cutout Diameter	13.97" (354.91 mm)
Overall Diameter	15.71" (399 mm)
Mounting Hole Pattern	8 x 6.5 mm / Ø 375 mm
Front Clearance Required	2.56" (65 mm) from baffle