

carboncalcpcf.com

# Product Carbon Footprint: **fhxpsmpkmi**

Analysis for: xyywmzvpgd | Standard: GHG Protocol

## 29.78 kgCO<sub>2</sub>e

Total Product Footprint

# Key Metrics Overview

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Total Footprint

**29.78 kgCO<sub>2</sub>e**

Per 1.0 unit

Carbon Intensity

**29.78 kgCO<sub>2</sub>e/unit**

For product fhxpsmpkmi

Top Material Hotspot

**Circuit Board**

3.00 kgCO<sub>2</sub>e of materials

Primary Emission Scope

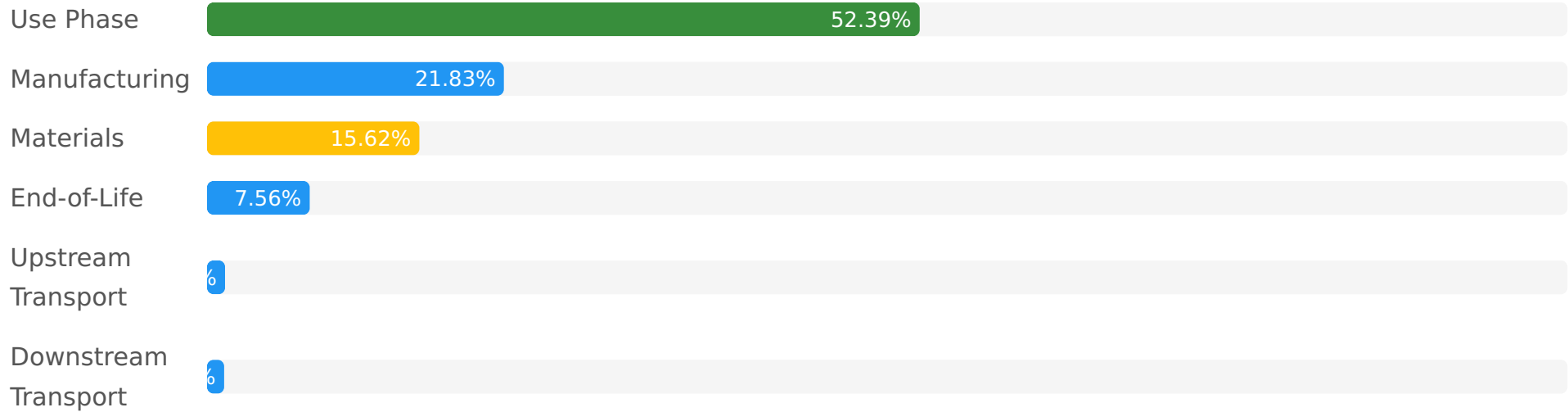
## **Scope 3**

78.17% of total PCF

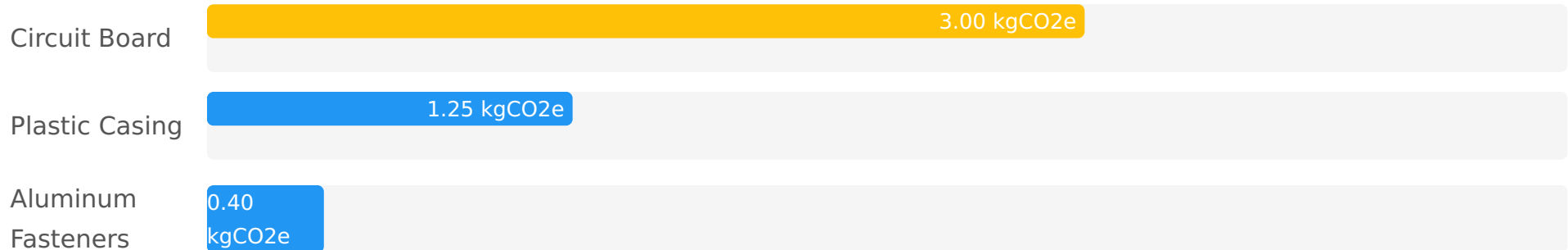
# Emission Breakdown

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## Lifecycle Stage Breakdown



## Material Impact Breakdown



Total Material Emissions: 4.65 kgCO<sub>2</sub>e

## Highlights: Critical Impacts

- The **Use Phase** is the single largest contributor to the PCF, accounting for 52.39% of total emissions.
- **Scope 3 emissions** (78.17%) dominate the product's carbon footprint, emphasizing the importance of value chain engagement.
- **Manufacturing electricity** (21.83%) and **embodied emissions in materials** (15.62%, primarily circuit board) are significant secondary hotspots.

## How to Reduce Your Footprint

### 1. **Optimize Use Phase Efficiency:**

- Redesign the product for lower energy consumption during its operational life.
- Promote user behaviors that reduce energy consumption.

### 2. **Increase Renewable Energy Sourcing for Manufacturing:**

- Further increase the percentage of renewable electricity procurement beyond 60%.
- Investigate lower-carbon grid mixes for the remaining non-renewable electricity.

### 3. **Engage Supply Chain for Material Decarbonization:**

- Source lower-carbon alternatives for components, especially circuit boards and plastic casings.
- Request supplier-specific primary data on material embodied emissions.

### 4. **Enhance Circularity and End-of-Life Management:**

- Leverage the active take-back program to maximize actual recycling rates.
- Explore design for disassembly and incorporating recycled content.