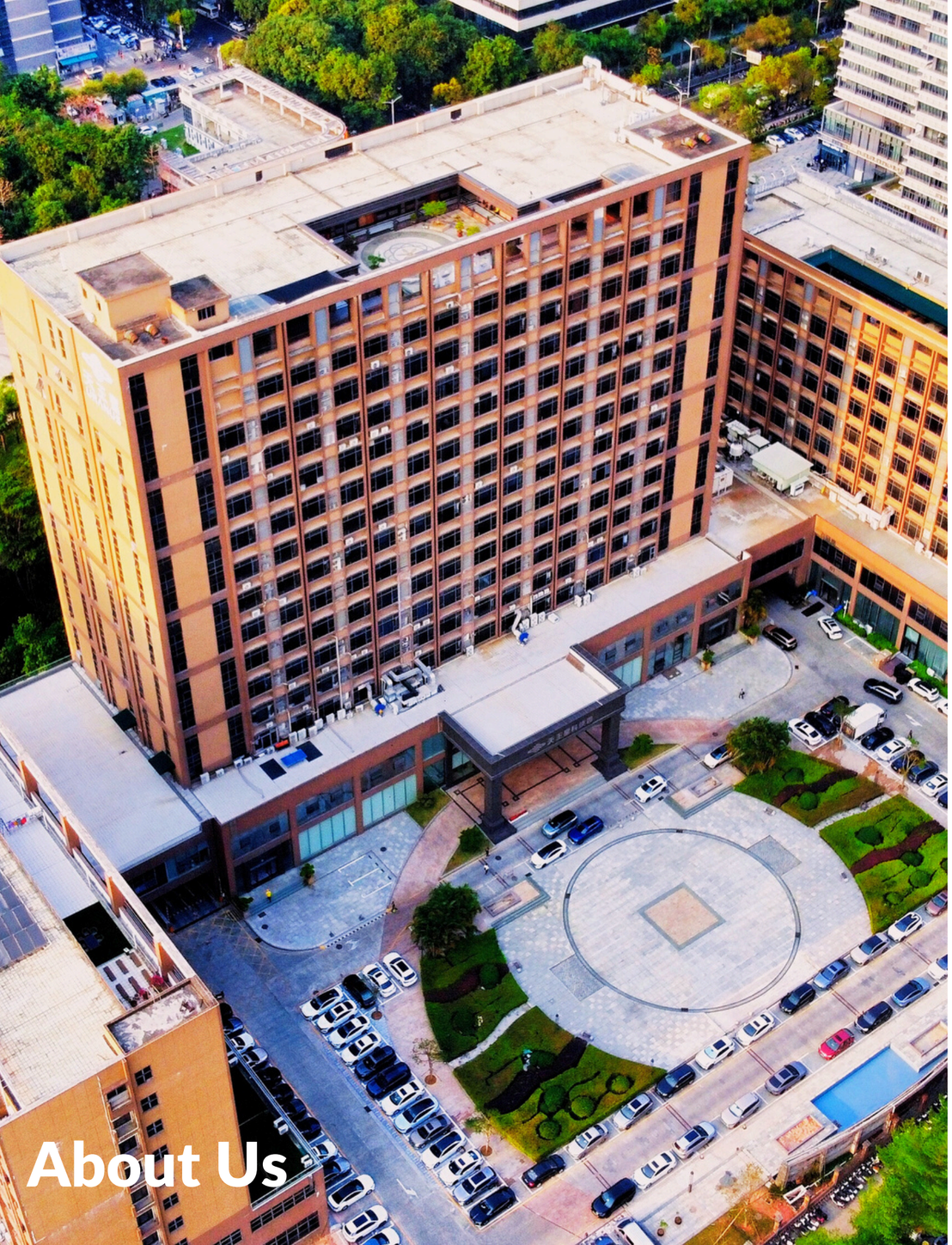
# Company Profile 2025

SYNIX SEMI

## Synix Semiconductor Technology

SHENZHEN CITY, CHINA

SINCE 2015



About Us

# Company Introduction

Founded in Shenzhen, China, Synix Semiconductor Technology is a power management IC distributor and mobile charger & adapter solution provider.

For over a decade, we partnering with leading Chinese IC manufacturing companies to deliver Charger PCB design solutions

Our mission is to empower manufacturers with reliable, high quality and affordable solutions, enabling them to succeed in the fast-evolving, competitive consumer electronics market.

