

JIANGSU CHANGJING ELECTRONICS TECHNOLOGY CO., LTD.

江苏长晶科技股份有限公司



2024.12

01

LDO Roadmap

≤ 7V Series

CJ6206E

1.0~6V, 400mA, 5uA,
100mV@100mA,
65dB@1kHz

CJ6213

1.8~6V, 500mA, 45uA,
50mV@100mA,
80dB@1kHz

CJ6108

1.0~6V, 1A, 40uA,
310mV@1A,
75dB@1kHz

CJ6216

1.8~5.5V, 500mA, 10uA,
200mV@500mA,
98dB@1kHz

CJ6022

2.5~5.5V, 500mA, 40uA,
150mV@500mA,
70dB@1kHz

≥ 10V Series

CJ6388

2.5~60V, 150mA, 3uA,
500mV@50mA,
80dB@1kHz

CJ6385/6

3.0~40V, 200mA, 2uA,
400mV@50mA,
55dB@1kHz

CJ6376

2.5~36V, 300mA, 2uA,
300mV@100mA,
70dB@1kHz

CJ6336

2.5~26V, 200mA, 1.5uA,
600mV@100mA,
50dB@1kHz

CJ6330

2.5~18V, 300mA, 2uA,
160mV@100mA,
65dB@1kHz

18V~40V Series

CJ6370

40V/0.3A
2~3uA

CJ633X

18V/1A/0.3A
0.8~2uA

CJ62XX

5V/0.5A
2 Channel

≥ 60V Series

CJ63XX

120V/0.3~1A
2~3uA

CJ63XX

60V/0.3A
2~3uA

Released

2025 New Coming



Camera Module



Cell phone



Tablet



Surveillance



Sweeper



Router



STB



PON



IoT

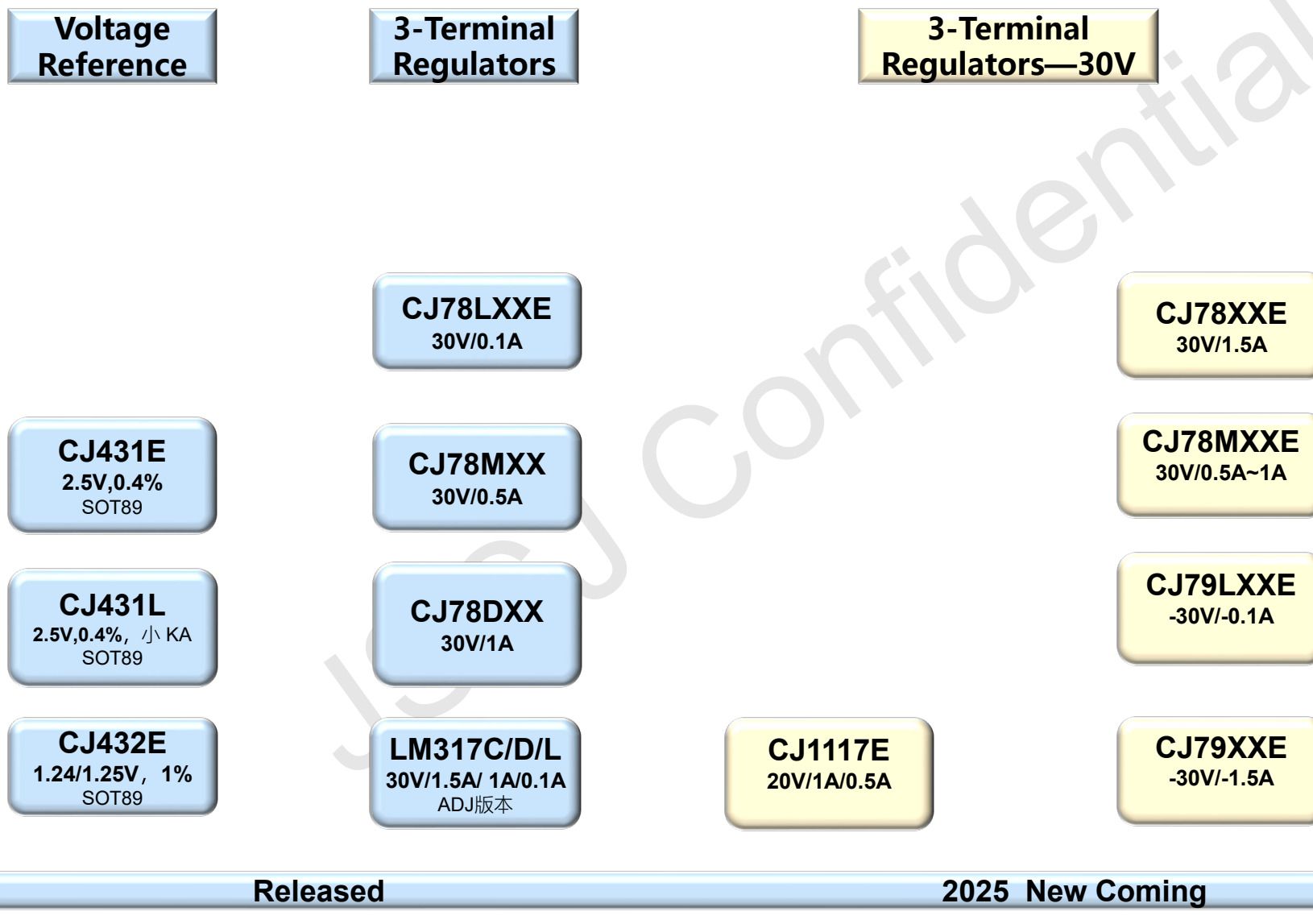


Power Tool

Solar
Power
SystemIndustrial/
Medical

01

3-Terminal Regulators & Voltage Reference



Air
Conditional



Washing
Machine



Refrigerator



TV



Small Appliance



Battery Energy
Storage system



Charger



Power Tool



Adapter



Industrial Power



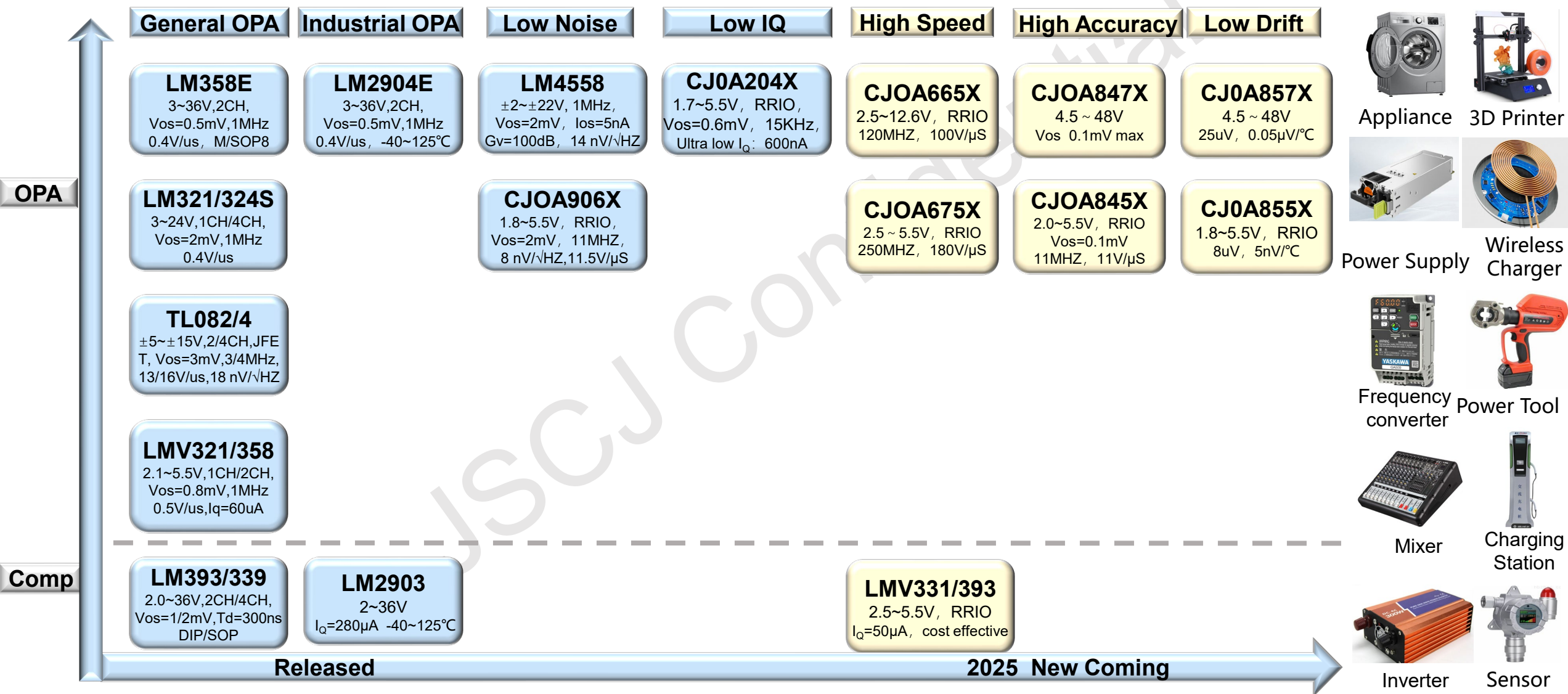
Medical



Industrial
Control

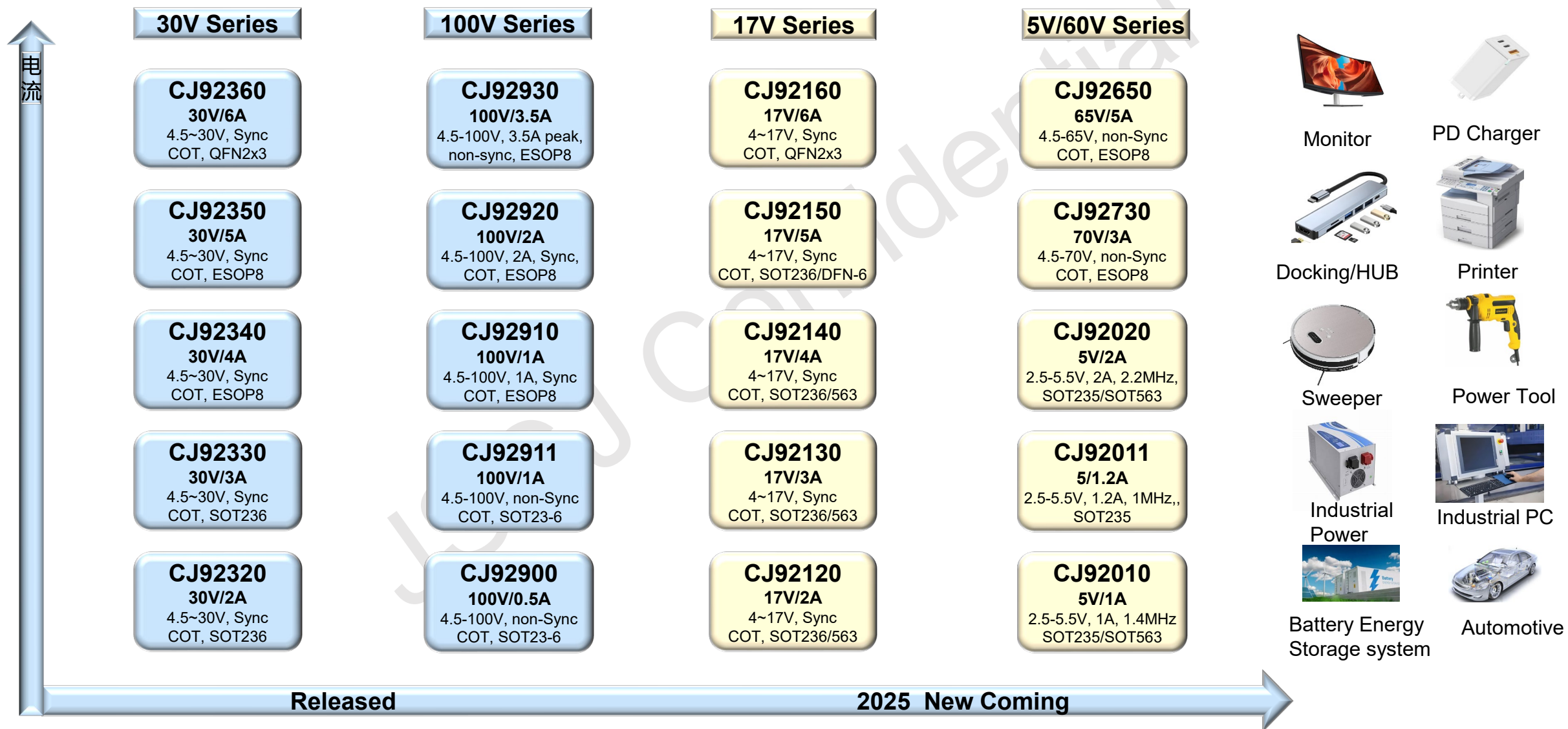
01

Operational Amplifier & Comparator Roadmap



02

DC-DC Buck Regulator Roadmap





CJ92900

4.5V~100V, 0.5A Non-Synchronous DC-DC Buck Converter



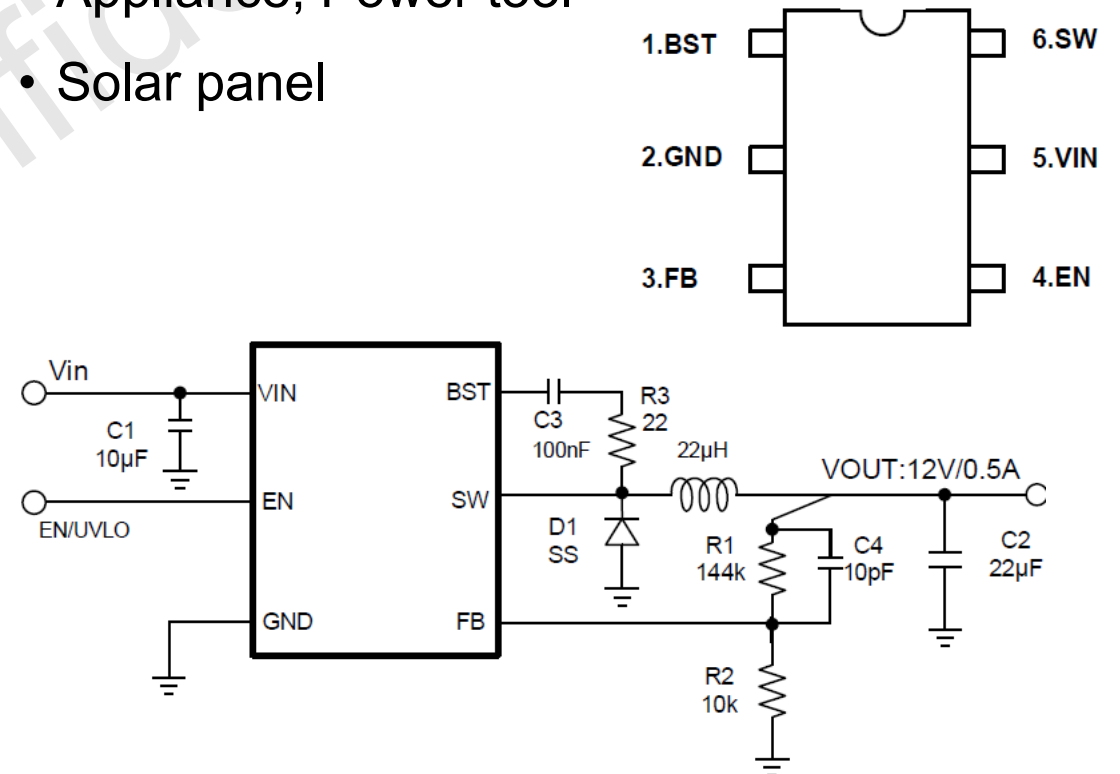
Key Parameters

- Input Voltage Range: 4.5V-100V
- Output Current: 0.5A
- $R_{DS(ON)}$ Switch : 1.1 Ω
- Low IQ: 180uA
- EN Pin for enable, default High if floating
- Shut down current: 4uA
- Switching frequency: 450KHz
- Light load PFM mode
- Support 2%~98% duty Cycle
- Reference voltage: 0.78V
- Over Current Protection and OTP
- SOT23-6 small package

www.jscj-elec.com

Typical Application

- Electric bicycle, Scooter ,battery Pack
- Industrial transport, Industrial control board
- Appliance, Power tool
- Solar panel



创造世界一流的半导体品牌

**CJ92911****4.5V~100V, 1A Non-Synchronous DC-DC Buck Converter**

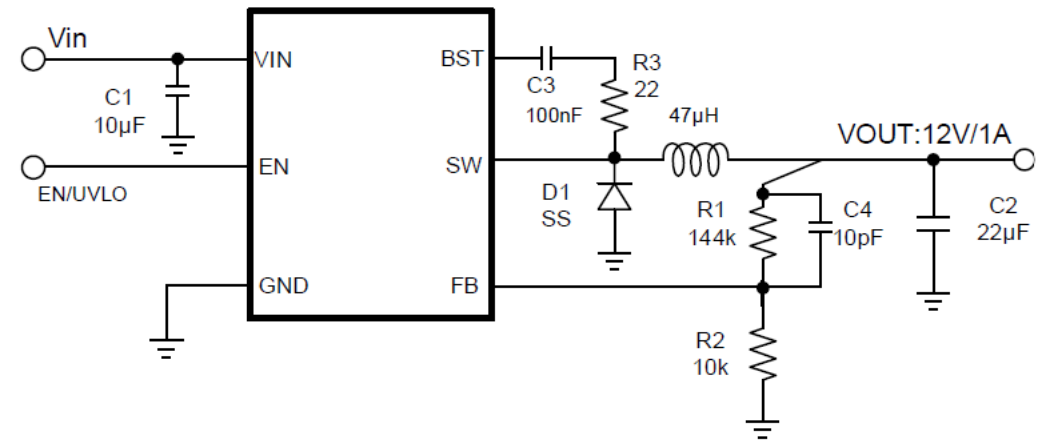
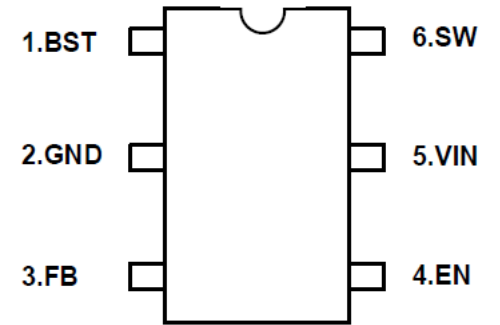
Key Parameters

- Input Voltage Range: 4.5V-100V
- Output Current: 1A
- $R_{DS(ON)}$ Switch : 900m Ω
- Low IQ: 180uA
- EN Pin for enable, default High if floating
