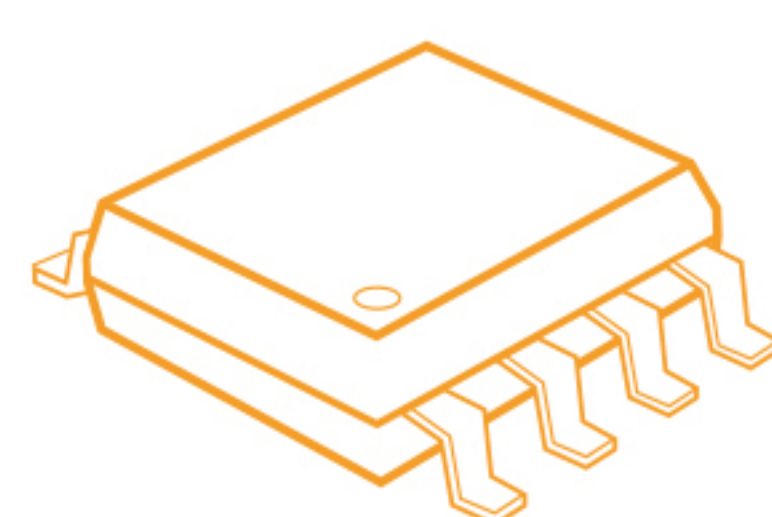


MORNSUN®



IC SELECTION GUIDE



COMPANY PROFILE

MORNSUN GUANGZHOU SCIENCE & TECHNOLOGY CO., LTD. is a national high-tech enterprise that has been ranked in the list of top 500 in manufacturing industry in Guangdong Province for 3 consecutive years. It is committed to providing comprehensive power supply solutions for industrial, medical, energy, electricity, railway and other industries. Mornsun product line includes AC/DC enclosed switching power supply, AC/DC converter, DC/DC converter, EMC auxiliary, isolation transmitter, IGBT driver, adapter and ICs , etc.. Mornsun is constantly improving its product based on the market demands and industry trends.

Mornsun IC product line includes AC/DC control IC, DC/DC control IC, interface IC and control IC for contactor. Meanwhile, Mornsun offers evaluation kits, design references, application manuals, and prompt technical supports to lower customers' cost, shorten design time and improve product reliability.

Our products are not only widely used in civilian applications such as adapters, chargers, and set-top box power supplies, etc., but also widely used in industrial applications such as power equipment, communication equipment, and industrial automation equipment.

Learn more, please visit: www.mornsun-power.com

RELIABLE



- 20+ years R&D experience
- 7 platforms for reliability assurance
- 10000+ successful applications

PROFESSIONAL



- Design references
- Pre-sale & after sale tracking
- Occasional technical discussion