***60+ FACTORY PARTNERS***

***$6 MILLIONS USD SALES REVENUE***

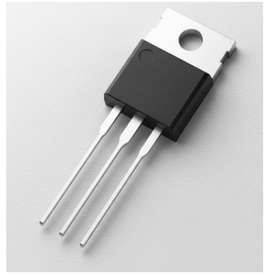
# What We Offer & Our Strength

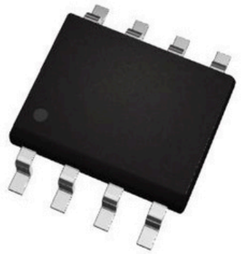
**We excel at delivering following service to our clients:**

**IC selection, PCB design, normal parameter/EMC testing**

**BOM development & optimization, supply high quality components with price advantages in Chinese market**

**Flexible delivery options: IC, CKD/KIT, SKD, Components .....**







# Workflow - 1

| | |
|---|---|
| ESD test | Contact discharge: ±8kV<br>Air discharge: ±15kV<br>Discharge 10 times for all exposed contacts and gaps<br>Reference: IEC61000-4-2 |

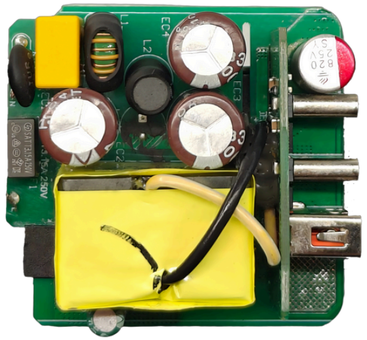
| | | |
|---|---|---|
| 24 | SMD Capacitor | 0603/1uF/25V |
| 25 | SMD Diode | F7/SOD123 |
| 26 | SMD Diode | F7/SOD123 |
| 27 | SMD Diode | 1N4148/SOD123 |
| 28 | Bridge Rectifier | WRABS40M MSB |
| 29 | IC (Controller) | HD8065B ESOP7 |
| 30 | IC (SR) | HD80032A TO-252 |
| 31 | SMD Optocoupler | EL1009 |
| 32 | Y Capacitor | 330pF 400Vac P=10mm |
| 33 | X Capacitor | 0.22uF/275Vac 10*6*12 P=7.5mm |

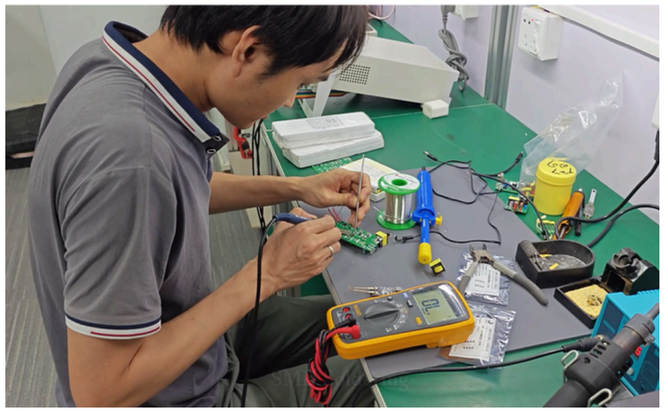
Step 1: Received product details from client. Testing standard, specification document, Charger housing PCB/DWG files.

Step 2: Project feasibility, Tentative BOM development, cost estimation, scheduel arrangement

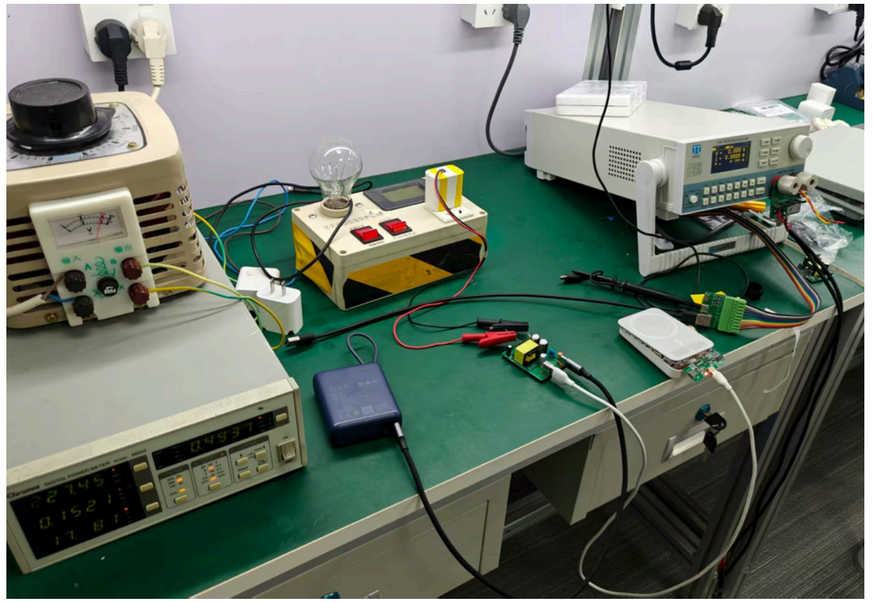
Step 3: PCB Layout design, Sample PCBA Soldering prepare for testing.