- Shut down current: 4uA
- Switching frequency: 450KHz
- Light load PFM mode
- Support 2%~98% Duty Cycle
- Reference voltage: 0.78V
- Over Current Protection and OTP
- SOT23-6 small package

www.jscj-elec.com

Typical Application

- Electric bicycle, Scooter ,battery Pack
- Industrial transport, Industrial control board
- Appliance, Power tool
- Solar panel
- POE power supply



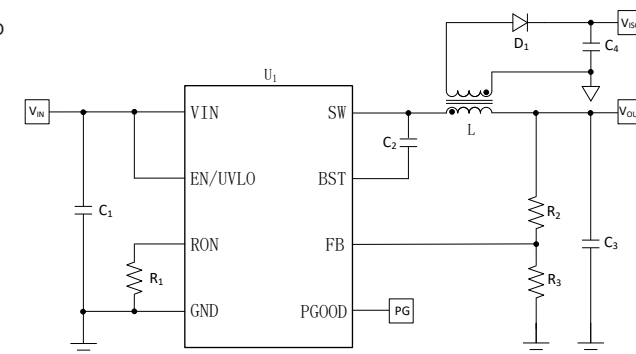
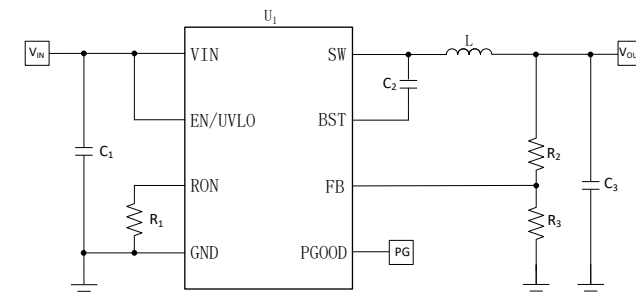
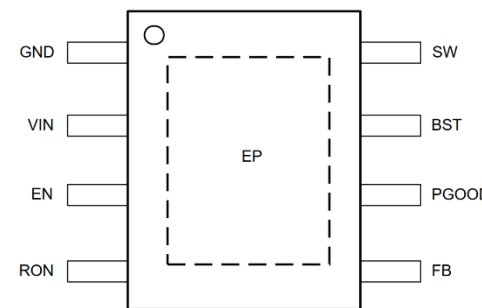
创造世界一流的半导体品牌

Key Parameters

- Input Voltage Range: 4.5V-100V
- Output Current: 1A
- High/low Side $R_{DS(ON)}$: 500mΩ/200mΩ
- Low IQ: 240uA
- EN Pin for enable, default High if floating
- Shut down current: 4uA
- Selectable frequency: 300k/500k/800kHz
- Selectable Light load PFM/FPWM mode
- Reference voltage: 0.78V
- Over Current Protection and OTP
- ESOP package

Typical Application

- Electric bicycle, Scooter ,battery Pack
- Industrial transport, Industrial control board
- Appliance, Power tool
- Solar panel
- Telecom station



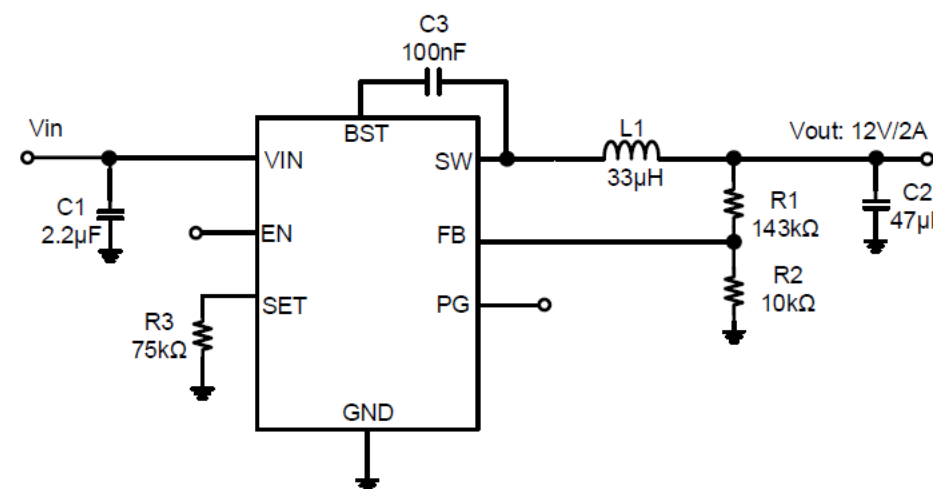
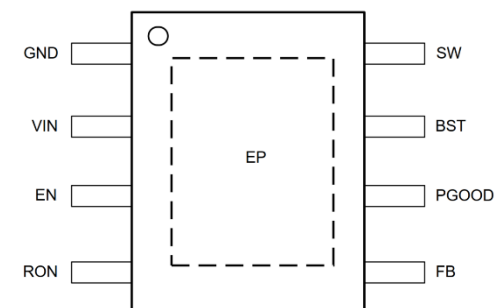
**CJ92920****4.5V~100V, 2A Synchronous DC-DC Buck Converter**

Key Parameters

- Input Voltage Range: 4.5V-100V
- Output Current: 2A
- High/low Side $R_{DS(ON)}$: 400m Ω /120m Ω
- Low IQ: 240uA
- EN Pin for enable, default High if floating
- Shut down current: 4uA
- Selectable frequency: 300k/500k/800kHz
- Selectable Light load PFM/FPWM mode
- Reference voltage: 0.78V
- Over Current Protection and OTP
- ESOP8 package

Typical Application

- Electric bicycle, Scooter, battery Pack
- Industrial transport, Industrial control board
- Appliance, Power tool
- Solar panel, Drone
- Telecom station
- POE Power supply



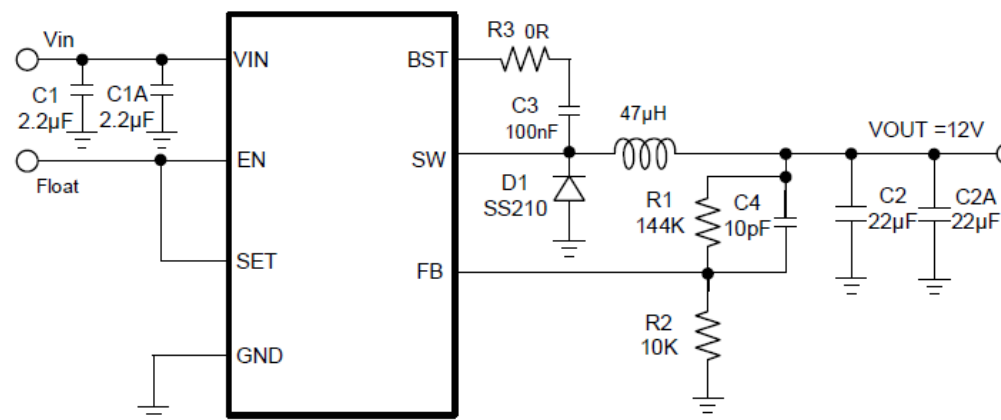
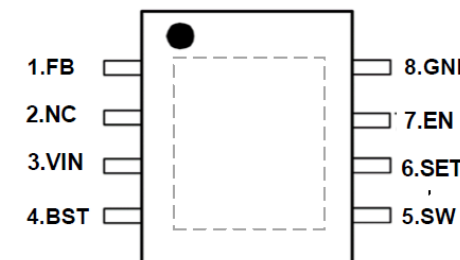
**CJ92930****4.5V~100V, Peak 3A Non-Sync DC-DC Buck Converter**

Key Parameters

- Input Voltage Range: 4.5V-100V
- Output Current: 2A(Cons)/3.5A(Peak)
- High Side $R_{DS(ON)}$: 5m Ω
- Low IQ: 180uA
- EN Pin for enable, default High if floating
- Shut down current: 3uA
- Selectable frequency: 150k/240k/450kHz
- Selectable Light load PFM
- Reference voltage: 0.78V
- Over Current Protection and OTP
- ESOP8 package

Typical Application

- Electric bicycle, Scooter ,Battery Pack
- Industrial transport, Industrial control board
- Motor Driver
- Solar panel
- GPS Tracker

