

Production of three-phase sine wave inverter





Overview

How to generate true sine wave in a 3 phase inverter?

Modern appliances are mostly running on AC power and three-phase voltage source inverter is utilized to convert DC power to three-phase AC power. In order to generate true sine wave, SPWM switching technique is adopted in this paper with closed-loop mechanism where output voltage and current are controlled simultaneously.

What is a 3 phase sine wave generator used for?

This generator can be used to drive three-phase inverters and three-phase electric drives, such as the popular AC and permanent magnet synchronous motor (PMSM) drives. As the popularity of three-phase electric drives increases, so does the need for a three-phase sine wave generator. Usually, DSP machines are used in such applications.

Do you need a three-phase sine wave generator?

As the popularity of three-phase electric drives increases, so does the need for a three-phase sine wave generator. Usually, DSP machines are used in such applications. However, this application note shows that PSoC® 1, with its unique structure, can generate three-phase sine waves, which then can directly drive electric drives and inverters.

What is a sine wave generator?

This type of generator is commonly employed to produce reference signals for three-phase sine wave inverters, enabling the generation of sinusoidal pulse width modulation. The frequency of the generated sine waves can be adjusted by modifying the values of the components utilized in the circuit diagram.



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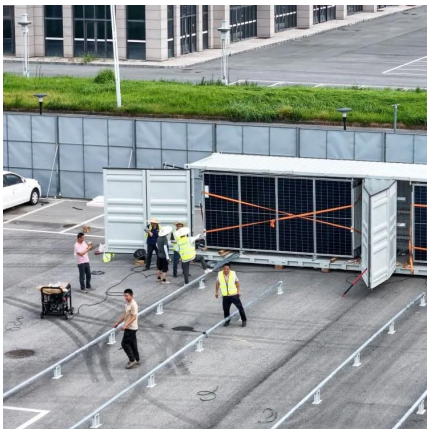
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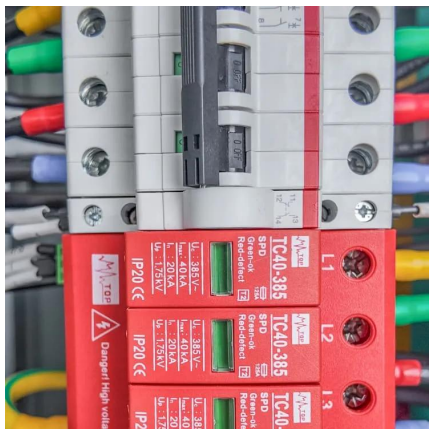
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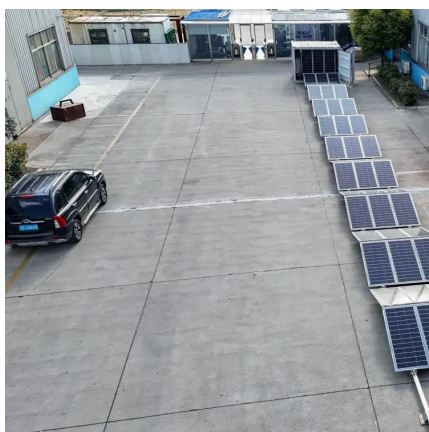
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Three Phase Sine Wave Generator
IntroductionCircuit

DiagramApplicationsConclusionA three-phase sine wave generator circuit diagram is used to generate three sine waves, with each individual sine wave easily observable at the output points. By using an oscilloscope, the sine waves can be visualized at the three outputs. This type of generator is commonly employed to produce reference signals for three-p...See more on microcontrollerslab Infineon Technologies[PDF]



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