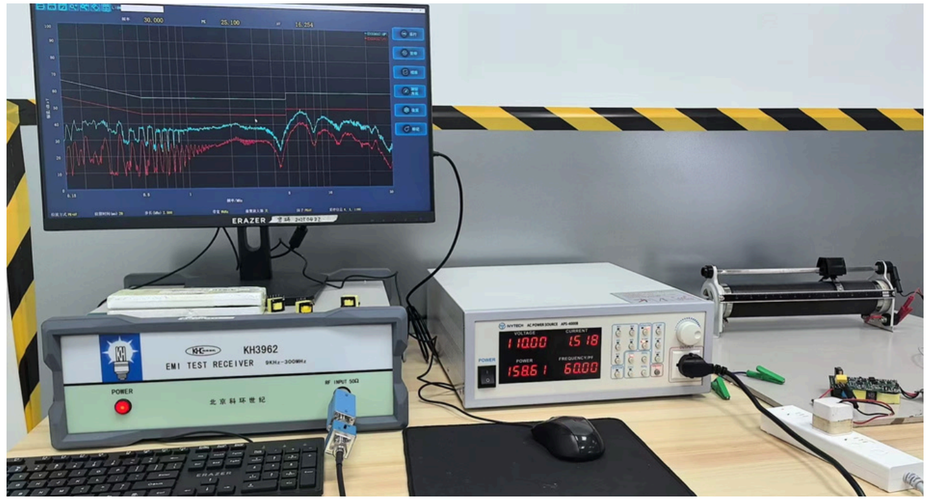
SYNIX SEMI





# Workflow - 2





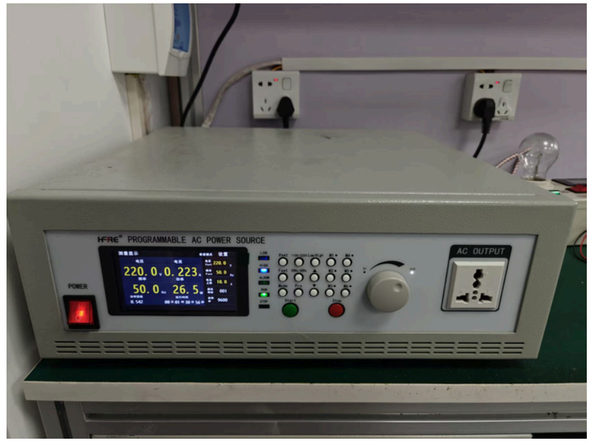

Step 4: Testing of Protection features, ripple, aging, temperature, noises, protocols, EMI.

Step 5: Samples sent to client for testing and confirmation

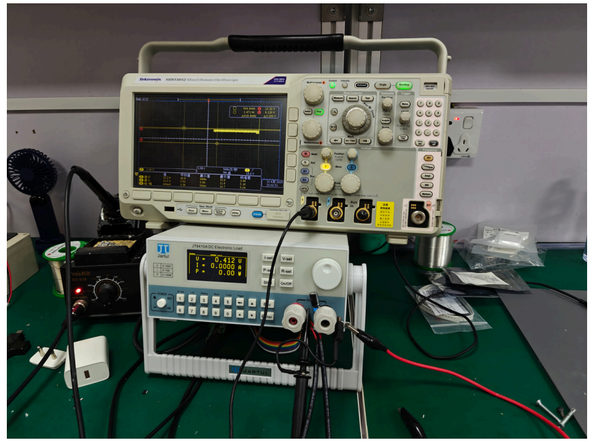
Step 6: Trial production, final price term negotiation, proceed to order.