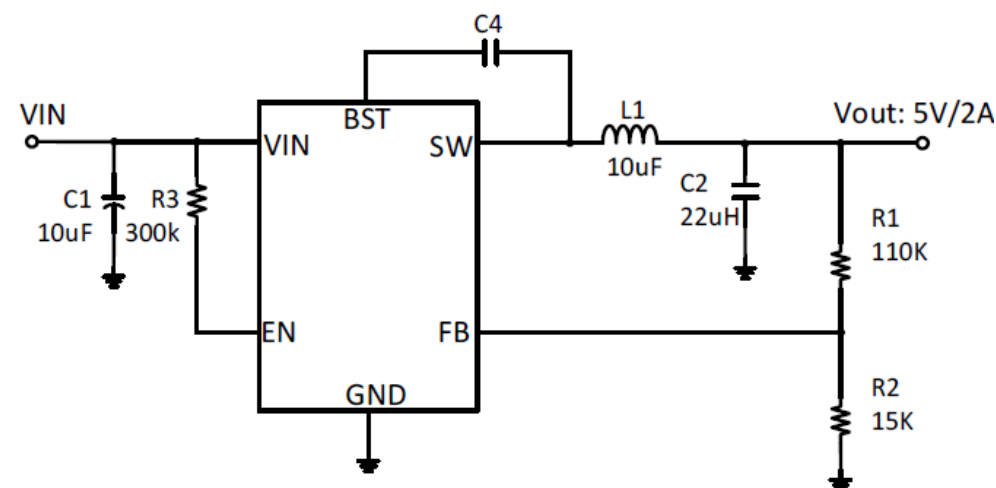
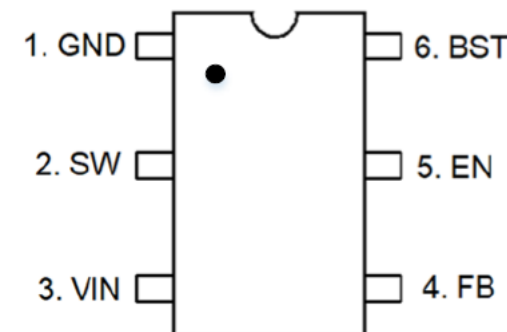


**CJ92320****4.5V~32V, 2A Synchronous DC-DC Buck Converter****Key Parameters**

- Input Voltage Range: 4.5V-32V
- Output Current: 2A
- High/Low Side $R_{DS(ON)}$: 135mΩ/ 85mΩ
- Low IQ: 150uA
- Constant-On-Time(COT) control mode
- Switching frequency: 520kHz
- Light load PFM
- Maximum Duty cycle: 98%
- Reference voltage: 0.78V
- Out-of-Audio (OOA) function
- Over Current Protection and OTP
- SOT236 package

Typical Application

- Surveillance
- Audio
- Printer
- Industrial control



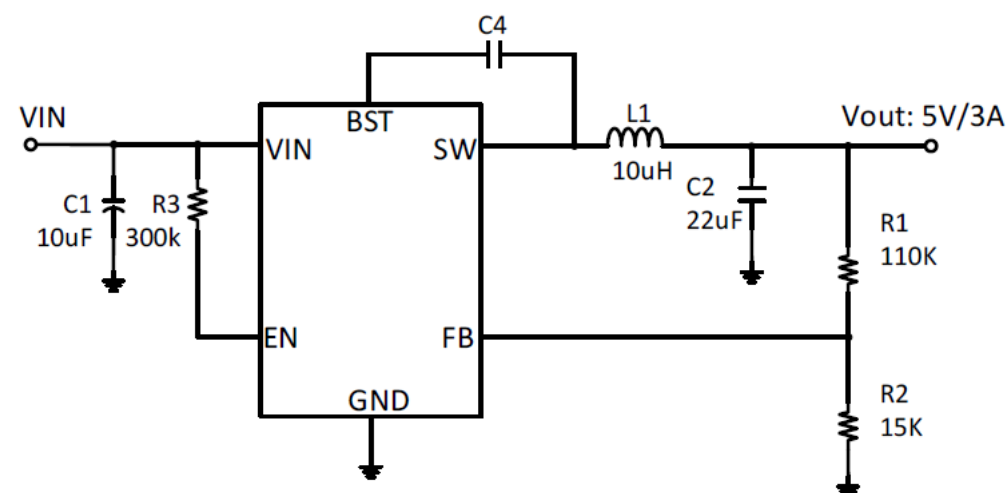
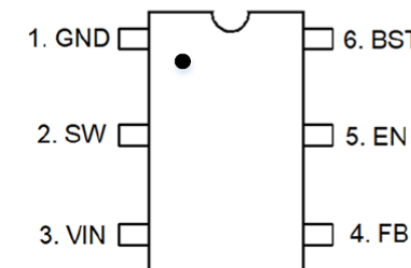
**CJ92330****4.5V~32V, 3A Synchronous DC-DC Buck Converter**

Key Parameters

- Input Voltage Range: 4.5V-32V
- Output Current: 3A
- High/Low Side $R_{DS(ON)}$: 85mΩ/ 55mΩ
- Low IQ: 190uA
- Constant-On-Time(COT) control mode
- Switching frequency: 340kHz
- Light load PFM
- Maximum Duty cycle: 98%
- Reference voltage: 0.8V
- Over Current Protection and OTP
- SOT236 package

Typical Application

- Surveillance
- Audio
- Printer
- Industrial control
- Industrial PC



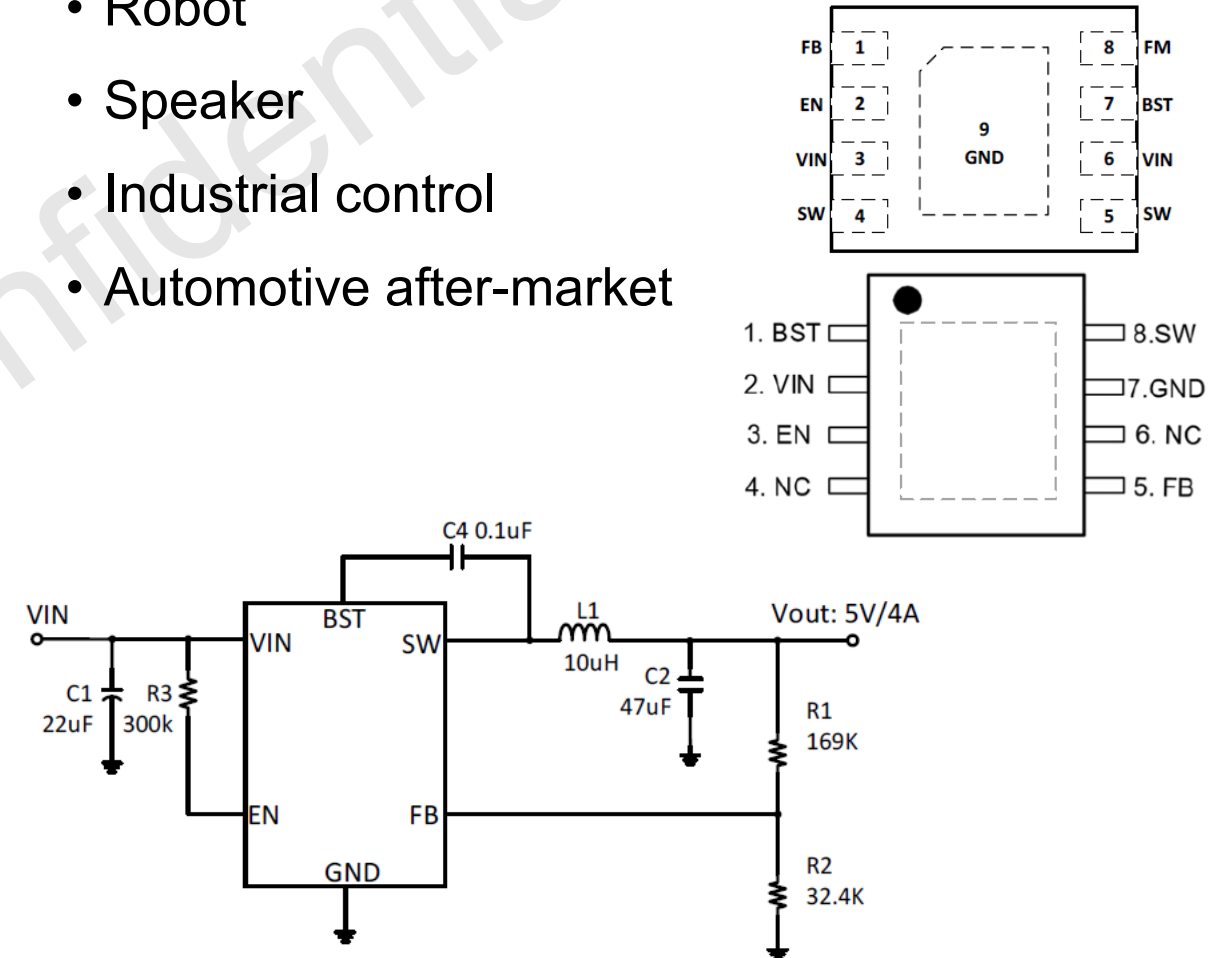
**CJ92340****4.5V~32V, 4A Synchronous DC-DC Buck Converter**

Key Parameters

- Input Voltage Range: 4.5V-32V
- Output Current: 4A
- High/Low Side $R_{DS(ON)}$: 80m Ω / 50m Ω
- Low IQ: 190uA
- Constant-On-Time(COT) control mode
- Switching frequency: 340kHz
- Light load PFM
- Maximum Duty cycle: 98%
- Reference voltage: 0.8V
- Over Current Protection and OTP
- ESOP-8/DFN2X3-8 package

Typical Application

- Robot
- Speaker
- Industrial control
- Automotive after-market



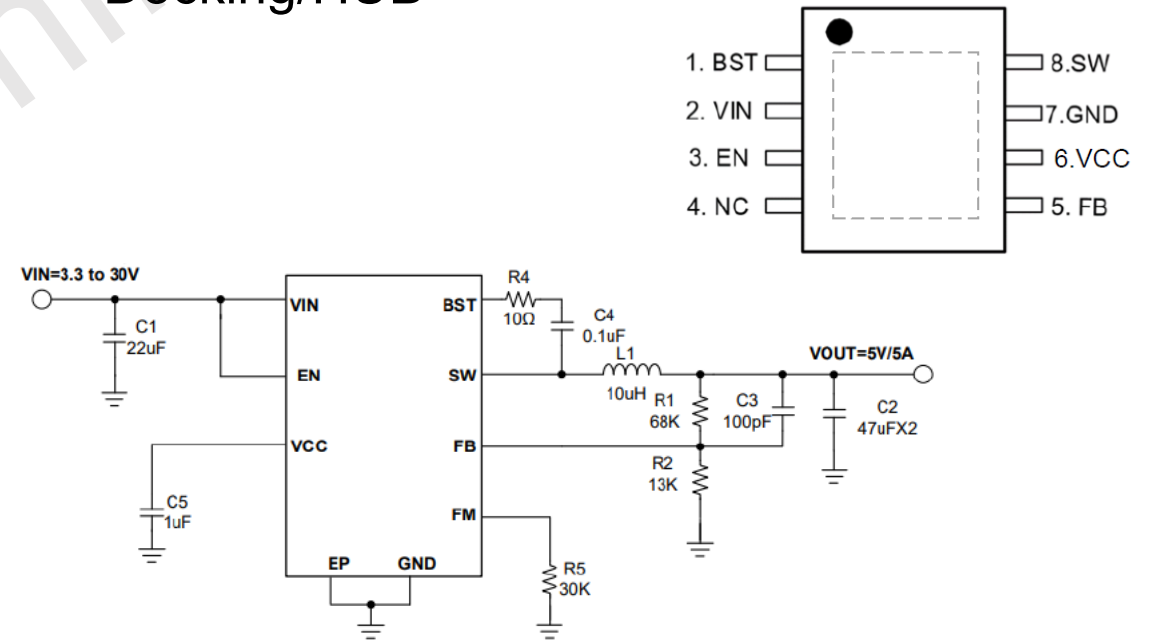
**CJ92350****4.5V~30V, 5A Synchronous DC-DC Buck Converter**

Key Parameters

- Input Voltage Range: 3.3V-30V
- Output Current: 5A
- High/Low Side $R_{DS(ON)}$: 43m Ω / 27m Ω
- Low IQ: 350uA
- Constant-On-Time(COT) control mode
- Switching frequency: 340kHz
- Selectable Light load PFM/FPWM
- Maximum Duty cycle: 100%
- Reference voltage: 0.8V
- Over Current Protection and OTP
- ESOP-8 package

