

芯洲科技(北京)股份有限公司
Silicon Content Technology

工业产品选型

Industrial Application Solutions

2024版 ■

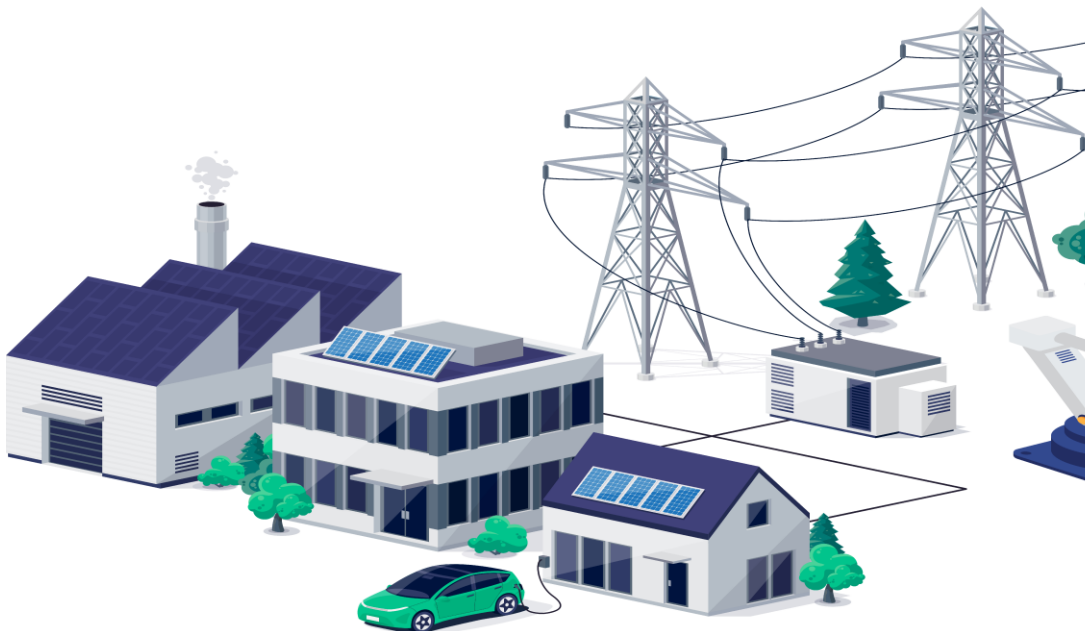


About SCT

Silicon Content Technology (SCT) is a fabless company focusing on the research and sales of high-performance power management integrated circuit products. SCT is a national level specialized and innovative small giant enterprise and a national key integrated circuit design enterprise in China.

Practicing a culture of customer-centric innovation and quality first. SCT has been continuously building a leading position with the core technology of power conversion and power control, especially for medium and high line voltage power system. SCT provides commercially competitive power management IC Catalog Products and Application Specific Standard Products ASSP for customers' applications.

SCT helps customers solve challenges in application system such as heat dissipation, miniaturization, safety, and ease of use by improving power density, conversion efficiency, and EMI friendliness of its products to ensure efficiency, energy-saving, and safe operation of electronics and electrical equipment.