Step 7:  Professional FAE team in Delhi, able to provide On-site Engineering support.

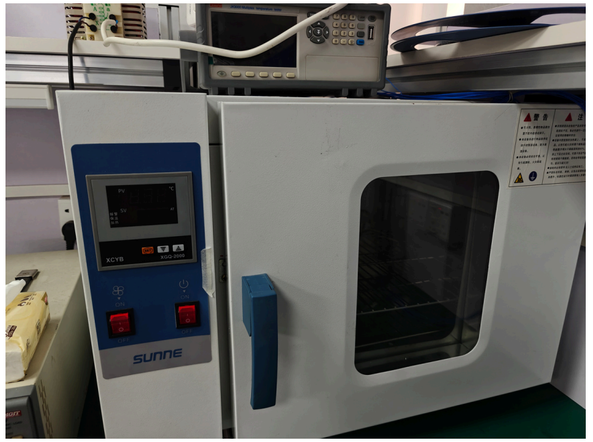
# Engineering Lab



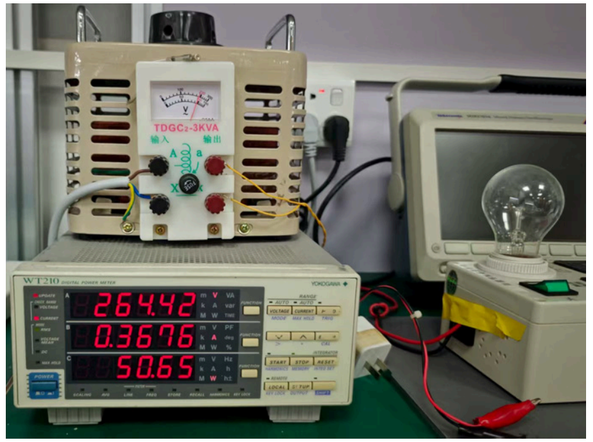

Programmable AC Power Source



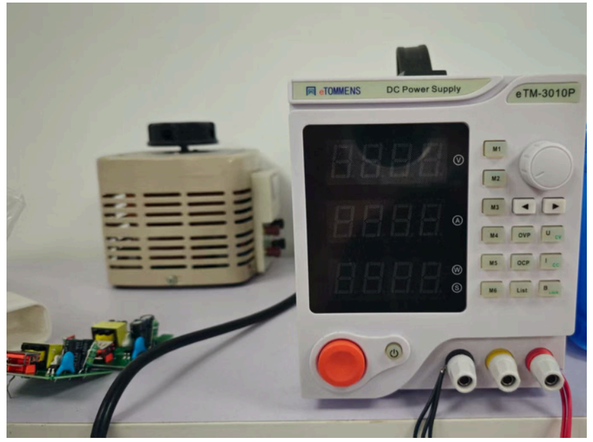
Oscilloscope




Temperature Test + Lab Oven



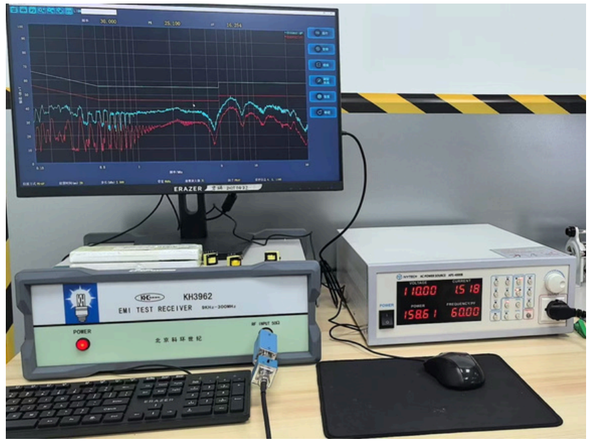

Digital Power Meter




DC Power Supply

Passive Components:
Capacitor, Connector, Inductor...