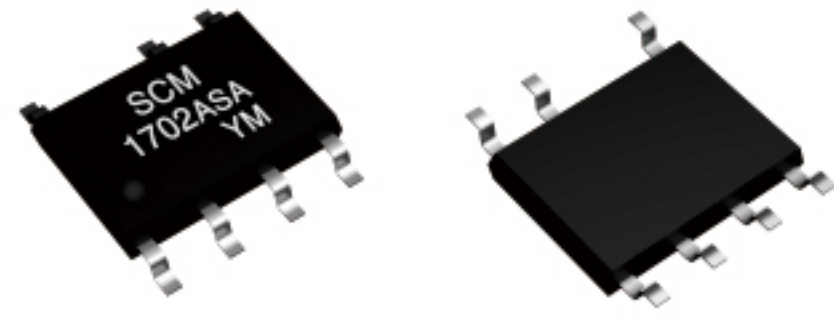
FAST



- Localized inventory
- 48 hours fast response

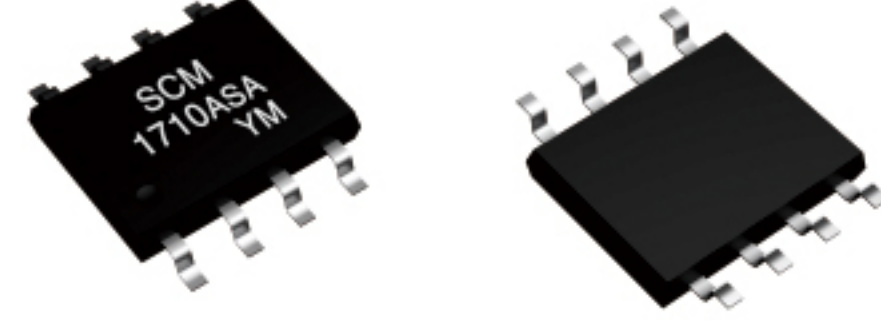
IC PRODUCT LINES

AC/DC Control IC



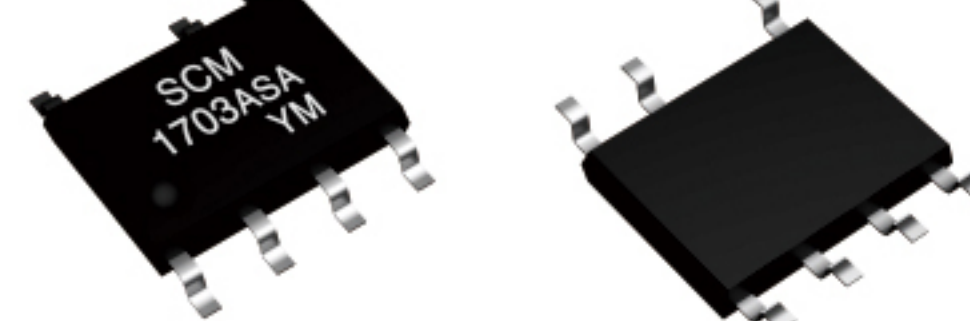
SCM1702A

AC/DC PSR Control IC
with Built-in MOS



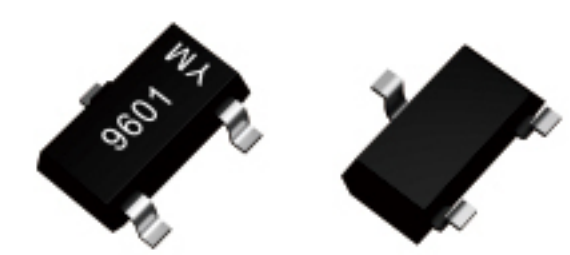
SCM1710A

AC/DC SSR Control IC



SCM1703A

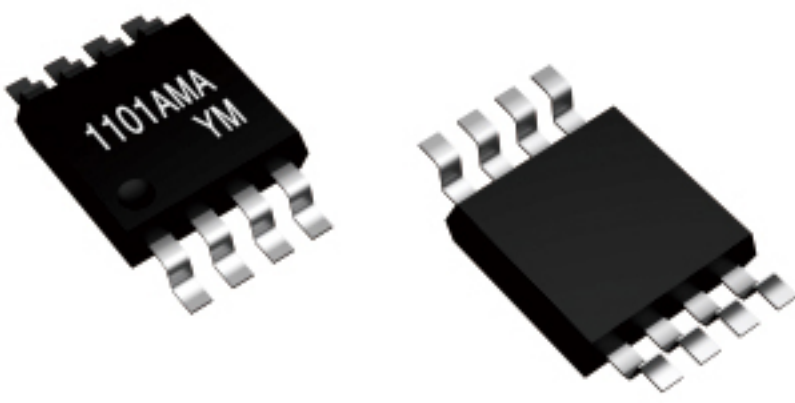
AC/DC SSR Control IC
with Built-in MOS



SCM9601A
SCM9602A

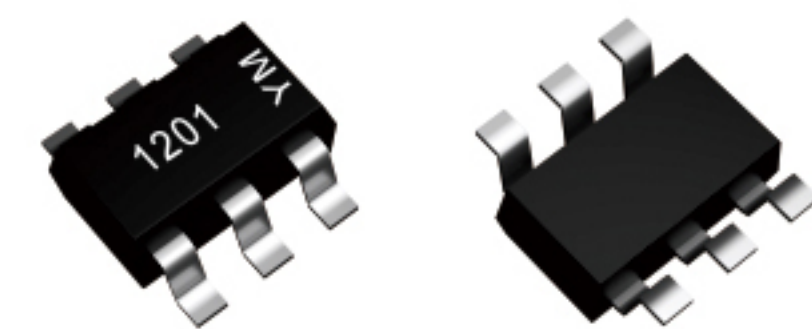
Start-up IC

DC/DC Control IC



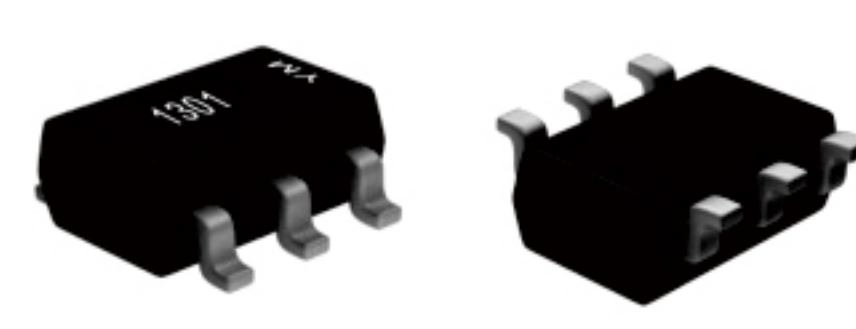
SCM1101A

DC/DC SSR Control IC



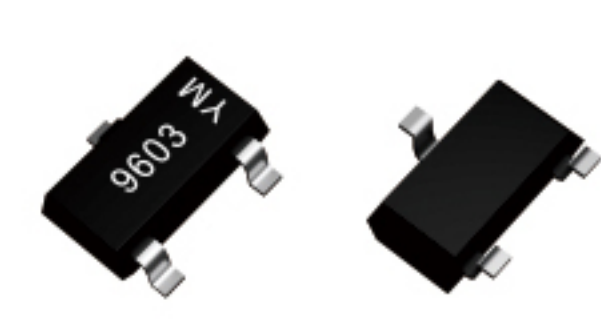