PRODUCT LINE

MPC

Monolithic Power Converter

Buck Converter
Boost Converter
Buck-Boost Converter

CPC

Catalog Power Control

IGBT/MOSFET Gate Driver
PWM Controller
Motor Drive Controller

SPI

System Power Integration

Wireless Charging TX PMIC
Camera/ADAS PMIC
Automotive Radar PMIC

LR

Linear Low-dropout Regulator

High Voltage LDO
Low Voltage LDO
High Performance LDO

PI

Power Interface

Ideal Diode Controller
High-Side Power Switch

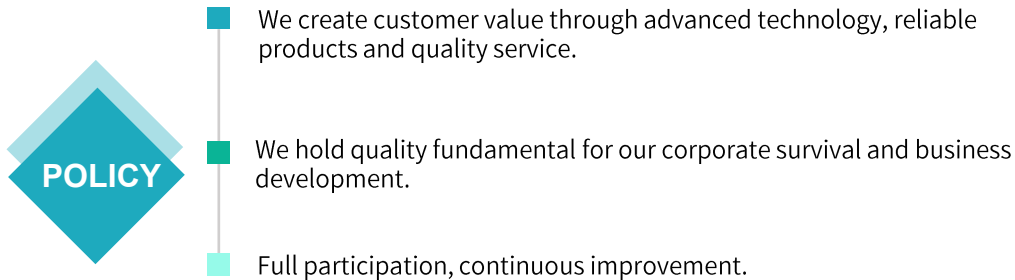
CPC

Catalog Power Control

Power Module



QUALITY SYSTEM



Framework



Production Part Approval Procedure

8D report. Fool proofing. Parallel implementation. Continuous improvement

Manufacturer strict selection

Zero Defection in production control implementation
Production data monitor and analysis
Production system inspection
Problem solving, measure tracking, continuous improvement

New process, package, and materials comprehensive evaluation

Research and development robustness and margin control
Reliability strict and sufficient verification
Test wide coverage and tight threshold
New product NPI control and safety ramp-up

Proactively and quickly solving customer problems

Exploring root cause of the problem and implement improvement plan
Closed loop management on customer audit, implementation and improvement
Standardization of processes and documents
Customer support and value-added services



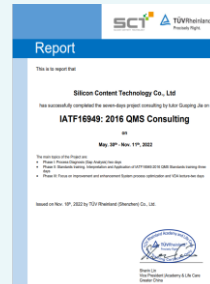
Manufacturing Partner Certifications

Take JCET As Example

ISO9001

IATF16949

ISO 26262 ASILD



01 SCT Profile

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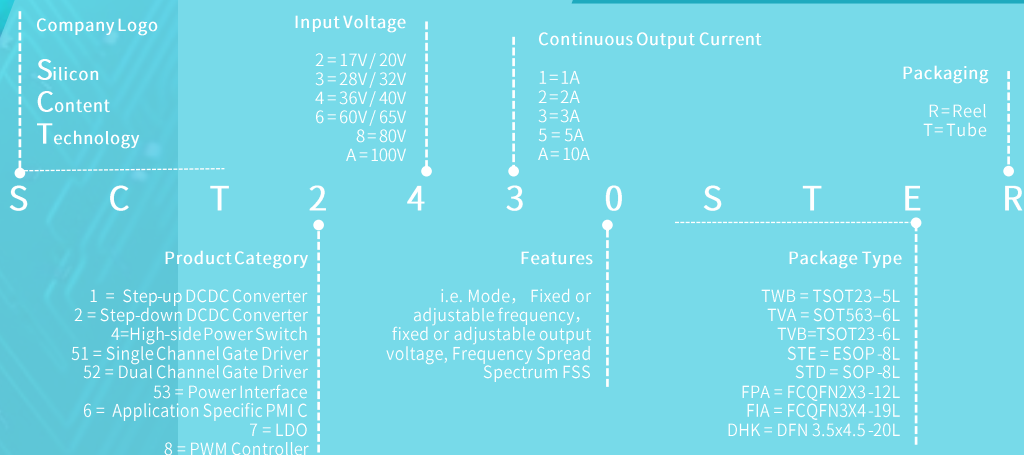
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Naming Convention