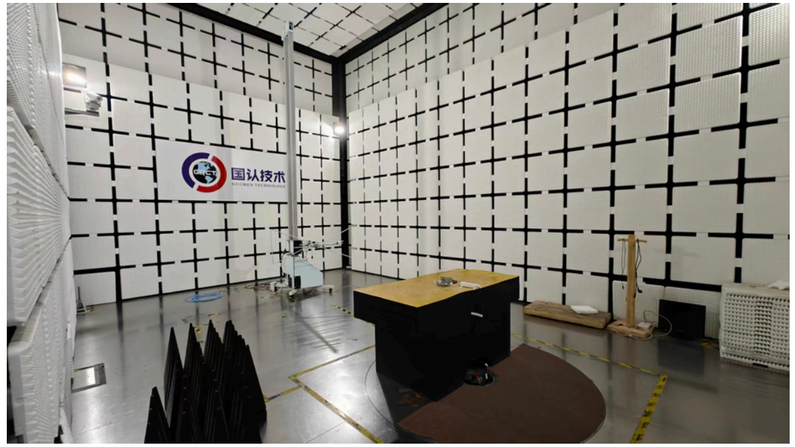
IC Warehouse

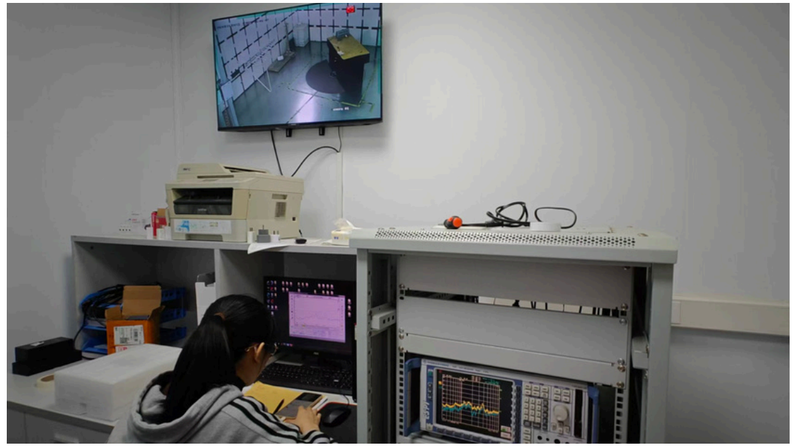


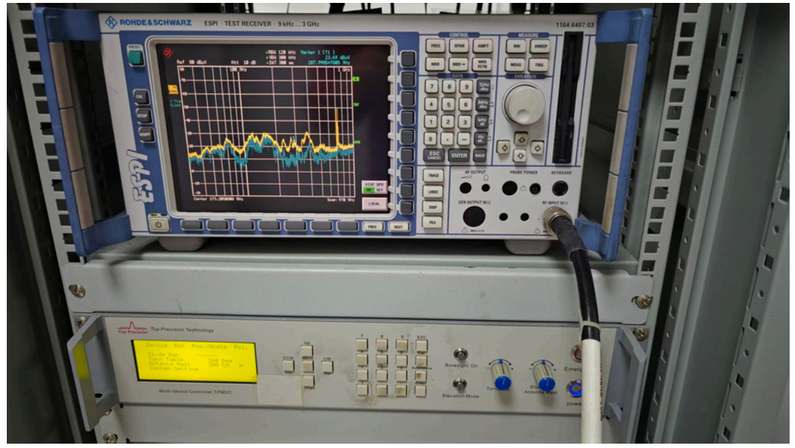

EMI Simulation

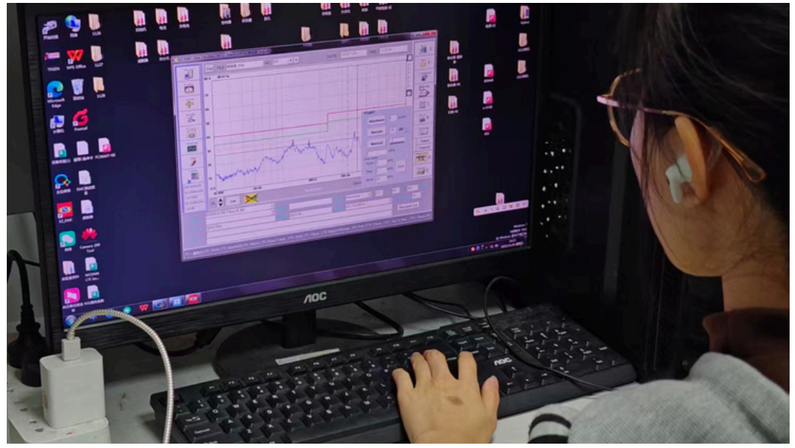
# Professional EMI lab

All radiation and conductivity testing are conducted in a proper 3-Meter Anechoic Chamber in our in-house laboratory. This ensures that every sample we deliver meets international safety standards (RoHS, FCC, CE, BIS, etc.), saving our clients significant time and effort on EMI compliance setup.