SCM1201A
SCM1212A

DC/DC Push-pull Control IC



SCM1301A
SCM1316A

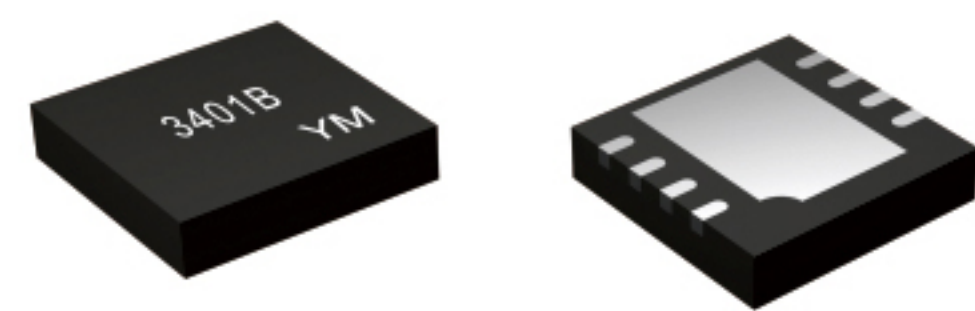
Non-isolated Buck Control IC



SCM9603B

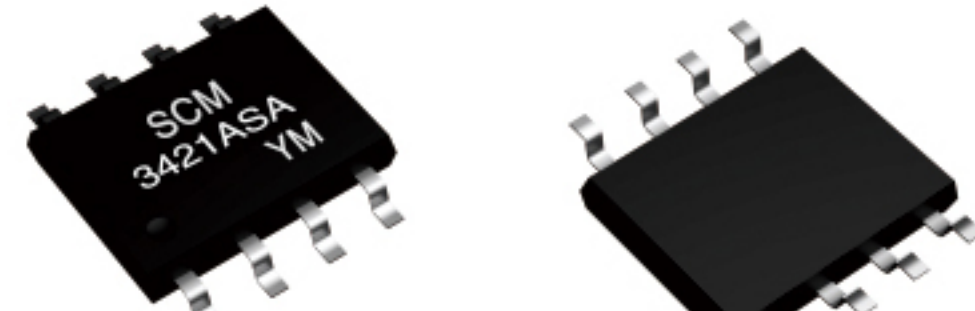
Start-up IC

Interface IC



SCM3401A
SCM3401B
SCM3402A

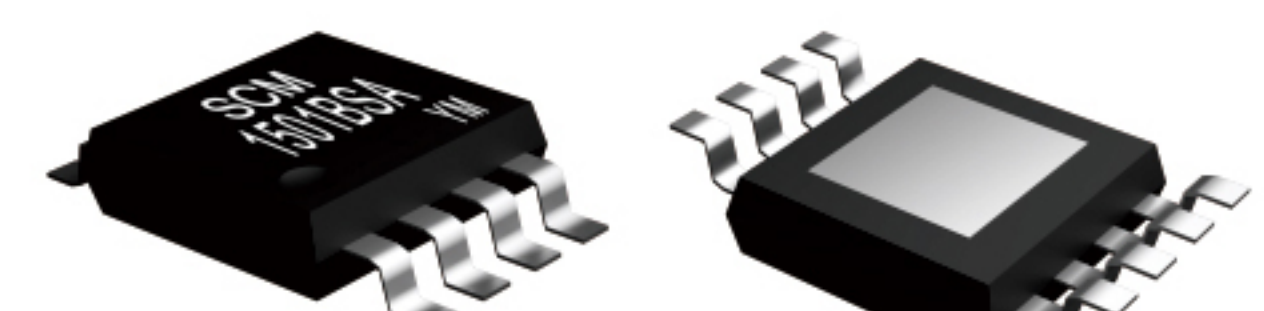
RS-485 Transceiver



SCM3421A
SCM3422A
SCM3423A

CAN Transceiver

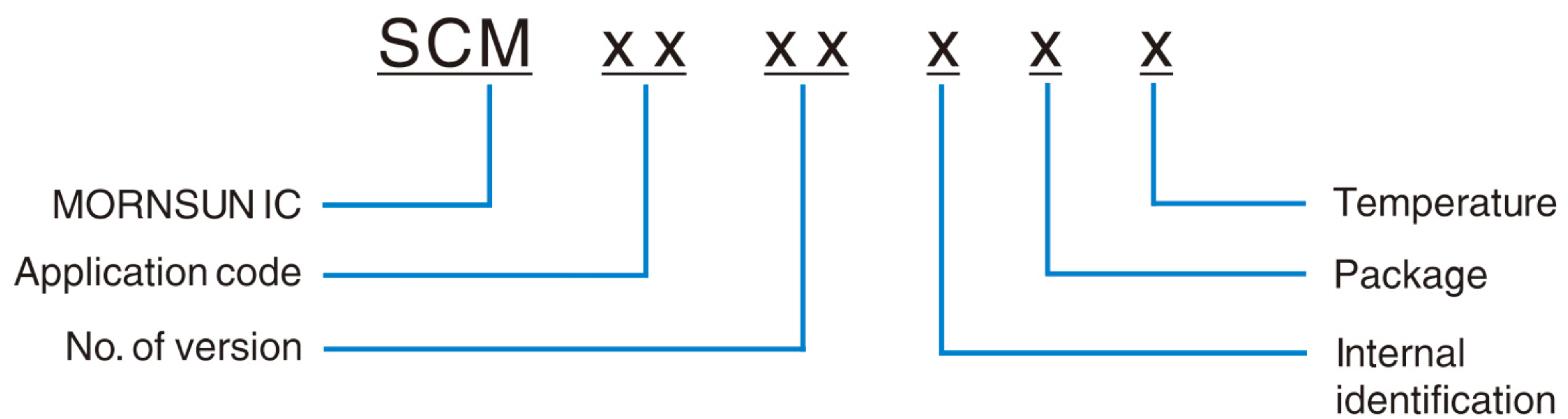
Control IC for contactor



SCM1501B

Contactor Power Saving Control IC

MODEL NOMENCLATURE



Application code

1 1: Isolated DC/DC control IC
1 2: Fixed input DC/DC control IC
1 3: Non-isolated control IC
1 5: Contactor control IC
1 7: AC/DC control IC