< 30V BUCK

PN	Vin MIN (V)	Vin MAX (V)	RDSOn_High (mΩ)	RDSOn_Low (mΩ)	Feedback Voltage (V)	Current Limit (A)	Power Saving Mode	Quiescent Current (uA)	Switching Frequency (Hz)	Package
New! SCT2120	2.8	5.5	80	50	0.6	2	PFM	38	1.5M 2.2M	QFN-8L SOT23-8L
New! SCT2130	2.8	6	30	25	0.6	3	FPWM	1000	2.2M	QFN-8L
SCT2220	4.2	17	90	60	0.8	2	PSM	135	750K	TSOT23-6L SOT563-6L
Hot! SCT2230	4.2	17	75	45	0.8	3	PSM	155	750K	TSOT23-6L SOT563-6L
Hot! SCT2230A	4.2	17	70	42	0.8	3	PSM	150	750K	SOT563-6L
SCT2230B/D	4.2	17	50	24	0.809	3.5	PSM	220	800K	SOT563-6
Hot! SCT2230C	4.2	17	90	54	0.8	3	PSM	135	750K	TSOT23-6L
SCT2231	4.2	18	70	42	0.8	3	FPWM	275	750K	TSOT23-6L SOT563-6L
Hot! SCT2250	4.5	18	42	17	0.6	5	PFM USM FPWM	130	400K 800K 1.2M	QFN-12L 2x3mm
Hot! SCT2260A	4.5	18	25	12	0.6	6	PFM USM FPWM	130	400K 800K 1.2M	QFN-12L 2x3mm
New! SCT2260C	4.5	18	42	17	0.6	6	PFM USM FPWM	130	400K 800K 1.2M	QFN-12L 2x3mm
Hot! SCT2280	4.5	18	25	12	0.6	8	PFM USM FPWM	130	400K 800K 1.2M	QFN-12L 2x3mm
Hot! SCT2330C	3.8	28	80	42	0.8	3	PSM	25	400K	TSOT23-6L
SCT9336	3.8	28	85	58	0.8	5	PSM	20	400K	ESOP-8L
Hot! SCT2360	4	28	36	16	0.6	6	PFM USM FPWM	130	400K 800K 1.2M	QFN-12L 3x3mm
SCT2361	4	28	36	16	0.6	6	PFM USM FPWM	130	400K	QFN-12L 3x3mm
Hot! SCT9330	3.8	30	85	58	0.8	3	PSM	20	400K	ESOP-8L
SCT9338	3.8	30	85	58	0.8	3	PSM	20	400K	ESOP-8L
Hot! SCT9339	3.8	30	85	58	0.8	3	FPWM	250	400K	ESOP-8L
SCT2320	3.8	32	130	70	0.8	2	PSM	20	500K	TSOT23-6L
SCT2321	3.8	32	130	70	0.8	2	FPWM	250	500K	TSOT23-6L
SCT2322	3.8	32	130	70	0.8	2	PSM	250	500K	TSOT23-6L
SCT2323	3.8	32	130	70	3.3	2	PSM	20	1.1M	TSOT23-6L
SCT2325	3.8	32	130	70	5	2	PSM	20	1.1M	TSOT23-6L
SCT2330	3.8	32	80	42	0.8	3	PSM	20	400K	TSOT23-6L
SCT2331	3.8	32	80	42	0.8	3	FPWM	20	400K	TSOT23-6L
SCT2332	3.8	32	80	42	0.8	3	PSM	20	400K	TSOT23-6L
SCT9320	3.8	32	130	70	0.8	2	PSM	20	500K	SOP-8L
SCT9325	3.8	32	130	70	5	2	PSM	20	500K	SOP-8L
SCT9331	3.8	32	74	40	0.8	3.5	PSM	22	450K	FCQFN2X3-9L