SYNIX SEMI

# Our Partner

## Manufacturer

## Factory/Brand We Served

.....

# HD Series IC

Over the years, we have accumulated extensive experience and established our own semiconductor brand, 'HD,' to meet the dynamic needs of the market.

HD Series IC Offers:

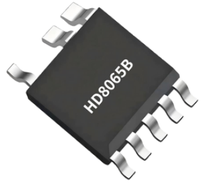
- Comprehensive protection mechanism
- Designed for simplified peripheral circuit application
- Versatile Application from 5V2A traditional charger to 140W GaN Power / SiC Power fast charger

# HD IC Product List - 1

## AC/DC Controller - BJT

| Input Voltage Range | Output Power Recommended | Model | Package | $I_{pk}$, Peak Current | BJT, Vcb | Maximum Switching Frequency | Operating Mode |
|---|---|---|---|---|---|---|---|
| 90-264V | 10-12W | HD3783A | SOP-7 | 500mA | 750V | 55kHz | CC, CV |
| 180-240V | 18W | HD8018A | SOP-8 | 660mA | 700V | 62kHz | CP |
| 180-240V | 20W | HD8018B | SOP-8 | 720mA | 700V | 62kHz | CP |


ESOP-8




ESOP-7

## AC/DC Controller - Darlington Tube

| Input Voltage Range | Output Power Recommended | Model | Package | $I_{pk}$, Peak Current | BJT, Vcb | Maximum Switching Frequency | Operating Mode |
|---|---|---|---|---|---|---|---|
| 180-240V | 20W | HD8020A | SOP-8 | 880mA | 700V | 68kHz | CP |
| 90-264V | 20W | HD8020B | SOP-8 | 920mA | 700V | 68kHz | CP |
| 180-240V | 45W | HD8021A | DIP-8 | 1300mA | 700V | 68kHz | CP |


TO-252


DIP-8

# HD IC Product List - 2

## AC/DC Controller - Integrated GaN HEMT

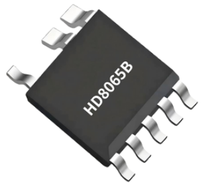
| Input Voltage Range | Output Power Recommended | Model | Package | Power Transistor | Maximum Switching Frequency | Operating Mode |
|---|---|---|---|---|---|---|
| 90-264V | 20W | HD8035A | ESOP-8 | 1.0Ω/700V | 118kHz | DCM/CCM; CC, CV |
| 90-264V | 25W | HD8035B | ESOP-8 | 0.8Ω/700V | 118kHz | DCM/CCM; CC, CV |
| 90-264V | 30W | HD8035C | ESOP-8 | 0.6Ω/700V | 118kHz | DCM/CCM; CC, CV |
| 90-264V | 20W | HD80H35A | ESOP-8 | 1.0Ω/700V | 118kHz | DCM/CCM; CP |
| 90-264V | 25W | HD80H35B | ESOP-8 | 0.8Ω/700V | 118kHz | DCM/CCM; CP |
| 90-264V | 30W | HD80H35C | ESOP-8 | 0.6Ω/700V | 118kHz | DCM/CCM; CP |
| 90-264V | 30W | HD8045A | ESOP-7 | 0.8Ω/700V | 118kHz | DCM/CCM; CC, CV |
| 90-264V | 30-45W | HD8045B | ESOP-7 | 0.4Ω/700V | 118kHz | DCM/CCM; CC, CV |
| 90-264V | 45W | HD8065A | ESOP-7 | 0.47Ω/700V | 130kHz | DCM/QR; CC, CV |
| 90-264V | 45-65W | HD8065B | ESOP-7 | 0.365Ω/700V | 130kHz | DCM/QR; CC, CV |
| 90-264V | 65W | HD8065C | ESOP-7 | 0.28Ω/700V | 130kHz | DCM/QR; CC, CV |

