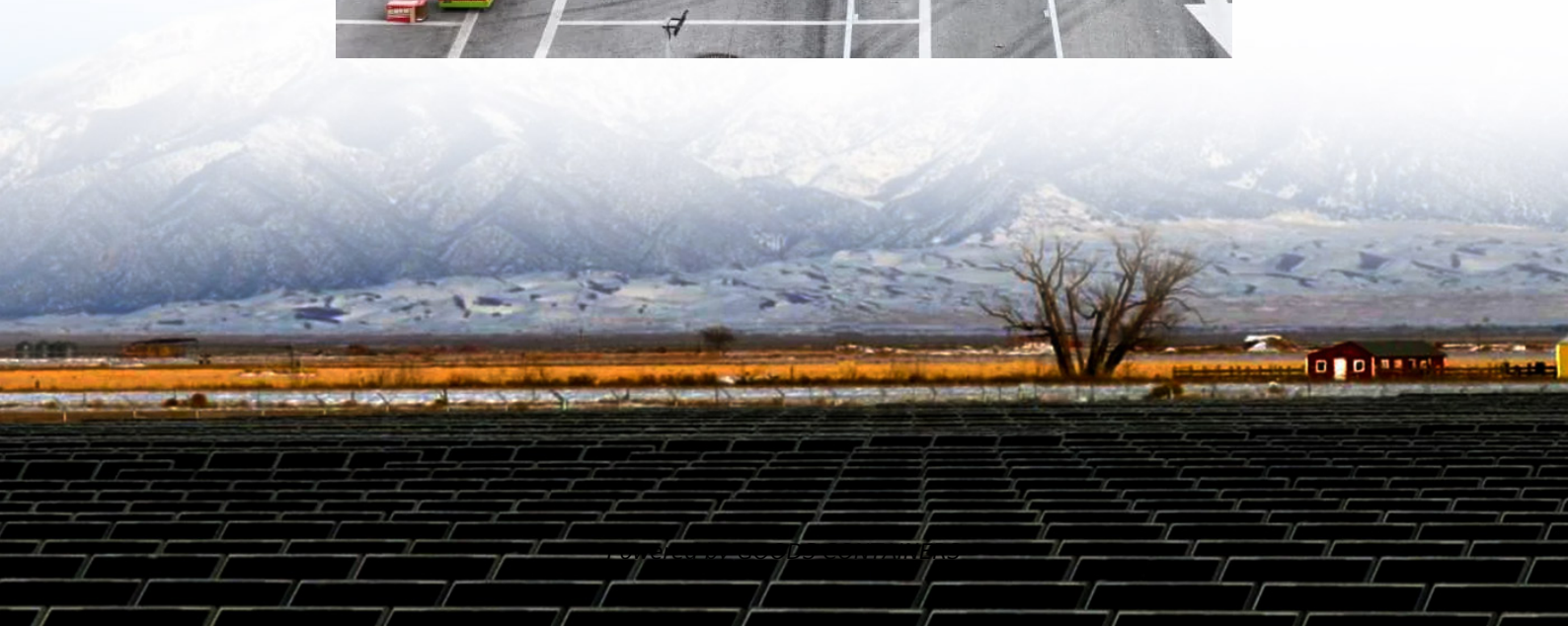


# Number of turns of high frequency inverter





## Overview

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How does a high frequency inverter work?

High-Frequency Inverter Technology The full bridge (S1. S4) generates a high-frequency square-wave signal with 40 - 50 kHz, which is transmitted via the HF transformer (Tr1). The bridge rectifiers (D1. D4) convert the square-wave signal back to DC voltage and store it in the intermediate circuit (L1+C2).

Which power supply topologies are suitable for a high frequency inverter?

The power supply topologies suitable for the High-Frequency Inverter includes push-pull, half-bridge and the full-bridge converter as the core operation occurs in both the quadrants, thereby, increasing the power handling capability to twice of that of the converters operating in single quadrant (forward and flyback converter).

What is a bridge type inverter?

The simplest form of an inverter is the bridge-type, where a power bridge is controlled according to the sinusoidal pulse-width modulation (SPWM) principle and the resulting SPWM wave is filtered to produce the alternating output voltage. In many applications, it is important for an inverter to be lightweight and of a relatively small size.

How to calculate secondary turns of ferrite core transformer?

At a maximum duty cycle of 98%, the input voltage to the transformer is  $0.98 * 10.5 = 10.29$  volts. By using voltage ratio formula of transformer = voltage ratio =  $330 / 10.29 = 32.1$ . Voltage ratio and turns ratio in transformer is equal to each other. Hence  $N = 32$ . So we know all values to calculate secondary turns of ferrite core transformer.



## Number of turns of high frequency inverter

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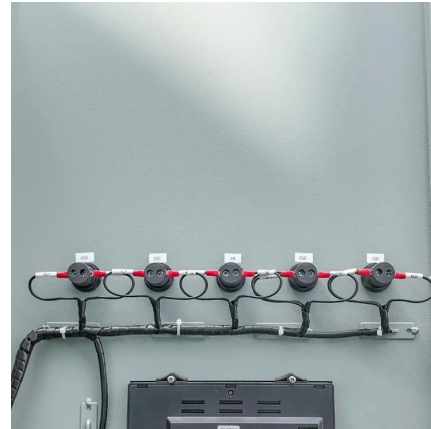
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