40-60V BUCK

PN	Vin MIN (V)	Vin MAX (V)	RDSON_High (mΩ)	RDSON_Low (mΩ)	Feedback Voltage (V)	Current Limit (A)	Power Saving Mode	Quiescent Current (uA)	Switching Frequency (Hz)	Package
Hot SCT2400	4.5	40	600	300	0.81	0.6	PSM	90	2M	TSOT23-6L
Hot SCT2401	4.5	40	600	300	0.81	0.6	PSM	90	1.2M	TSOT23-6L
SCT2401F	4.5	40	600	300	0.8	0.6	FPWM	140	1.2M	TSOT23-6L
SCT2420	3.8	40	160	80	0.8	2	PSM	25	100K-2.2M	ESOP-8L
SCT2421	3.8	40	160	80	0.8	2	PSM	25	570K	ESOP-8L
SCT2422	3.8	40	160	80	0.8	2	PSM	25	300K-2.2M	ESOP-8L
SCT9430	3.8	36	80	42	0.8	3	PSM	250	400K	TSOT23-6L
Hot SCT9431	3.8	36	74	40	0.8	3	PSM	22	400K	FCQFN2X3-9L
SCT9433	3.8	36	74	40	0.8	3	PSM	22	800K	FCQFN2X3-9L
Hot SCT2434C	3.6	36	60	36	1	3	PSM	25	2.1M	QFN-12L
Hot SCT2430	3.8	40	80	50	0.8	3.5	PSM	25	100K-2.2M	ESOP-8L
Hot SCT2432	3.8	40	80	50	0.8	3.5	PSM	25	300K-2.2M	ESOP-8L
SCT2433	3.8	40	80	50	0.8	3.5	PSM	25	570K	ESOP-8L
SCT2433D	3.8	40	80	50	0.8	3.5	FPWM	290	570K	ESOP-8L
Hot SCT2434A	3.6	36	60	36	1	3.5	PSM	25	400K	QFN-12L
Hot SCT2450	3.8	36	45	20	0.8	5	PSM	25	100K-2.2M	ESOP-8L
SCT2451	3.8	36	45	20	0.8	5	PSM	25	570K	ESOP-8L
SCT2452	3.8	36	45	20	0.8	5	PSM	25	100K-2.2M	ESOP-8L
SCT2459	3.8	36	45	20	0.8	5	PSM	25	100K-2.2M	ESOP-8L
Hot SCT2450C	4.5	42	80	Async	0.8	5	PSM	175	100K-2.2M	ESOP-8L
SCT2452C	4.5	42	80	Async	0.8	5	PSM	100	100K-2.2M	ESOP-8L
SCT2460	3.8	36	36	13	0.8	6	PSM	25	100K-2.2M	QFN-10L
SCT2462	3.5	36	30	18	1	6	PSM	13	200K-1.8M	QFN-14L
Hot SCT2464	3.5	36	30	18	1	6	PSM	13	200K-1.8M	QFN-14L
SCT2600	4.5	60	500	Async	0.765	0.6	PSM	80	2.1M	TSOT23-6L
Hot SCT2601	4.5	60	500	Async	0.765	0.6	PSM	80	700K	TSOT23-6L
Hot SCT2610	3.8	60	220	Async	0.8	1.5	PSM	190	100K-1.2M	EMSOP-10L
SCT2612	4.2	60	220	Async	0.8	1	PSM	100	100K-1.2M	ESOP-8L
Hot SCT2613	4.5	60	500	Async	0.765	1	PSM	80	480K	TSOT23-6L
Hot SCT2620	3.8	60	220	Async	0.8	2.5	PSM	190	100K-1.2M	EMSOP-10L
SCT2622	4.2	60	220	Async	0.8	2	PSM	100	100K-1.2M	ESOP-8L
Hot SCT2630	4.2	60	220	Async	0.8	3	PSM	190	100K-1.2M	ESOP-8L
SCT2630A	4.5	60	80	Async	0.8	3.5	PSM	175	100K-1.2M	ESOP-8L
Hot SCT2632	4.2	60	220	Async	0.8	3	PSM	100	100K-1.2M	ESOP-8L
SCT2632A	4.5	60	80	Async	0.8	3.5	PSM	100	100K-1.2M	ESOP-8L
SCT2633	5.5	60	220	Async	1.221	3	PSM	100	500K	ESOP-8L
Hot SCT2650	4.5	60	80	Async	0.8	5	PSM	175	100K-1.2M	ESOP-8L
SCT2651	4.5	60	80	Async	0.8	5	PSM	175	100K-800K	DFN-10L

100V BUCK

PN	Vin MIN (V)	Vin MAX (V)	RDSON_High (mΩ)	RDSON_Low (mΩ)	Feedback Voltage (V)	Current Limit (A)	Power Saving Mode	Quiescent current (uA)	Switching Frequency (Hz)	Package
New! SCT2A00	5.5	100	975	Async	1.2	0.6	PFM	49	270K	SOT23-6
SCT2A10A	4.5	100	750	500	0.8	0.6	PFM	100	300K-800K	ESOP-8L
SCT2A11	4.5	100	750	500	0.8	0.6	FPWM	130	300K-800K	ESOP-8L
New! SCT2A12	5.5	100	975	Async	1.2	1	PFM	49	390K	ESOP-8L
New! SCT2A15	5.5	100	975	Async	1.2	1	PFM	49	270K	SOT23-6
SCT2A21	4.5	100	530	220	1.2	1	PFM	150	100K-600K	ESOP-8L
New! SCT2A22	4.5	100	530	220	1.2	1	FPWM	150	100K-600K	ESOP-8L
New! SCT2A23	4.5	100	530	220	1.2	1.2	PFM/USM /FPWM	150	300K	ESOP-8L
New! SCT2A25	5.5	100	500	Async	1.2	2	PFM	135	300K	ESOP-8L
SCT2A26	5.5	100	500	Async	1.2	2	PFM	140	300K	ESOP-8L
New! SCT2A27	5.5	100	500	Async	1.2	2	PFM	140	300K	ESOP-8L