# HD IC Product List - 3

## Synchronous Rectifier

| Output Power Recommended | Model | Package | Power Transistor | Maximum Switching Frequency | Operating Mode |
|---|---|---|---|---|---|
| 20W | HD7707B | SOP-8 | 15mΩ/50V | 100kHz | Support Low side / High side Rectification, DCM/CCM/QR |
| 20W | HD80036A | SOP-8 | 12.5mΩ/65V | 120kHz | |
| 25W | HD80036B | SOP-8 | 9.5mΩ/65V | 120kHz | |
| 30W | HD80036C | SOP-8 | 6.5mΩ/65V | 120kHz | |
| 20W | HD80036AE | SOP-8 | 12.5mΩ/65V | 120kHz | |
| 25W | HD80036BE | SOP-8 | 9.5mΩ/65V | 120kHz | |
| 30W | HD80036CE | SOP-8 | 6.5mΩ/65V | 120kHz | |
| 30-45W | HD80038A | SOP-8 | 12.5mΩ/85V | 150kHz | |
| 30-45W | HD80031X | SOP-8 | 100V | 200kHz | |
| 45W | HD80032A | TO-252 | 10mΩ/100V | 200kHz | |
| 45-65W | HD80032B | TO-252 | 8mΩ/100V | 200kHz | |
| 65W | HD80032C | TO-252 | 6.5mΩ/100V | 200kHz | |


ESOP-8




ESOP-7


TO-252


DIP-8

# PCB Design Example

## 30W A+C GaN Power Charger Solution

- Port Type: A+C
- Input Voltage Range: Universal range, 90-264V, 50/60Hz
- PDO:

  C port works alone (High Power): 5V/3A, 9V/3A, 15V/3A, 20V/1.5A; 30W Max

  A port works alone (High Power): 5V/3A, 9V/2A, 12V/1.5A; 18W Max

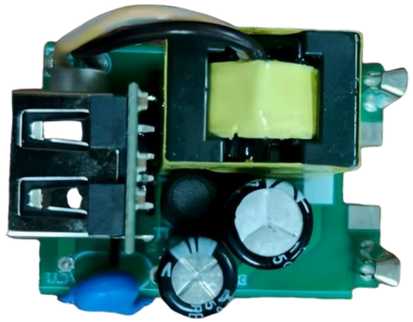
  A+C working together: Falls back to 5V, output = 15W Max
- Energy Efficiency: 92%
- Certification-ready EMI performance
- PCB Size:  37.5*28.5*1.0mm(Main Board), 18.8*18.8*1.0mm(Sub Board, USB Output PCB)

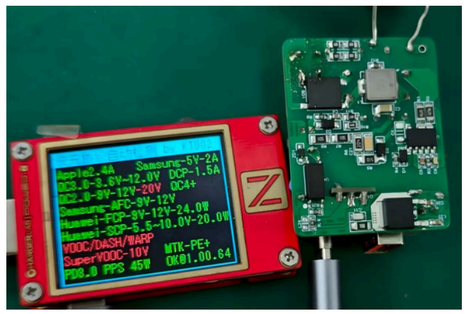
**IC adopted:**

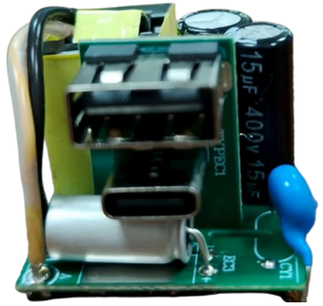
**HD8045B**, ESOP-7 (**Main IC**)

**HD80038A**, SOP-8 (**SR**)

**FM981** (**Protocol**)





# PCB Design Example

## 45W A+C GaN Power Charger Solution

- Port Type: A+C
- Input Voltage Range: Universal range, 90-264V, 50/60Hz
- PDO:

  C port works alone (High Power): 5V/3A, 9V/3A, 15V/3A, 20V/2.25A

  A port works alone (High Power): 5V/3A, 9V/3A, 12V/3A,  20V/2.25A

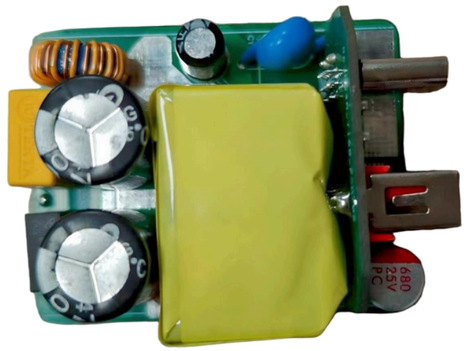
  A+C working together: Type C 25W + Type A 20W power sharing
- Energy Efficiency: 92%
- Certification-ready EMI performance
- PCB Size:  48.00*38.5*1.0mm(Main Board), 18.8*18.8*1.0mm(Sub Board, USB Output PCB)