--- 1: PWM control

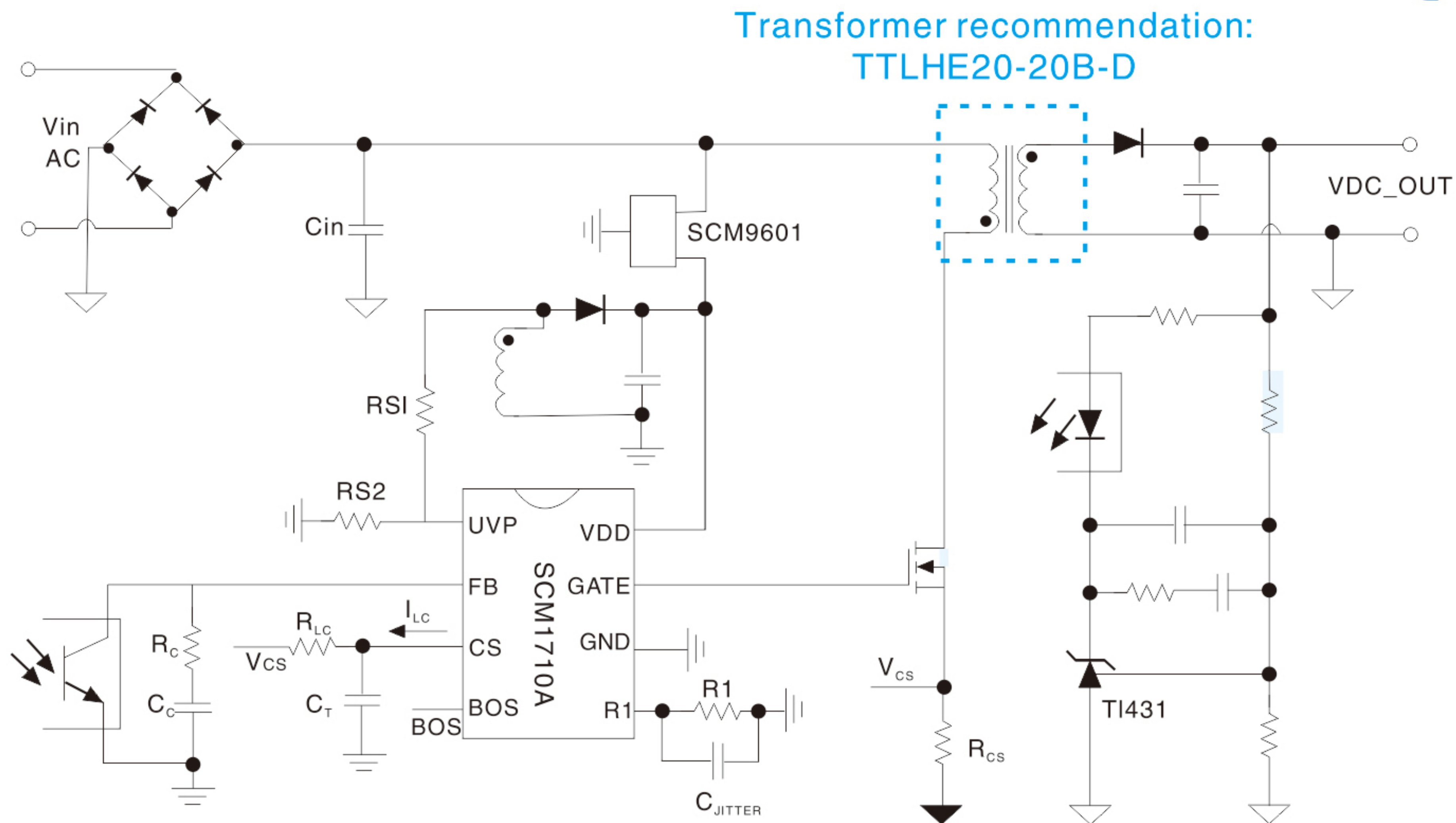
3 4: Communications interface IC
9 6: Start-up IC

3: Signal interface
9: Auxiliary device

AC/DC Control IC

Power range is from 0.1W to 60W.

Simplify circuit design and reduce material cost.



AC/DC Power Supply Control IC

Typical applications: USB compatible adapters of consumer electronics (mobile phones, tablet computers, set-top boxes, etc.) and charger, auxiliary power supply, industrial power supply.

Part No.	Topology	Power (W)	Control Mode	Vds(max) (V)	HV ¹	F _{sw} ² (max) (Khz)	OTP ³	OVP ⁴	OCP ⁵	Package
SCM1702A	Flyback	≤5	Current mode PSR	650	Built-in	110	Built-in	Built-in	Built-in	SOP-7
SCM1703A	Flyback	≤5	Current mode SSR	650	Built-in	110	Built-in	Built-in	Built-in	SOP-7
SCM1710A	Flyback	5-60	Current mode SSR	–	–	110	External	Built-in	Built-in	SOP-8

High-voltage Start-up IC

High-voltage start-up ICs SCM9601 and SCM9602 are used in AC/DC power supply.

To meet the requirement of photovoltaic industry, SCM9602A and SCM9601A can be used in series so that its input voltage range extends to 40-5000VDC.

Typical applications: photovoltaic industry, wind power, high voltage H-bridge



Part No.	V _{IN} (V)	V _{DD} (max) (V)	I _{VDD} (min) (mA)	I _{VDD} (max) (mA)	T _j ⁶ (°C)	Package
SCM9601A	40-700	20	0.8	4	-40~125	SOT-23
SCM9602A	40-700	20	1	4	-40~125	SOT-23

Note:

Hv¹ : Internal high voltage start-up switch

OTP³: Over temperature protection

OCP⁵: Over current protection

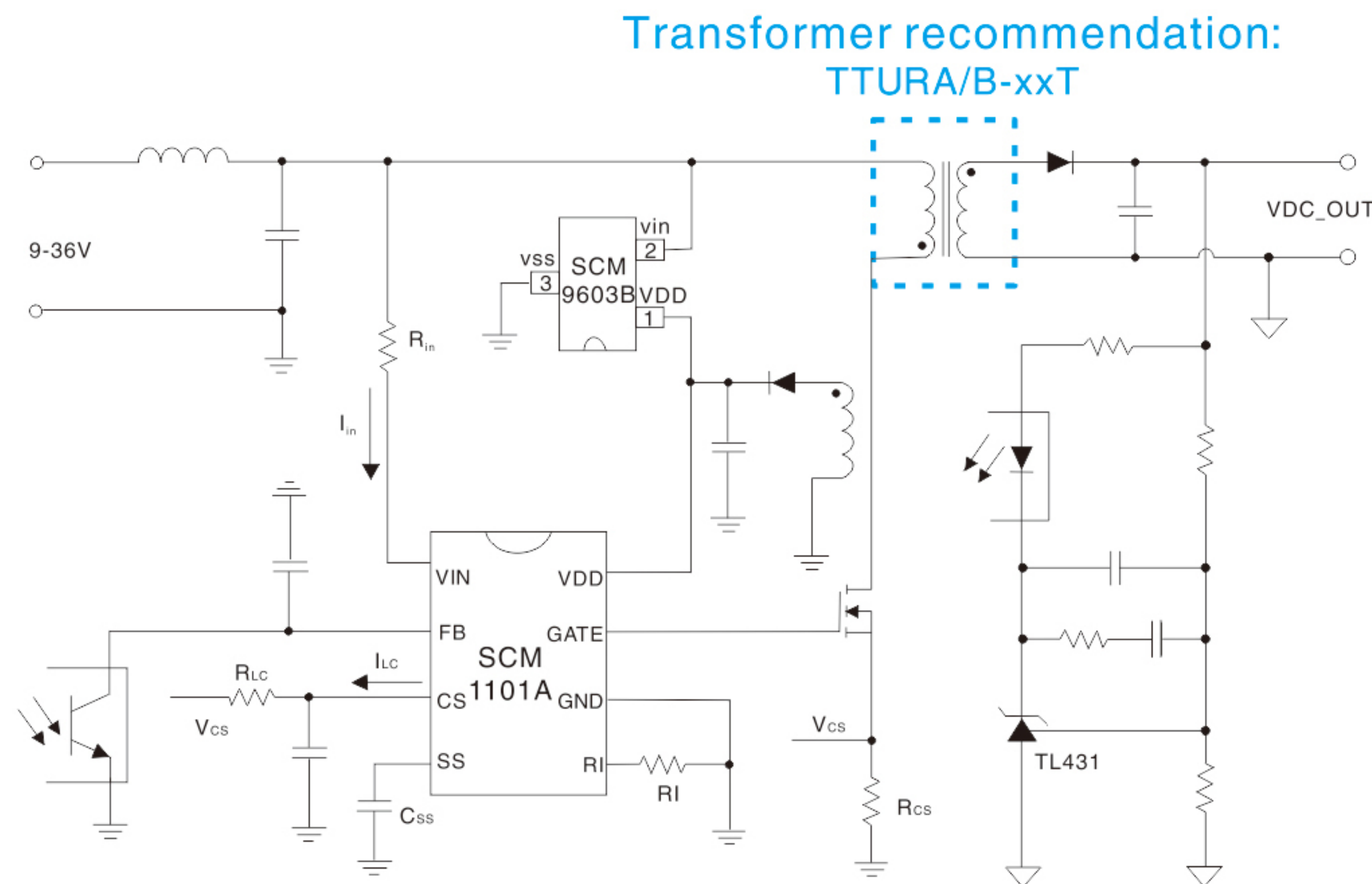
 F_{sw}^2 : Operating switching frequency

OVP⁴: Over voltage protection

T_j^6 : Operating junction temperature range

DC/DC Control IC

Power range is from 0.1W to 40W.
It reduces the cost of the power supply system.

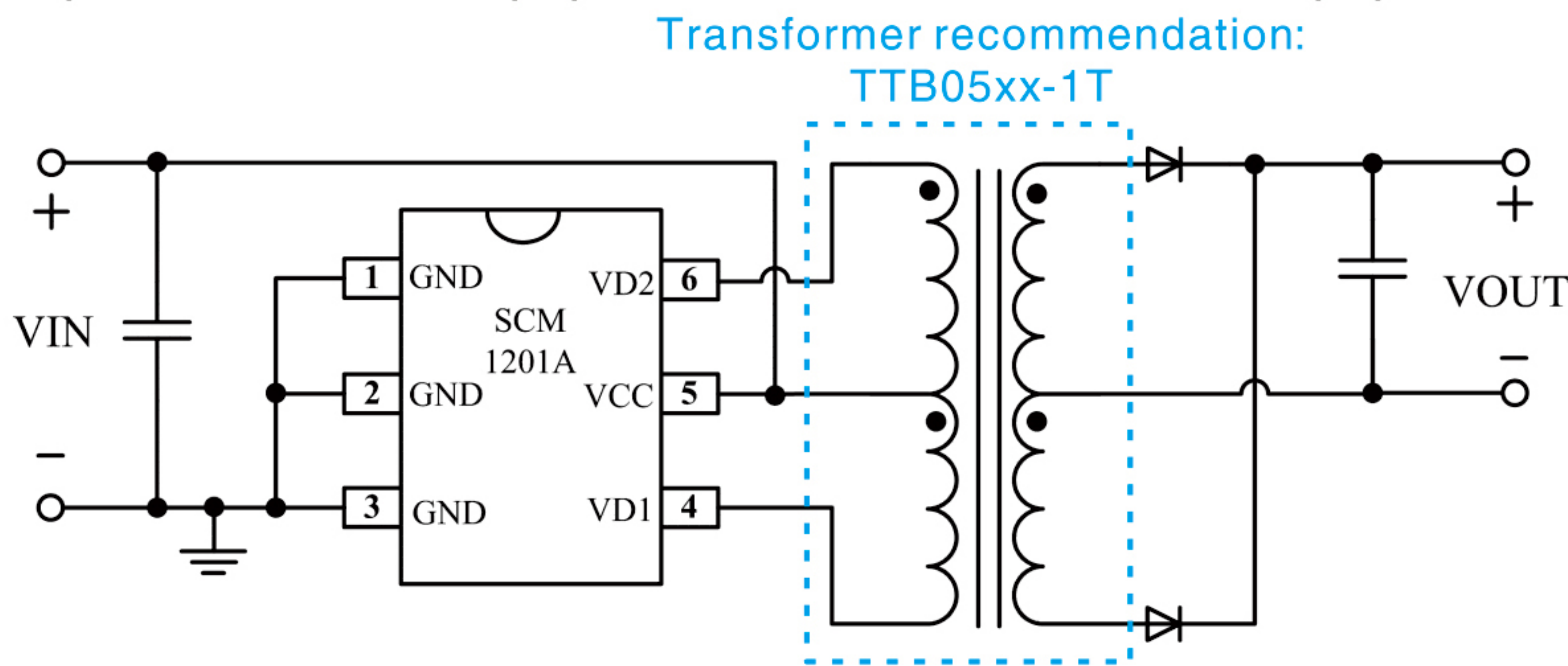


DC/DC Power Supply Control IC

Typical applications: Instrument power supply, communication isolated converter.