Typical Application

- Sweeper, Drone
- Type-C PD charger
- Automotive after-market
- Docking/HUB





CJ92360

4.5V~30V, 6A Synchronous DC-DC Buck Converter

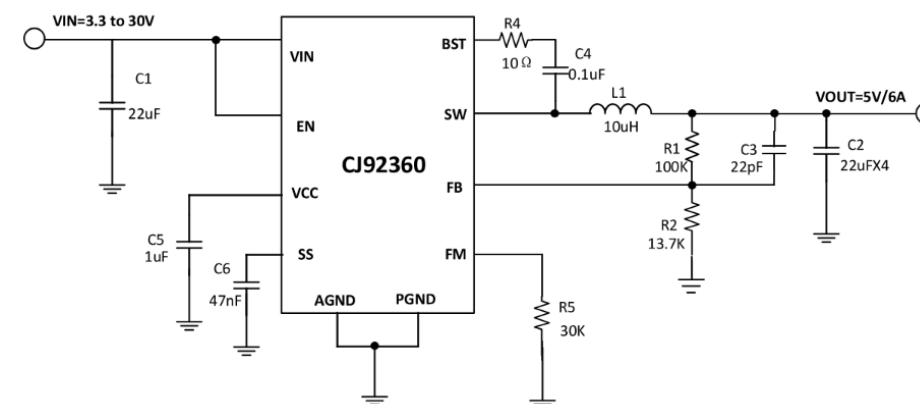
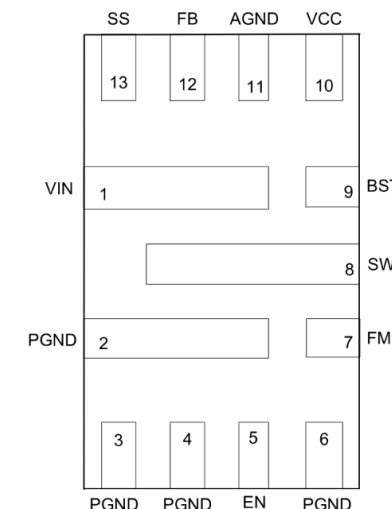


Key Parameters

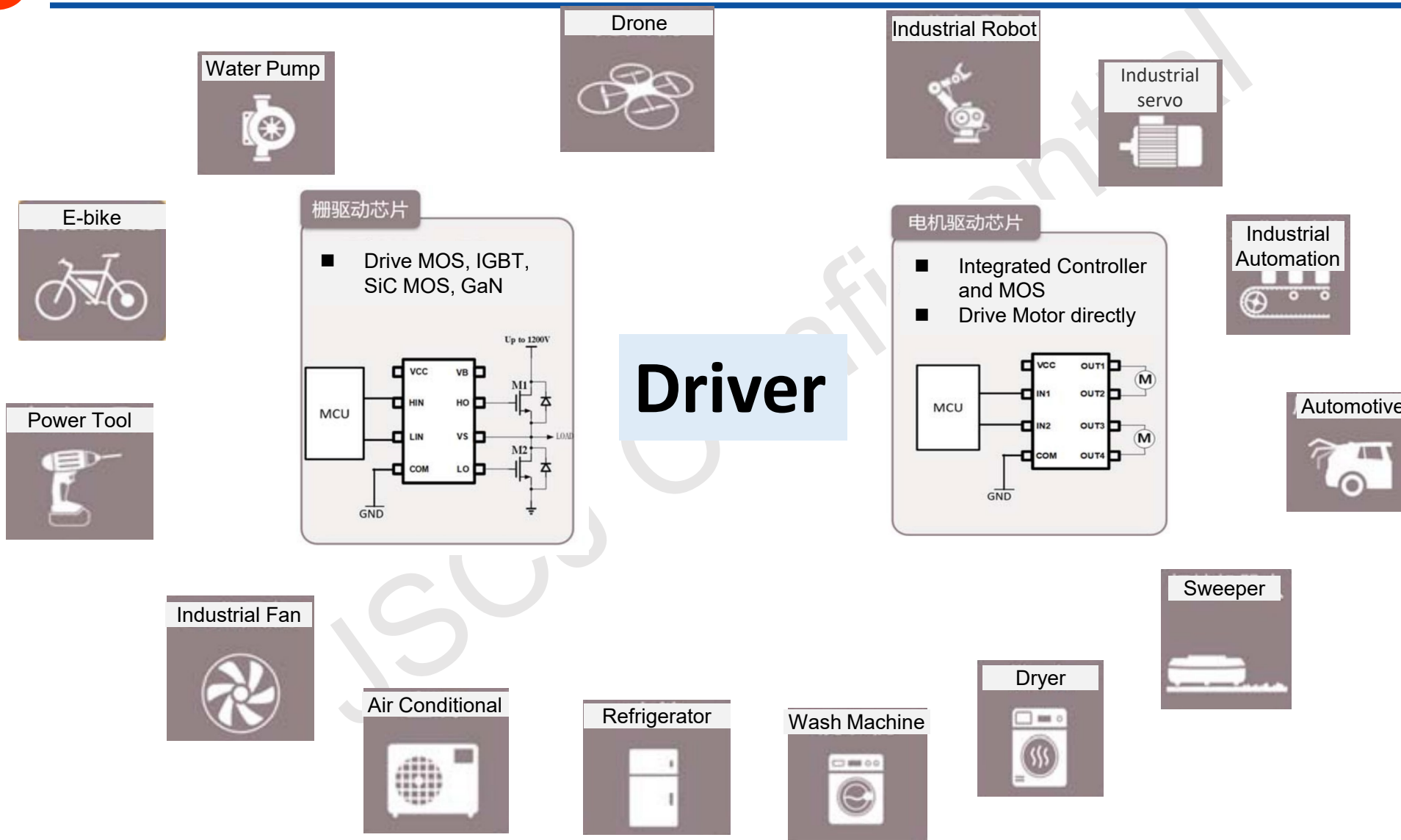
- Input Voltage Range: 3.3V-30V
- Output Current: 6A
- High/Low Side $R_{DS(ON)}$: 32mΩ/ 20mΩ
- Low IQ: 350uA
- Constant-On-Time(COT) control mode
- Selectable frequency: 250k/300k/400kHz
- Selectable Light load PFM/FPWM
- Maximum Duty cycle: 100%
- Reference voltage: 0.6V
- Over Current Protection and OTP
- QFN2X3-13 package

Typical Application

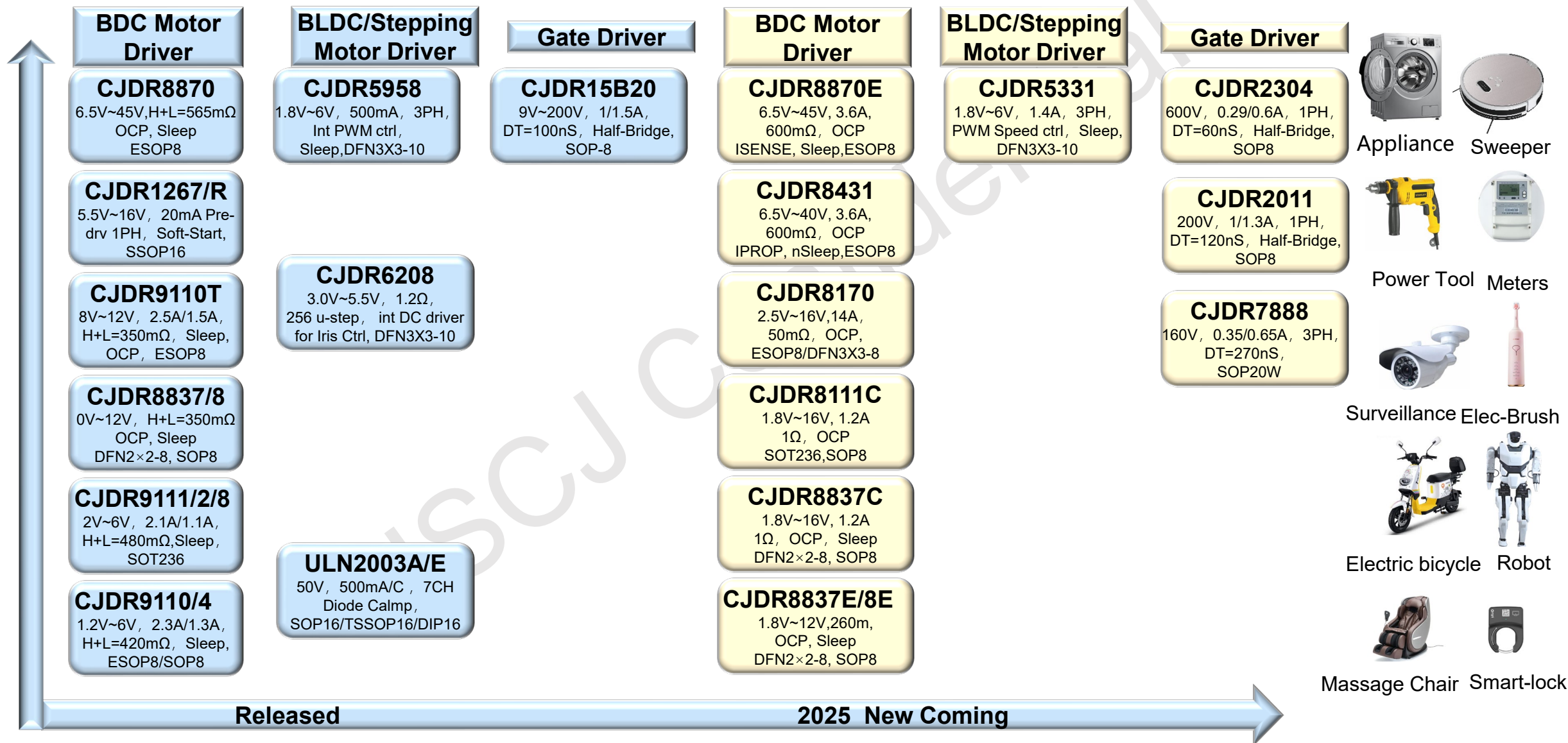
- Sweeper
- Type-C PD charger
- Docking/HUB
- Drone



03 Driver IC application



03 Driver IC Roadmap





CJDR8837

2.0V~12V, 1.5A Single Channel Full Bridge Motor Driver

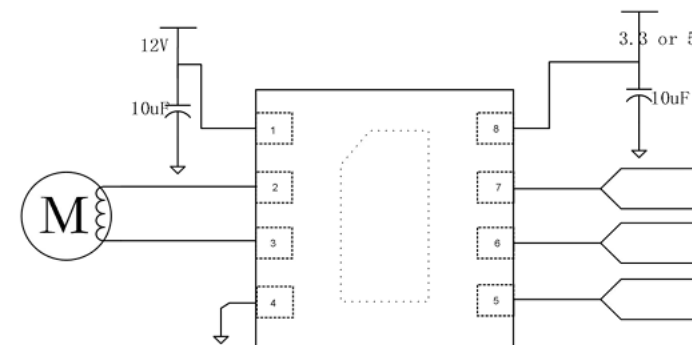
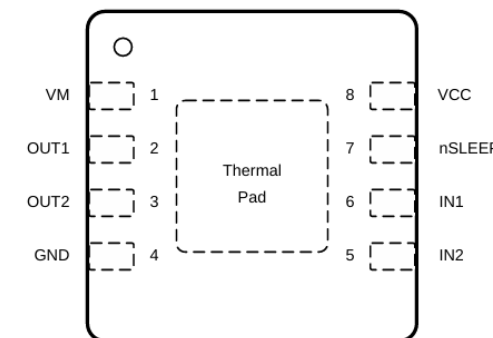


Key Parameters

- VM Input Voltage Range: 0V-12V
- VCC input Voltage Range: 2.0V-7.0V
- Continuous Output Current: 1.5A
- High Side + Low Side $R_{DS(ON)}$: 350m Ω
- Build-in output current limit
- Low Consumption Current in Sleep: 40nA
- Compatible with 3.3V, 5.0V Logic
- Short circuit protection
- Under voltage protection
- Thermal Shutdown Protection
- DFN2X2-8 package

Typical Application

- Meter
- Video Camera
- Toys
- Smart Lock
- Medical Equipment





CJDR8837C

2.0V~12V, 1A Single Channel Full Bridge Motor Driver

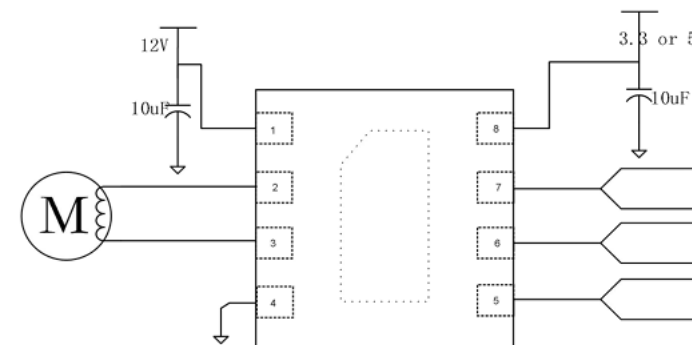
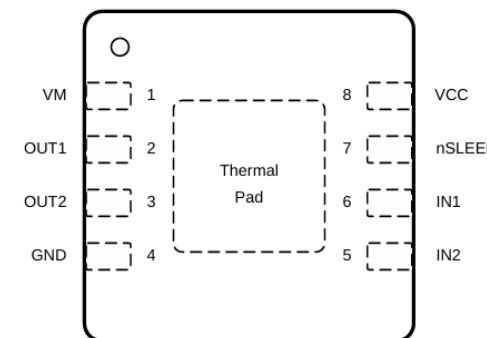


Key Parameters

- VM Input Voltage Range: 0V-12V
- VCC input Voltage Range: 2.0V-7.0V
- Continuous Output Current: 1A
- High Side + Low Side $R_{DS(ON)}$: 1 Ω
- Build-in output current limit
- Low Consumption Current in Sleep: 40nA
- Compatible with 3.3V, 5.0V Logic
- Short circuit protection
- Under voltage protection
- Thermal Shutdown Protection
- DFN2X2-8 package