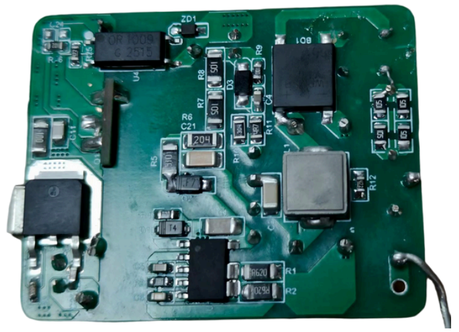
**IC adopted:**

**HD8065B**, ESOP-7 (**Main IC**)

**HD80032B**, TO-252 (**SR**)

**FM836** (**Protocol**)





# 65W A+C GaN Power Charger Solution

- Port Type: A+C
- Input Voltage Range: Universal range, 100-264V, 50/60Hz
- PDO:

  C port works alone (High Power): 5V/3A，9V/3A，12V/3A，15V/3A, 20V/3.25A

  A port works alone (High Power):  5V/3A,9V/2A,12V/1.5A

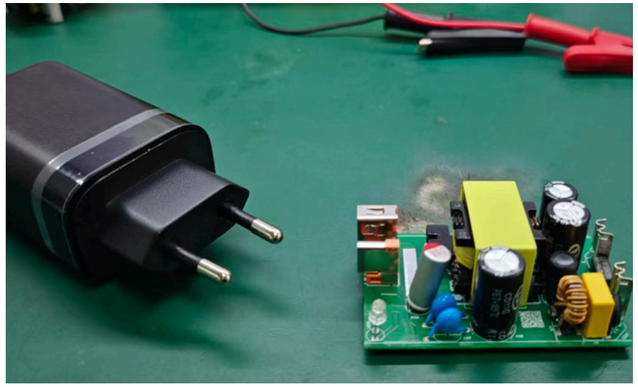
  A+C working together: Type C 45W + Type A 18W power allocation
- Energy Efficiency: 92%
- Certification-ready EMI performance
- PCB Size:  60.00*38.5*1.0mm
- Protocol support: PD3.1/PSS/QC5.0+/FCP/SCP/AFC/MTK PE/Apple 2.4 Charging

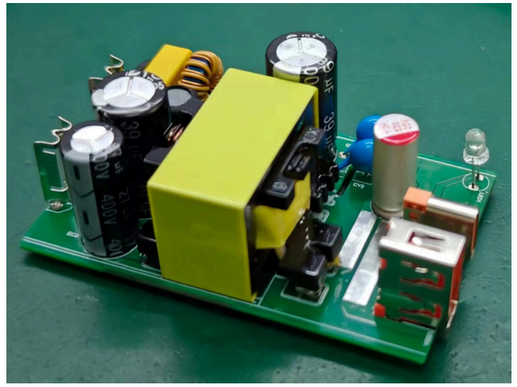
## IC adopted:

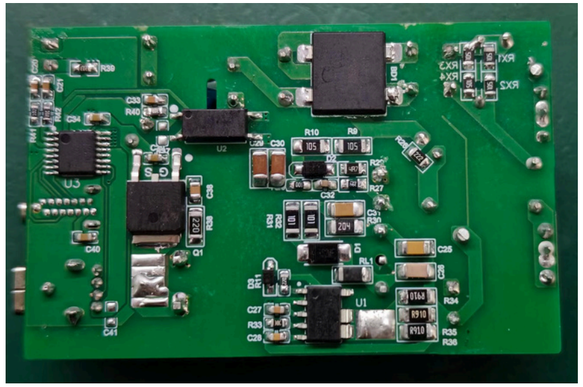
**HD8065B**, ESOP-7 (**Main IC**)

**HD80032B**, TO-252 (**SR**)

**FM836** (**Protocol**)







# CONTACT US

+86 19870060372

chester@synixsemi.com

www.synixsemi.com

Shenzhen, China

SYNIX SEMI

**Contact Person: Chester**

**Address: 3rd Floor, Building C, Uranus Science Park, Yutang Street, Guangming District, Shenzhen, Guangdong Province, 518132, China**