Part No.	Topology	Power (W)	Control Mode	F_{sw}^1 (max) (Khz)	VDD (V)	UVLO ²	OCP ³	OLP ⁴	Package
SCM1101A	Flyback, forward	5-40	Current mode	480	7.5-14	Built-in	Built-in	Built-in	MSOP-8

Typical applications: Isolated power supply, industrial process control system, isolated communication power, medical equipment, telecommunication equipment.



Part No.	Topology	Power (W)	VIN (min) (V)	VIN (max) (V)	OTP ⁵	SCP ⁶	Package
SCM1201A	Push-pull	≤1	4.5	6	Built-in	Built-in	SOT-23-6
SCM1212A	Push-pull	≤1	4.5	6	Built-in	Built-in	SOT-23-5

Low-voltage start-up IC

Low-voltage start-up IC SCM9603 is used in DC/DC power supply.

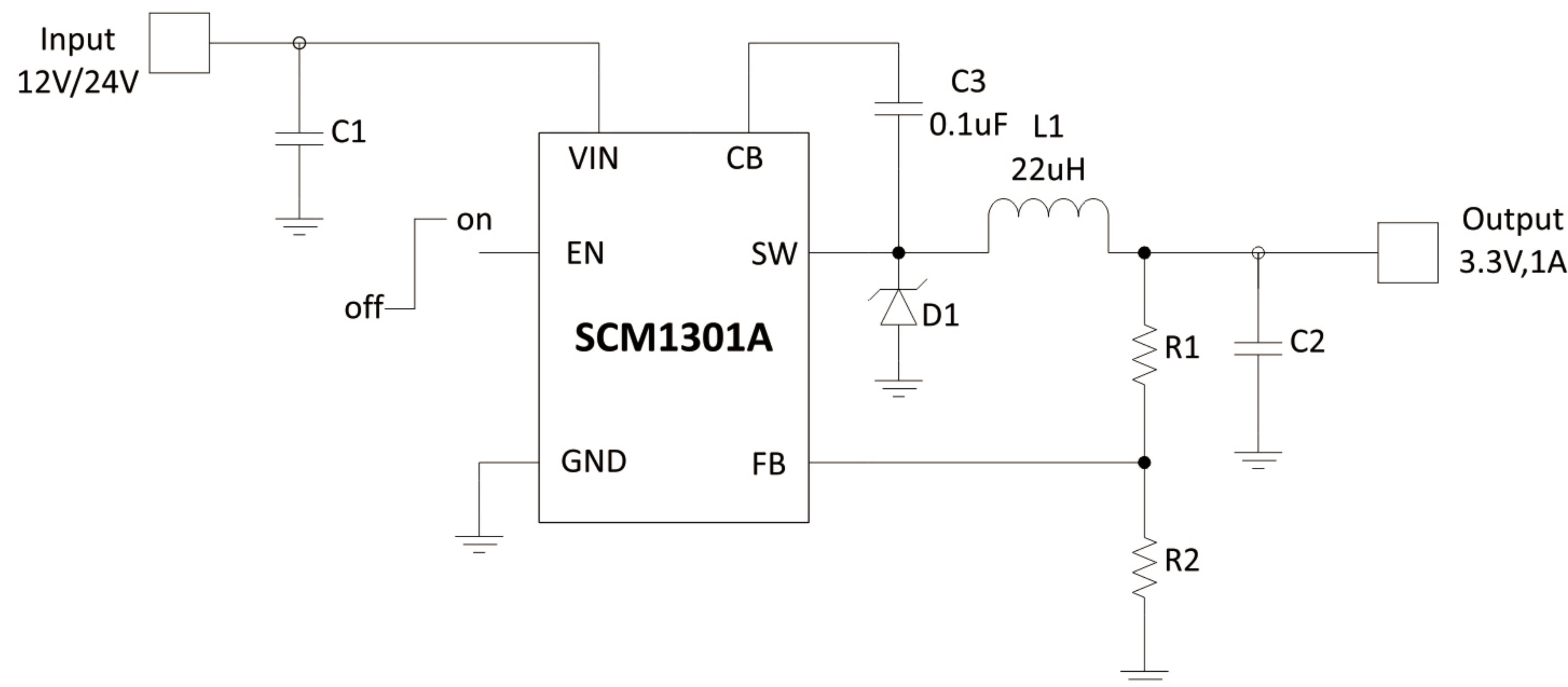
Part No.	VIN (V)	VDD (max) (V)	I _{VDD} (min) (mA)	I _{VDD} (max) (mA)	T _j ⁷ (°C)	Package
SCM9603B	4-85	10	2.3	20	-40~125	SOT-23

Note:
F_{sw}¹ : Operating switching frequency
OLP⁴ : Open-loop protection
T_j⁷ : Operating junction temperature range
UVLO²: Under voltage lockout
OTP⁵ : Over temperature protection
OCP³: Over current protection
SCP⁶: Short circuit protection

Non-isolated Buck Control IC

Buck converter control IC, 4.5-40V wide input voltage, Internal integrated soft start and compensation circuit, with over-current and over-temperature protection.

Typical applications: Smart meters, current collectors, hubs, industrial distributed power supplies.