Typical Application

- Meter
- Video Camera
- Toys
- Smart Lock
- Medical Equipment





CJDR8870

2.0V~12V, 1A Single Channel Full Bridge Motor Driver

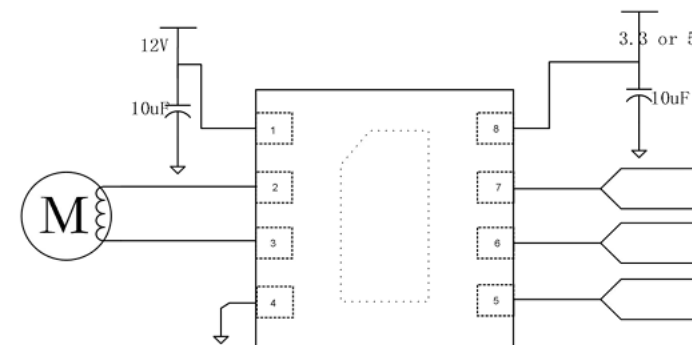
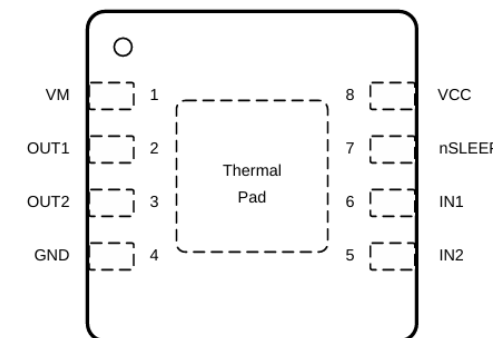


Key Parameters

- VM Input Voltage Range: 0V-12V
- VCC input Voltage Range: 2.0V-7.0V
- Continuous Output Current: 1A
- High Side + Low Side $R_{DS(ON)}$: 1 Ω
- Build-in output current limit
- Low Consumption Current in Sleep: 40nA
- Compatible with 3.3V, 5.0V Logic
- Short circuit protection
- Under voltage protection
- Thermal Shutdown Protection
- DFN2X2-8 package

Typical Application

- Meter
- Video Camera
- Toys
- Smart Lock
- Medical Equipment



04 Battery protection IC market

1 Cell



- **3-4.3V**: Smart watch, E-Cigarette, Portable Electronics...

2~4 Cells



- **5~18V**: Vacuum cleaner , Wireless speaker, Power tool, Notebook...

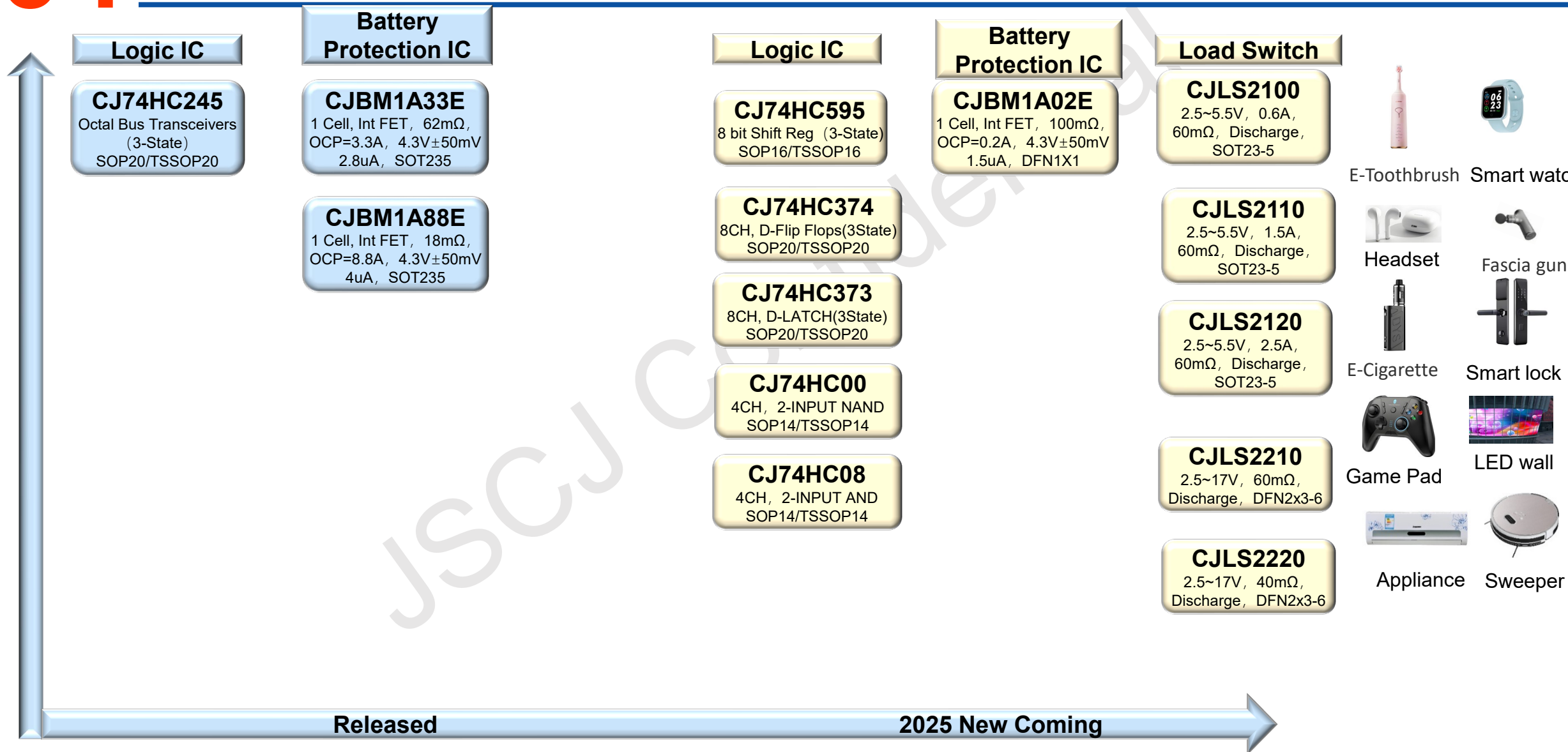
4~6 Cells



- **18~29V**: Fascia gun, Sweeper, Robot, Drone...

Battery
Protection
IC

04 Battery Protection IC/Logic IC Roadmap





CJ74HC245

Octal Bus Transceivers With 3-State Outputs

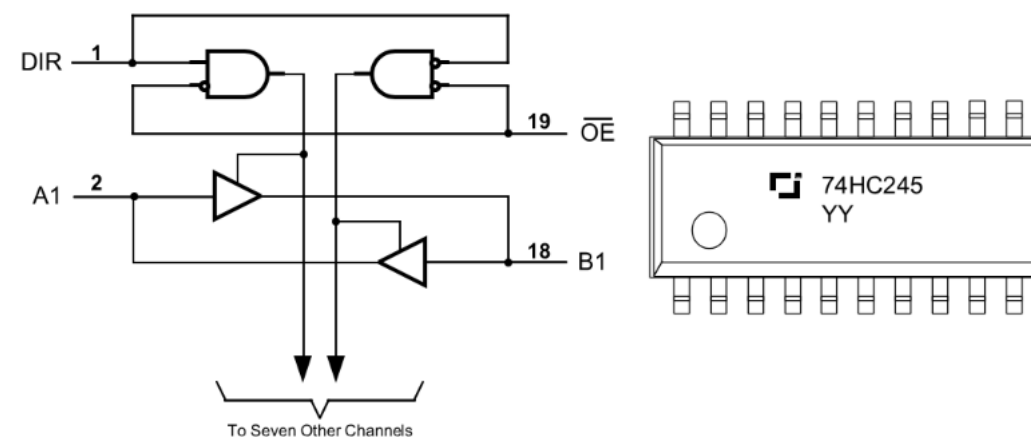


Key Feature

- Wide operating voltage range of 2 V to 6 V
- High speed:
 $t_{PD} = 10\text{ns}$ (TYP.) at $V_{CC} = 6\text{V}$
- Low power consumption:
 $I_{CC} = 4\mu\text{A}$ (MAX.) at $T_A = 25^\circ\text{C}$
- Balanced propagation delays
- Symmetrical output impedance:
 $|I_{OH}| = I_{OL} = 6\text{mA}$ (MIN.) @5V
- SOP20&TSSOP20

Typical Application

- Servers
- PCs and Notebooks
- Network Switches
- Wearable Health and Fitness Devices
- Telecom Infrastructures
- Electronic Points of Sale



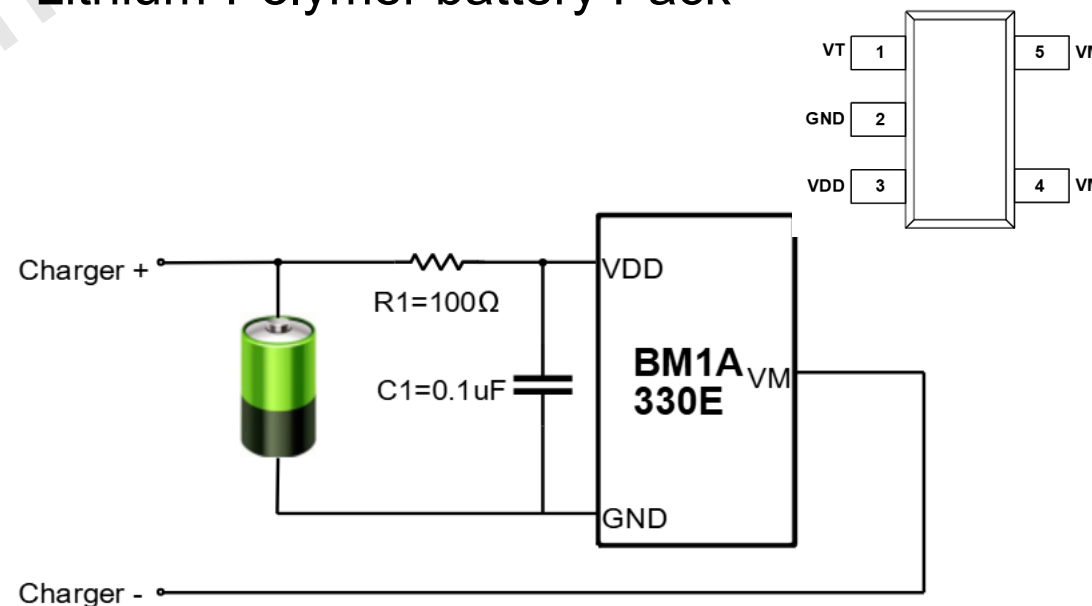


Key Features:

- Integrated 62mΩ Power MOS
- Operation mode: 2.8uA@Typical
- Shutdown mode: 1.5uA@Typical
- High-accuracy voltage protection: $4.3 \pm 50\text{mV}$
- 0V battery charge function
- Over voltage protection: 3.3A
- Overcharge current Protection
- Charger Detection Function
- Two step Overcurrent protection
- Over Temperature Protection
- SOT23-5

Typical Application

- Battery protection board, 5V/1A Power Bank
- Headset, Wearable devices
- One-cell Lithium-ion battery pack
- Lithium-Polymer battery Pack



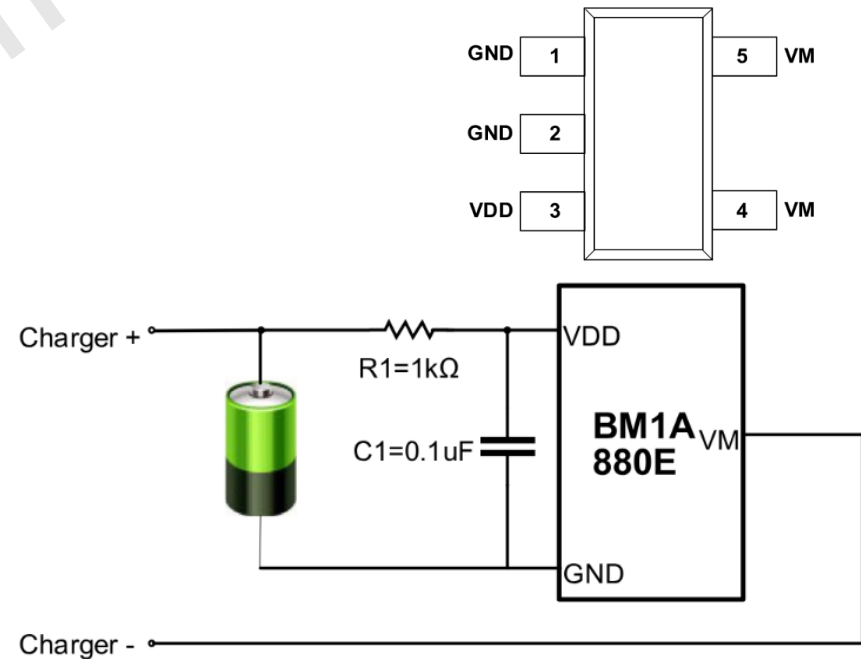


Key Features:

- Integrated 18mΩ Power MOS
- Operation mode: 4uA@Typical
- Shutdown mode: 2uA@Typical
- High-accuracy voltage protection: $4.3 \pm 50\text{mV}$
- 0V battery charge function
- Over voltage protection : 8.8A
- Overcharge current Protection
- Charger Detection Function
- Two step Overcurrent protection
- Over Temperature Protection
- SOT23-5

Typical Application

- One-cell Lithium-ion battery pack
- Lithium-Polymer battery Pack
- E-Cigarette



05

Typical Application—Air Conditioner/Refrigerator/Washer

JSCJ Products:

Gate Driver:

600V: CJDR2136、CJDR2103,
200V: CJDR7888、CJDR2007

DC-DC/LDO Regulator:

30V/500mA: CJ78M05/15
30V/100mA: CJ78L05E
20V/1A: SCJ1117
30V/2A: CJ92320

Voltage Reference :

36V/2.5V: CJ431E

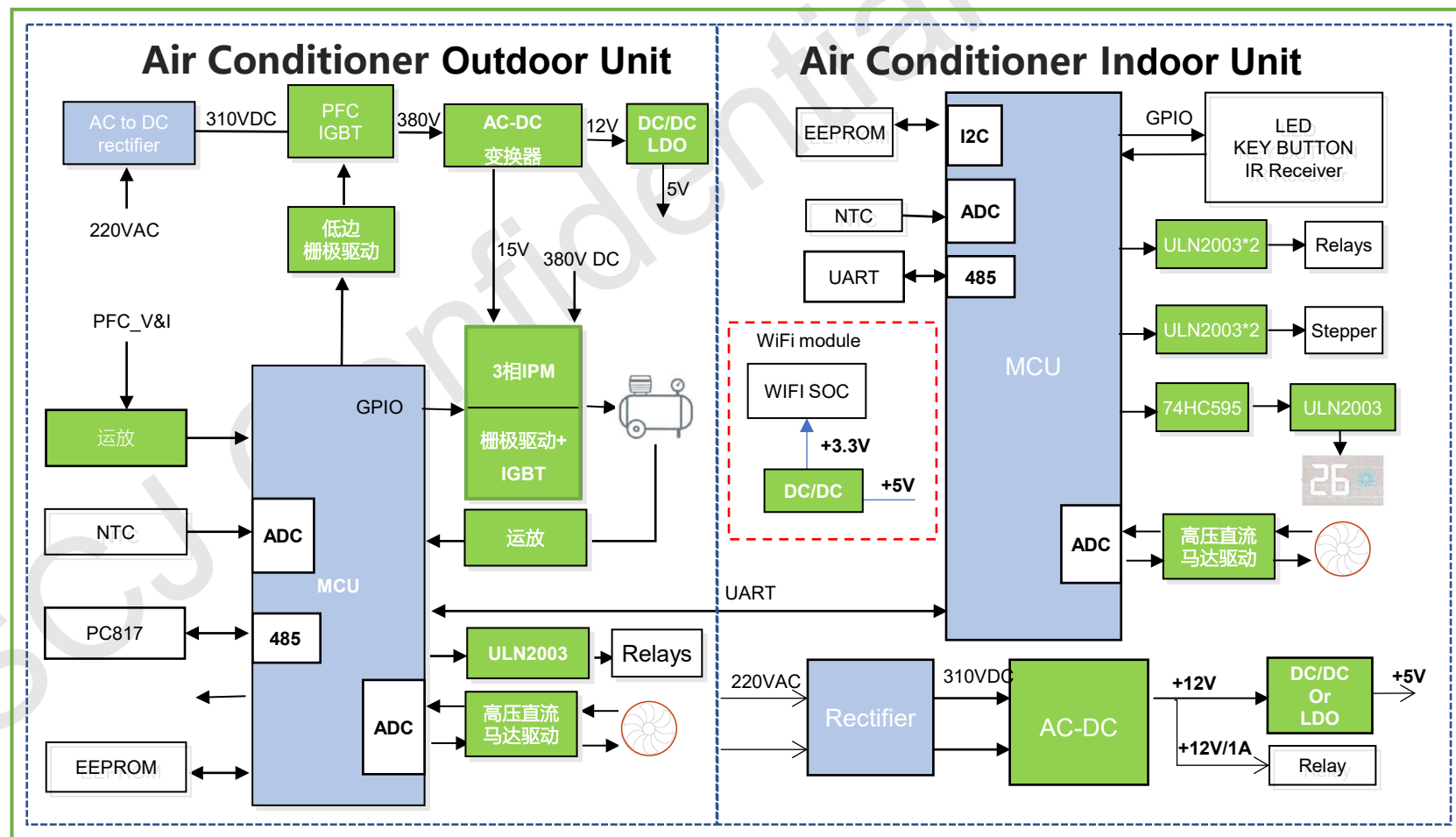
Logic IC: CJ74HC595

Operation Amplifier :

CJOA906X, LM2903/4,
LM358E

Low-side Switch:

ULN2003A/E



(Residential Air Conditioner Block diagram)

05

Typical Application—E-Bike/Scooter/Battery Pack

JSCJ Products:

DC-DC:

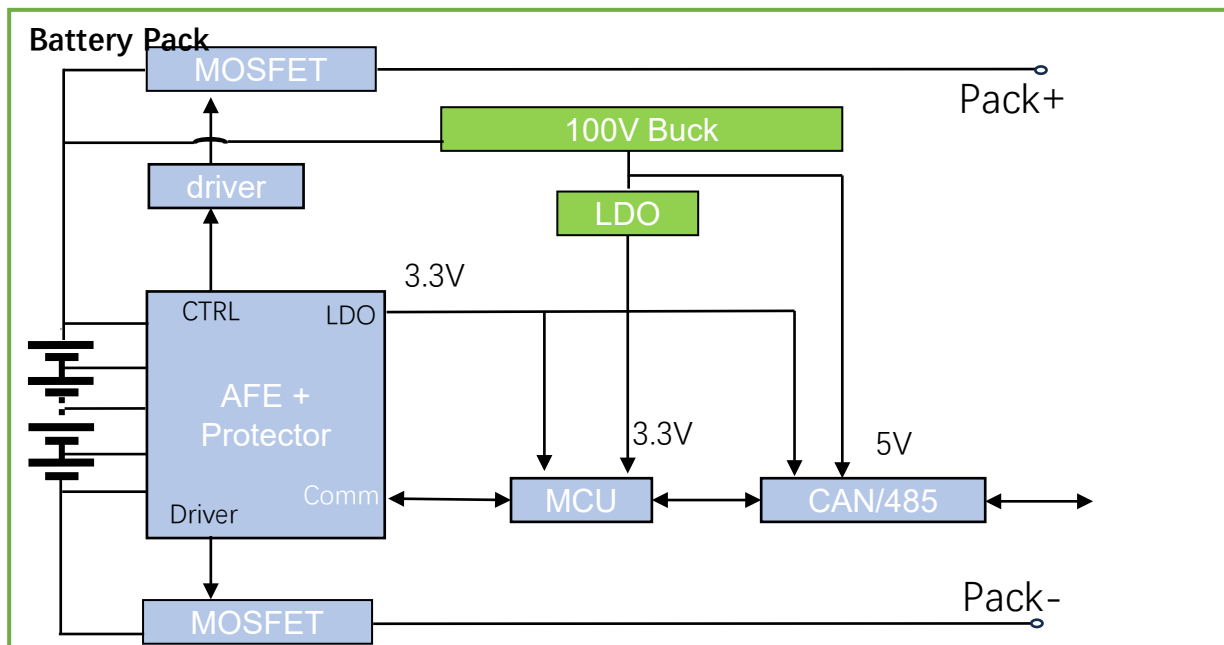
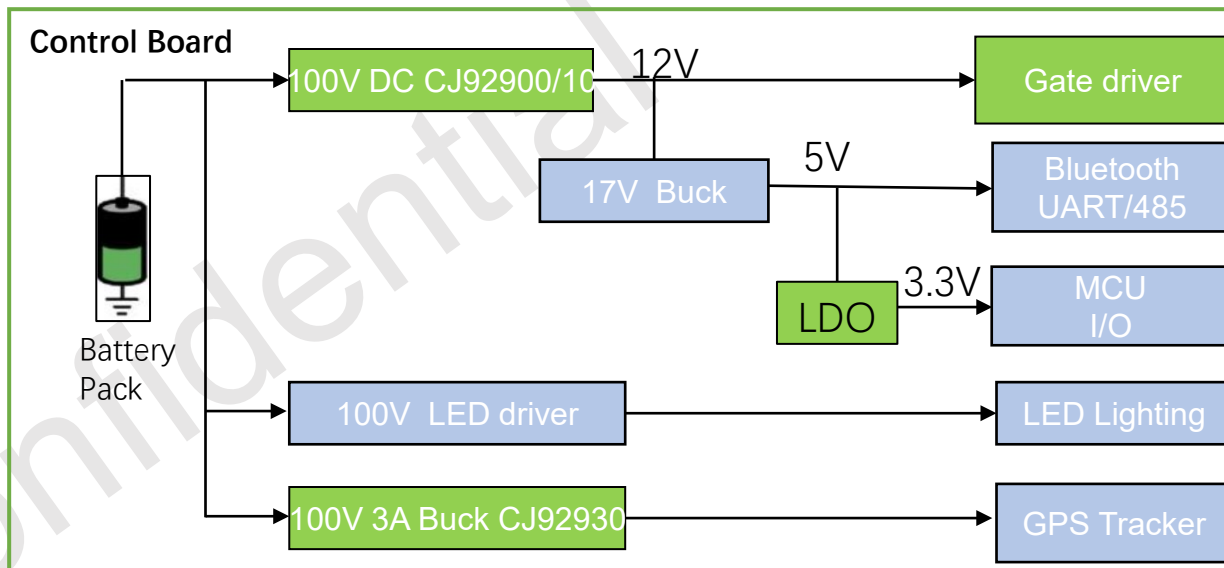
- 100V/0.5A: CJ92900(Non-Synchronous)
- 100V/1.0A: CJ92910(Synchronous)
- 100V/2.0A: CJ92320(Synchronous)
- 100V/3.5A: CJ92330(Non-Synchronous, Peak3.5A)

LDO:

- 30V/0.1A: CJ78L05
- 36V/0.25A: CJ7550S, SOT-89-3L
- 40V/0.20A: CJ6385A50P, SOT-89-3L
- 60V/0.25A: CJ6388B50M, SOT-23-5L

Gate Driver:

- 200V 1A/1.5A CJDR15B20



05 Typical Application—Sweeper

JSCJ Products :

Motor Driver: CJDR8870

DC-DC Buck Converter:

30V/2A: CJ92320

30V/3A: CJ92330

30V/4A: CJ92340

30V/5A: CJ92350

LDO:

5.5V/400mA: CJ6206E

20V/1A: SCJ1117

36V/0.25A: CJ7550S

40V/0.20A: CJ6385

Voltage Reference:

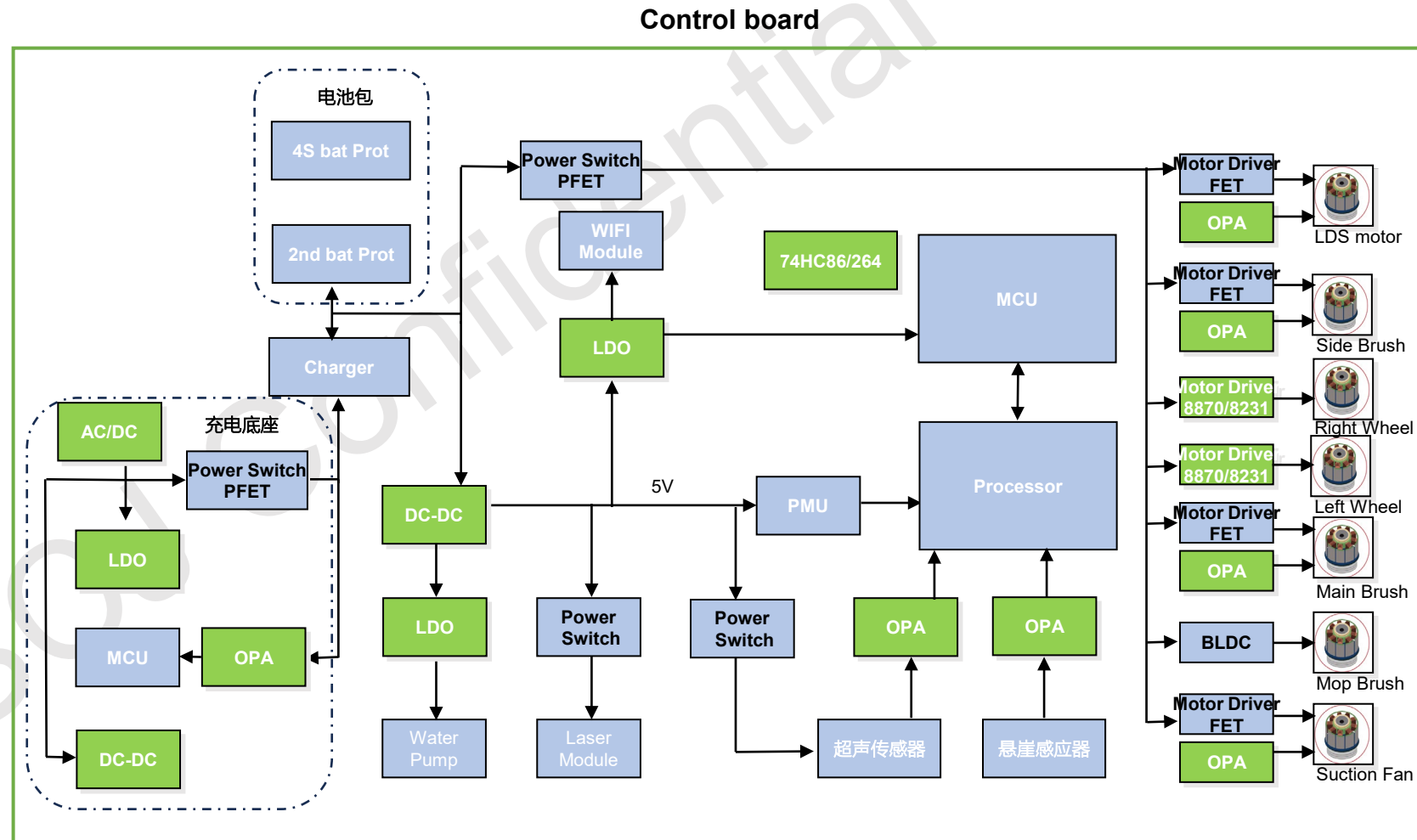
36V/2.5V: CJ431E

Amplifier/Com:

LM358, CJOA906X, CJOA675X

LM393, LMV331

AC-DC: CJPS2101



05 Typical Application—PD Charger / Docking

PD (Power Delivery) is a power transmission protocol that can provide higher power transmission through Type-C ports. It can adaptively adjust voltage and current to meet the charging needs of different devices. The biggest advantage of PD protocol lies in its efficiency and flexibility, which can support power transmission of up to 100W (or even higher), far exceeding the charging capacity of traditional USB interfaces.