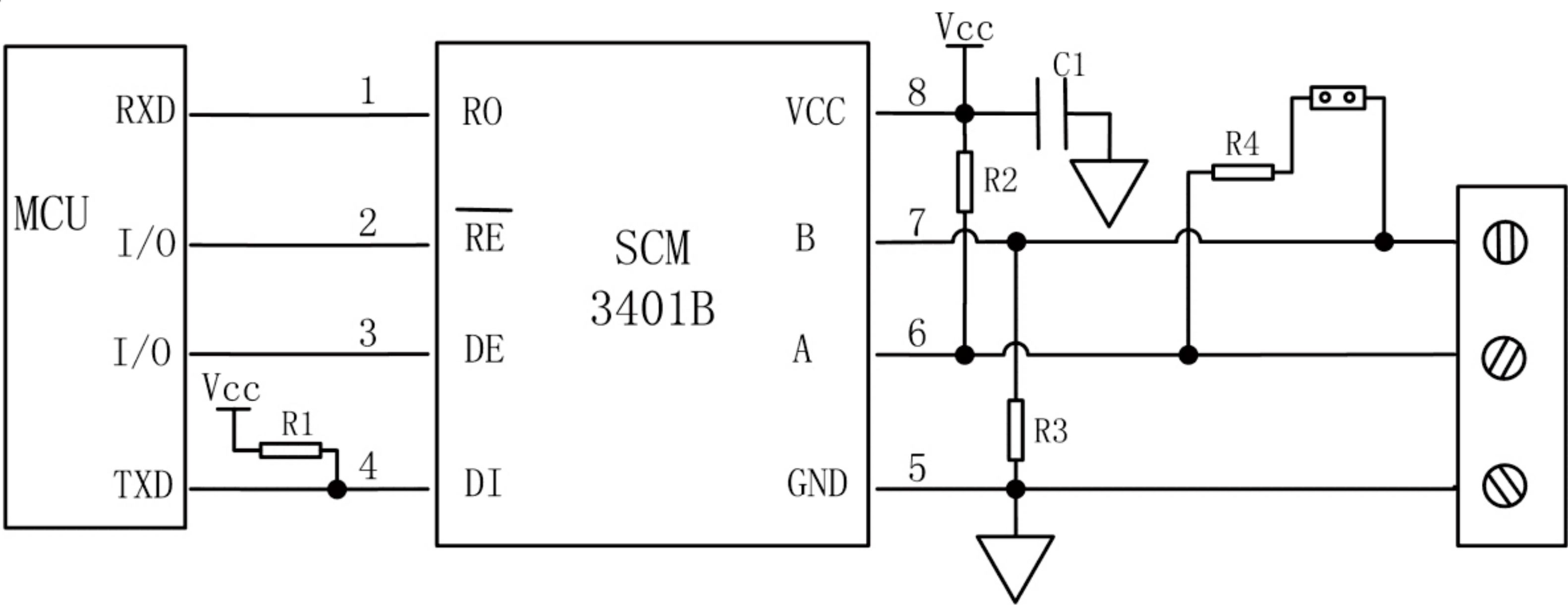
Part No.	VCC (V)	I _{out} (max) (A)	F _{sw} ¹ (kHz)	T _j ² (°C)	Synchronous Rectification	Package
SCM1301A	4.5-40	1	700	-40 to +150	-	TSOT23-6L
SCM1316A	7-38	6	130-300	-40 to +150	✓	QFN5*5

Interface IC

Meet customer’s requirements of high reliability, compact size and low cost.

RS-485 Transceiver

Typical applications: Industrial automation, building automation, smart meter, long-distance signal exchange.

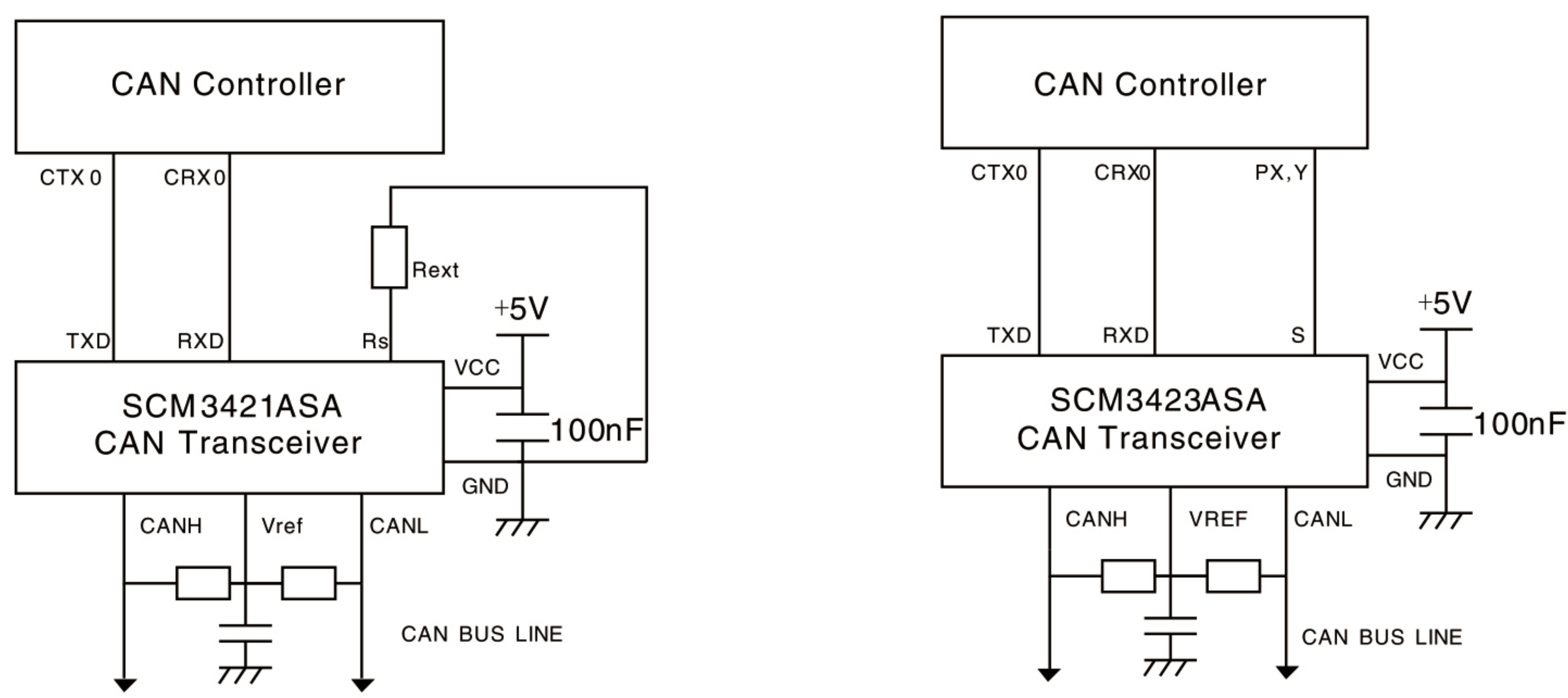


Part No.	VCC (V)	Duplex Mode	No. of TX	No. of TR	Signaling Rate (Max) (Mbps)	No. of Nodes	Package
SCM3401A	4.5-5.5	Half	1	1	1	256	SOP-8
SCM3401B	4.5-5.5	Half	1	1	1	256	DFN(3X3)
SCM3402A	3.0-3.6	Half	1	1	12	256	SOP-8