JSCJ Products :

DC-DC :

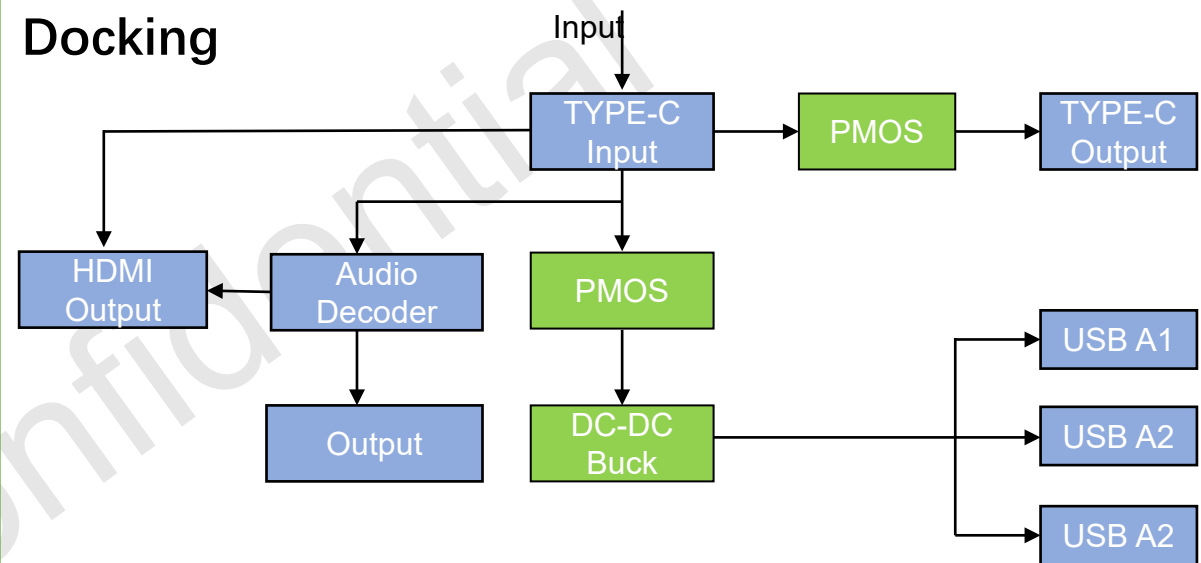
30V/6A: CJ92360 (Up to100% Duty Cycle, QFNFC2X3)

30V/5A: CJ92350 (Up to100% Duty Cycle , ESOP8)

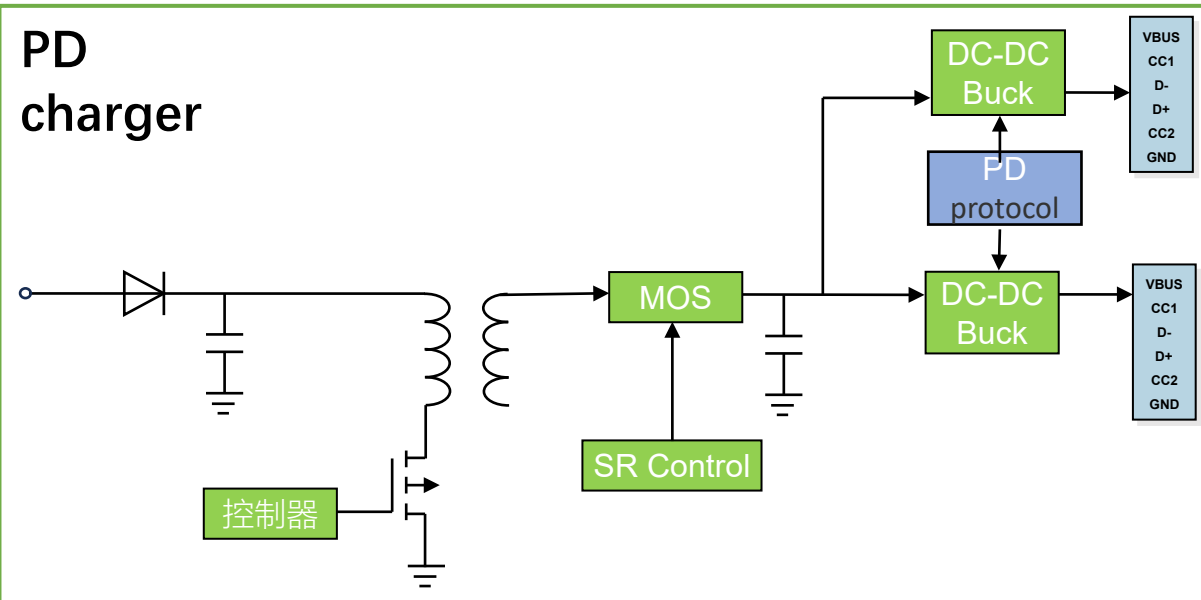
30V/4A: CJ92340 (Up to 98% Duty Cycle , ESOP8)

Typical Application: Docking, PD Charger, Monitor, Industrial PC, Multi-function Printer, Wall charger

Docking



PD charger



05 Typical Application—NB FAN

The issue of heat dissipation has always been a problem in laptop design, and with the continuous improvement of configuration and performance requirements, it poses a huge challenge to the laptop heat dissipation system. JSCJ has developed Motor driver IC for this application, providing reliable and more cost-effective options.

JSCJ Products :

Motor Driver:

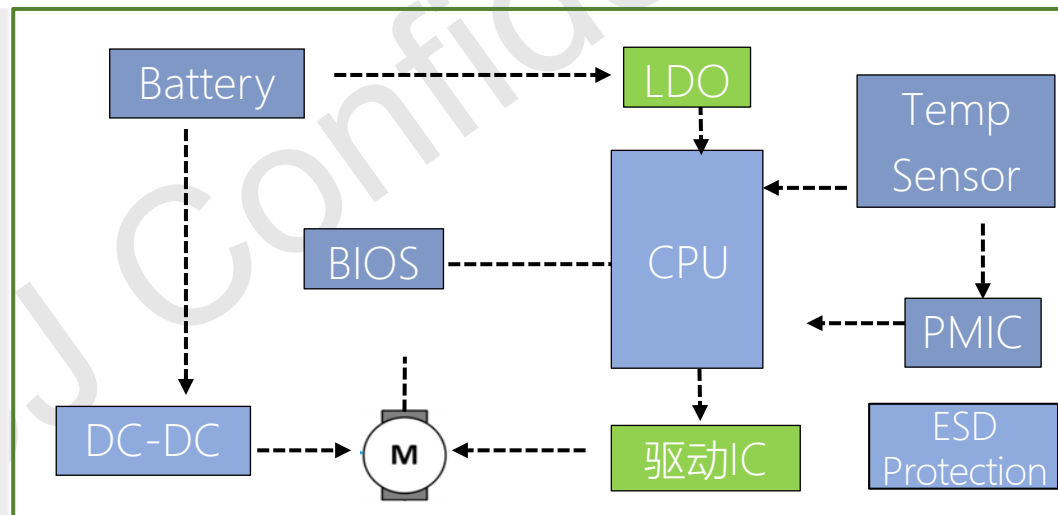
CJDR5958、CJDR5331*

LDO:

CJ6213/6,CJ6206

Key features:

- 1.Three-Phase Sensor-Less Drive Method
2. PWM Quasi-Sinusoidal Driver
- 3, Low power consumption
- 4.DFN3x3 Assembly, saving space



05 Typical Application –Power Tool

JSCJ Products :

Gate Driver:

600V: CJDR2136、CJDR2103,
200V: CJDR7888、CJDR2007

LDO:

30V/0.10A: CJ78L05E, SOT-89
36V/0.25A: CJ7533S, SOT-89
40V/0.20A: CJ6385, SOT-89

DC-DC Buck Converter:

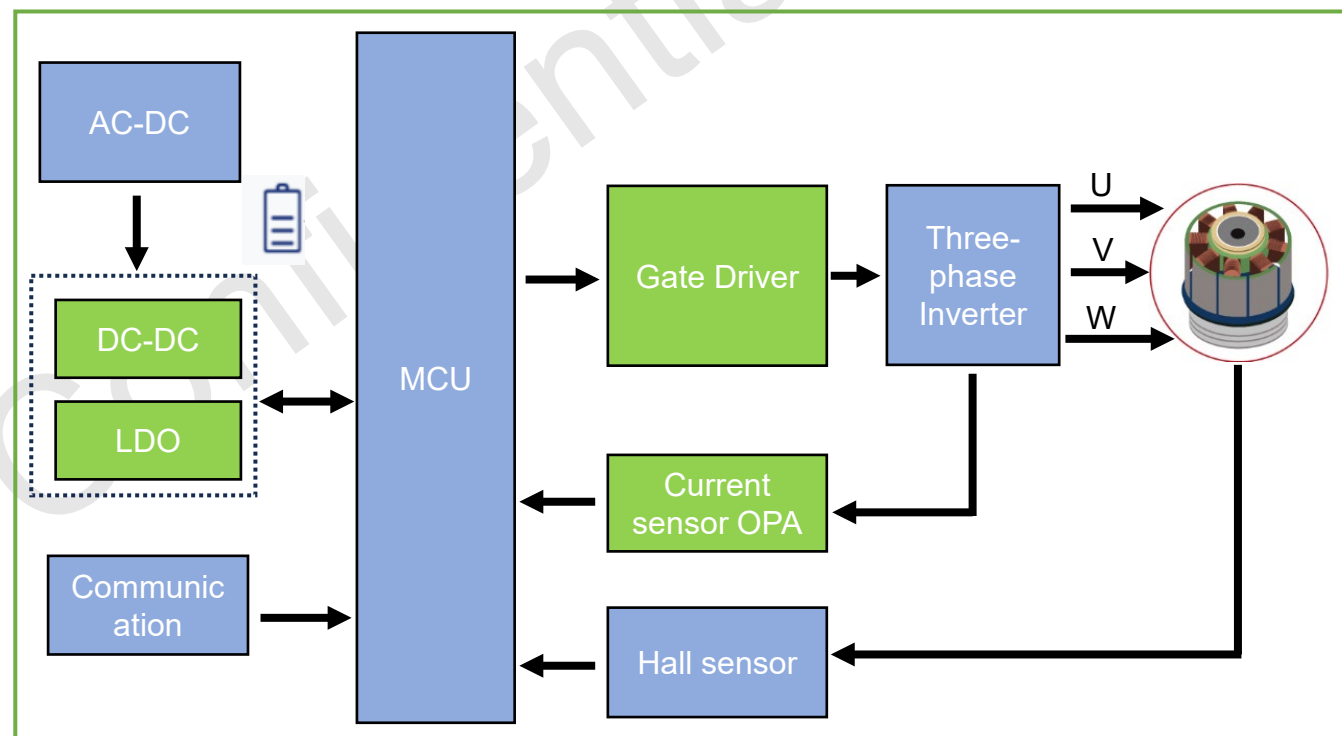
100V/0.5A: CJ92900(Non-Synchronous)
100V/1.0A: CJ92910(Synchronous)
100V/2.0A: CJ92320(Synchronous)

Voltage Reference: 36V, 2.5V: CJ431E

Logic IC: CJ74HC595

Amplifier: LM2903/04, CJOA906X

Motor Driver: CJDR8870E



05 Typical Application – Building Security System

The home security monitoring system mainly consists of cameras, wireless modules, central control units, power modules, alarms, etc. The camera require stepper motor drive, while filter switching is controlled by H-bridge driver

JSCJ Products :

Motor Driver:

CJDR9111、CJDR8837C、CJDR6208

LDO:

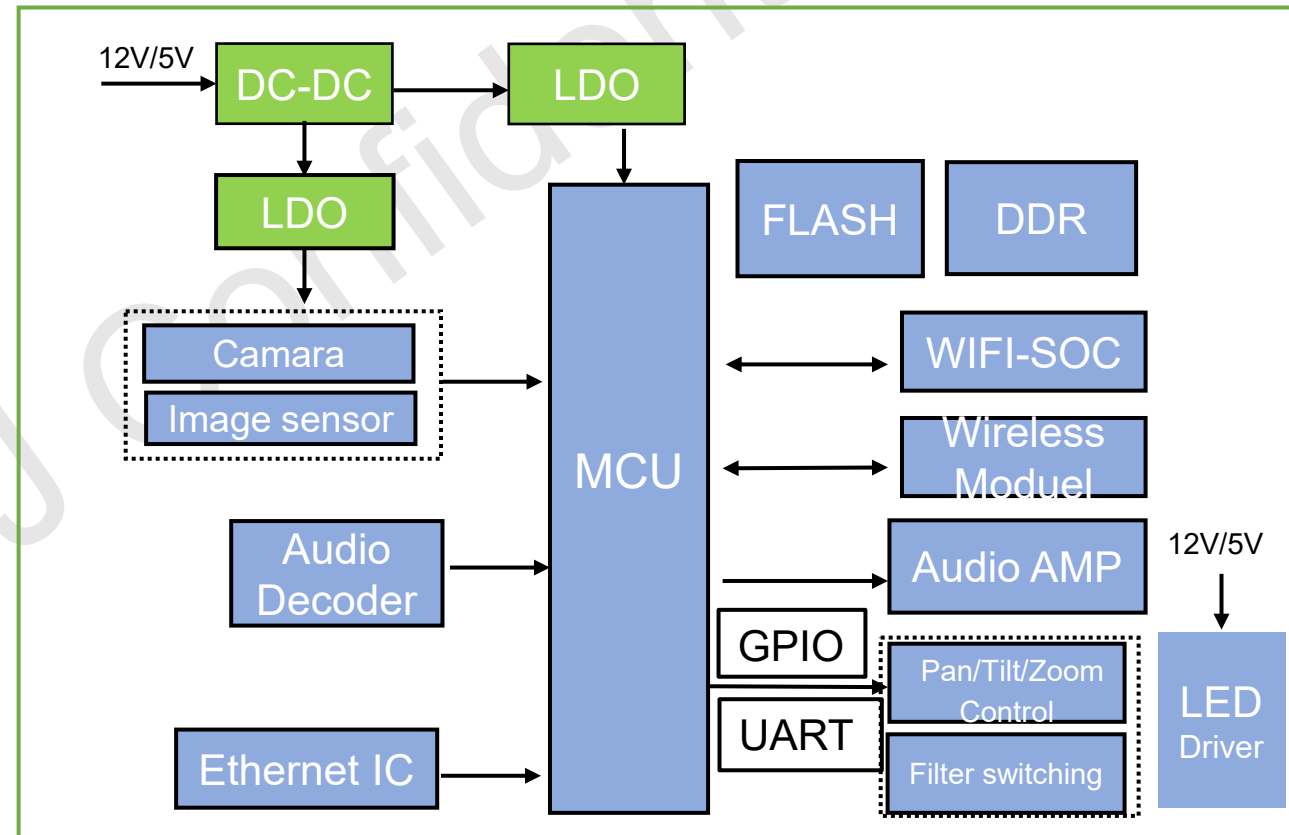
5.5V/500mA: CJ6213 (High PSRR)

5.5V/400mA: CJ6206E (Low IQ)

DC-DC:

30V/2A: CJ92320

30V/3A: CJ92330



05

Typical Application – Intelligent door locks

Intelligent door locks are different from traditional mechanical locks in that they are composite locks with safety, convenience, and advanced technology. According to the locking method, they are divided into semi-automatic and fully automatic. Its power supply is either a dry battery or a rechargeable lithium-ion battery. Due to its sleep state for most of the time, it has high requirements for system static power consumption to extend battery life.

JSCJ Products :

Motor Driver:

CJDR9111、CJDR9114、CJDR9118、
CJDR8837

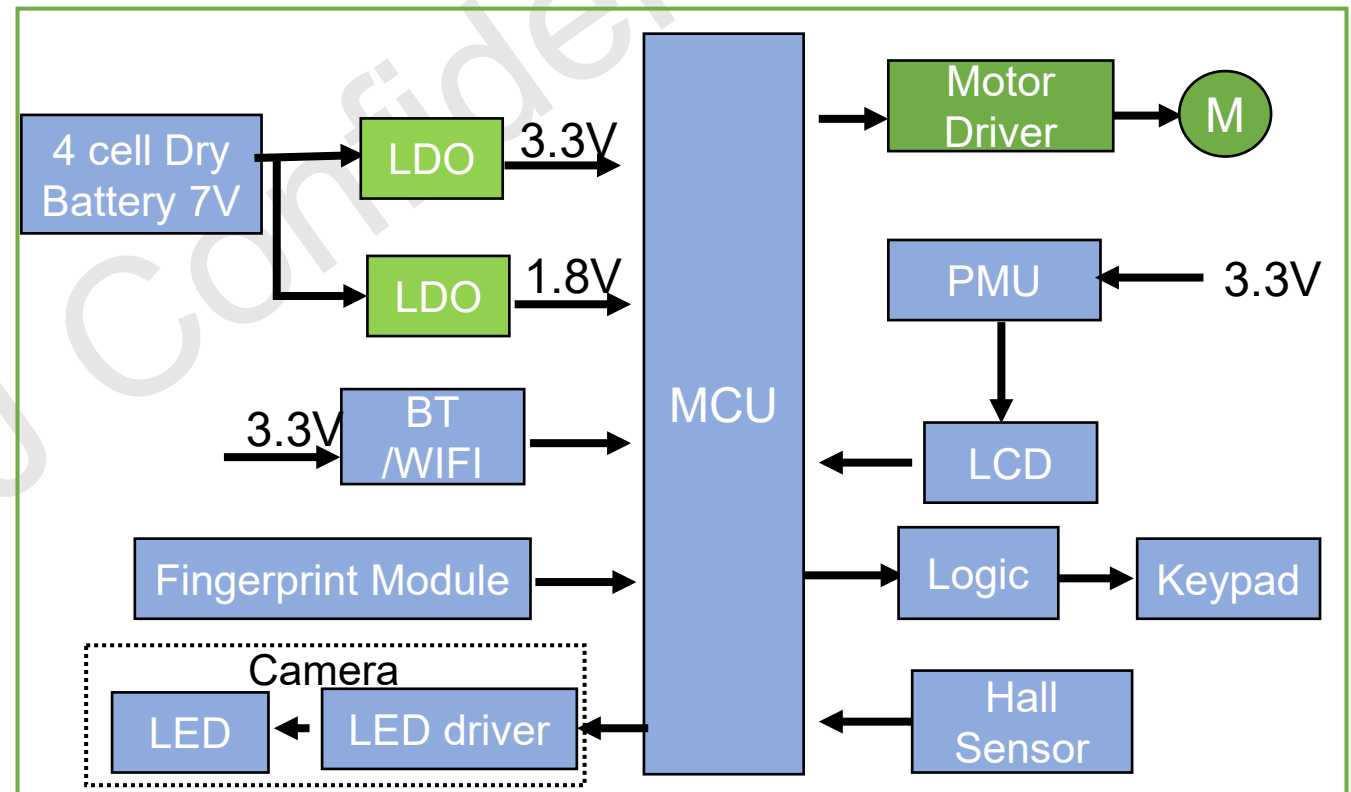
Logic IC:

CJ74HC595

LDO:

6.5V/300mA: CJ6111 (Low IQ)

18V/300mA: CJ6330(Low IQ)



(Semi-automatic smart lock block diagram)

05 Typical Application—Meter

The intelligent prepaid water meter can remotely control the valve on and off, requiring the valve motor drive chip. Meanwhile, it is powered by dry batteries or ion batteries, which require relatively high static power consumption for its system

JSCJ Products :

CJDR9111、CJDR9114、CJDR9118、
CJDR8837、CJDR8310
CJDR5849、CJDR8870

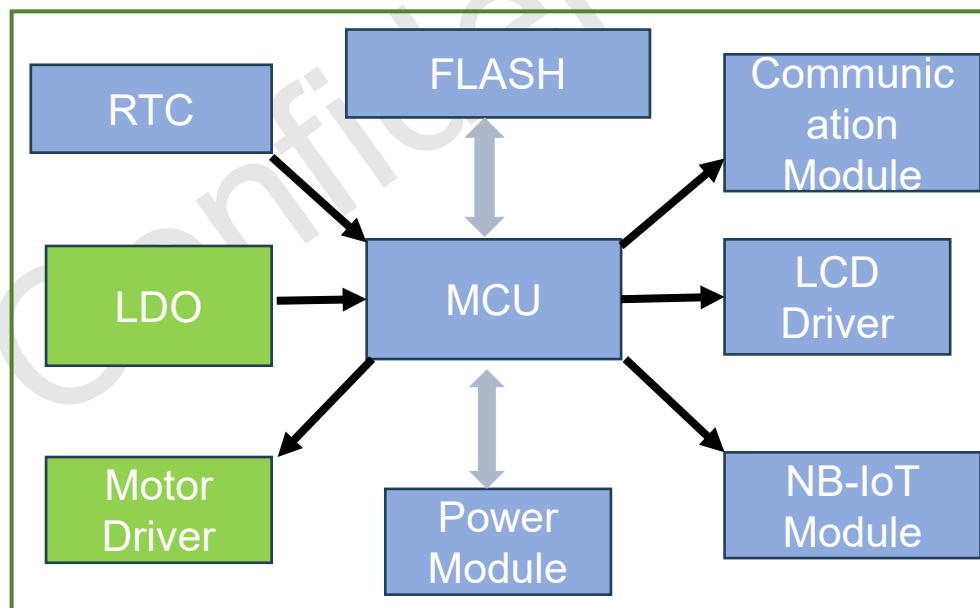
LDO:

6.5V/300mA: CJ6111 (Low IQ)

18V/300mA: CJ6330(Low IQ)

Key features:

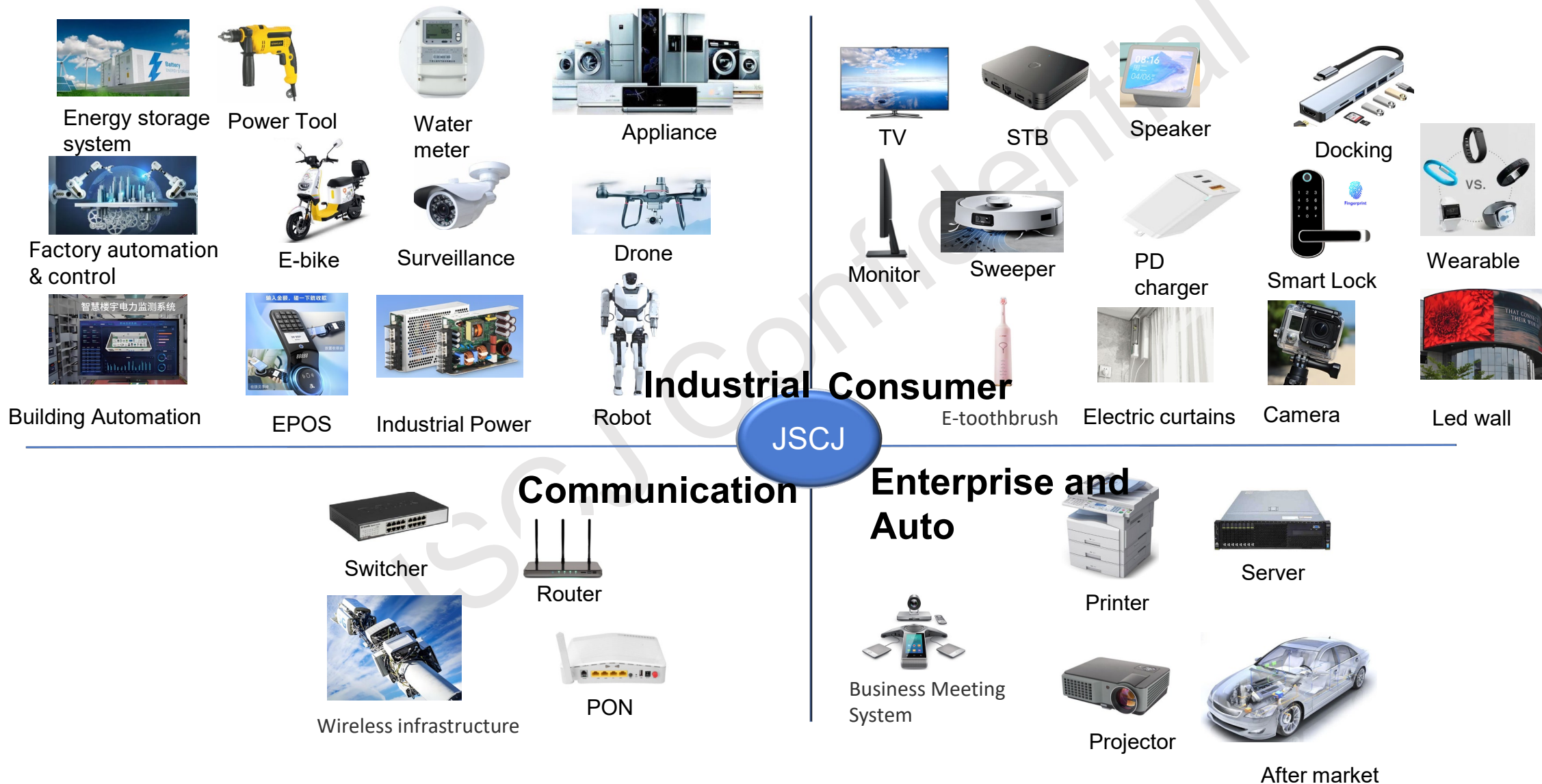
1. Provide 0-6, 0-12V solutions
2. SOT-23-6L, SOP8 assembly
3. Up to 1.3A current



(Water Meter Block diagram)



05 Main Market



Thanks

<http://jscj-elec.com>

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