Note:
F_{sw}¹ : Operating switching frequency T_j² : Operating junction temperature range

CAN Transceiver

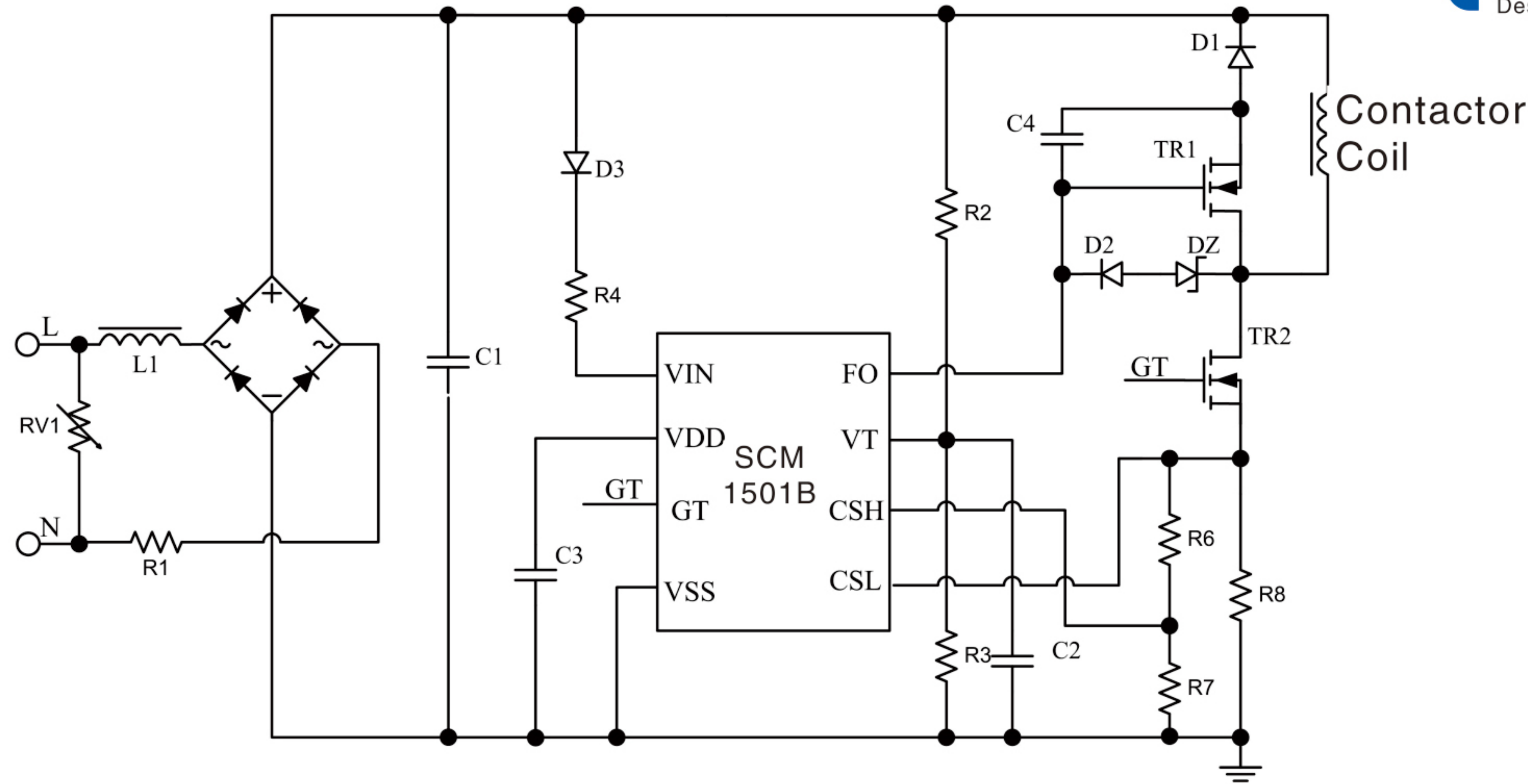
Typical applications: Trucks, buses, cars, industrial control.



Part No.	VCC (V)	No. of Channel	V _{CAN} (V)	Signaling Rate (Mbps)	Dominant Delay Function	Control Mode	Package
SCM3421A	4.5-5.5	1	± 36	1	–	High speed/ Slope control/Stanby	SOP-8
SCM3422A	4.5-5.5	1	± 40	1	✓	High speed/Standby	SOP-8
SCM3423A	4.5-5.5	1	± 40	1	✓	High speed/Silence	SOP-8

Contactor Power Saving Control IC

Typical applications: Various contactor power saving transformation, wide voltage AC/DC universal contactor control.



Part No.	VIN (V)	F _{sw} ¹ (max) (khz)	Quick Shutdown Function	V _{ACT_AC} ²	V _{OFF_AC} ³	Package
SCM1501B	16.5-500	23.5	✓	2.4V	1.6V	SOP-8

Note:
F_{sw}¹: Operating switching frequency
V_{ACT_AC}²: VT pin contactor operating voltage
V_{OFF_AC}³: VT pin contactor turn-off voltage



mornsun website

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