LDO

Name	Vin MIN (V)	Vin MAX (V)	Quiescent Current (uA)	Output Voltage (V)	Output Current (mA)	EN	PGOOD	Package
New! SCT71005Fxx-TWDR	1.6	5.5	10	1.2/1.8/3.3	500	✓	✓	SOT23-5
New! SCT71005A01-TWDR	1.6	5.5	10	ADJ	500	✓	-	SOT23-5
New! SCT71005Fxx-DVAR	1.6	5.5	10	1.2/1.8/3.3	500	✓	✓	TDFN2x2-6
New! SCT71005A02-DTDR	1.6	5.5	10	ADJ	500	✓	✓	TDFN2x3-8
SCT71005Fxx-DXAR	1.6	5.5	10	1.2/1.8/3.3	500	✓	-	DFN1x1-4
New! SCT71010A00-DTBR	1.6	5.5	10	ADJ	1000	✓	✓	TDFN3x3-8
New! SCT71401Fxx-TWDR	3	40	2.5	5/3.3	150	-	-	SOT23-5
SCT71401Fxx-TYDR	3	40	2.5	5/3.3	150	-	-	SOT23-3
SCT71401Fxx-TYFR	3	40	2.5	5/3.3	150	-	-	SOT89-3
New! SCT71402A00-DTBR	3	40	2.6	ADJ	200	✓	-	TDFN3x3-8
SCT71403Fxx-DVAR	3	40	2.4	5/3.3	300	✓	-	TDFN-6
SCT71403FxxA-DVAR	3	40	2.4	5/3.3	300	✓	✓	TDFN-6
New! SCT71403Fxx-DTBR	3	40	2.4	5/3.3	300	✓	✓	TDFN-8
SCT71403Fxx-MTER	3	40	2.4	5/3.3	300	✓	-	MSOP-8
SCT71403Fxx-TWDR	3	40	2.4	5/3.3	300	-	-	SOT23-5
SCT71403Fxx-TXER	3	40	2.4	5/3.3	300	-	-	SOT223-4
SCT71203Fxx-TWDR	3	28	2.4	5/3.3	300	✓	✓	SOT23-5
New! SCT71405A01-DTBR	3	40	3	ADJ	500	✓	✓	TDFN3x3-8
New! SCT71405A00-STER	3	40	3	ADJ	500	✓	✓	ESOP-8
New! SCT71405FxxB-STER	3	40	4.2	5/3.3	500	✓	✓	ESOP-8

BOOST

PN	Vin MIN (V)	Vin MAX (V)	Vout MAX (V)	Current Limit (A)	Quiescent Current (uA)	Switching Frequency (Hz)	Power Saving Mode	Load Disconnection Control	Package
New! SCT1270	2.7	12	12.6	9.5	150	200K-2.2M	PFM	-	DFN-11L
SCT1271	2.7	12	12.6	9.5	150	200K-2.2M	PFM	-	DFN-11L
New! SCT1270F	2.7	12	12.6	9.5	150	200K-2.2M	FPWM	-	DFN-11L
New! SCT12A0	2.7	14	14.6	12	120	200K-2.2M	PFM/FPWM	-	DFN-20L
SCT12A1	2.7	14	14.6	12	120	200K-2.2M	PFM/FPWM	✓	DFN-20L
New! SCT12A2	2.7	20	21	15	420	200K-1M	PFM	✓	DFN-20L
SCT12A3	2.7	20	21	15	480	200K-1M	PFM	✓	DFN-20L
New! SCT12A5/6	2.7	20	21	21	150	600K	PFM/USM FPWM	-	DFN-13L

CONTROLLER

PN	Topologies	Vin MIN (V)	Vin MAX (V)	Current Limit (A)	Overcurrent Protection	FSS	EXTVCC	EN	PGOOD	Package
New! SCT82A30	Buck	5.5	100	1400	Hiccup	✓	✓	✓	✓	QFN-20
SCT82A31	Buck	5.5	100	1400	Constant Current	✓	✓	✓	✓	QFN-20
New! SCT82A32	Buck	5.5	100	1400	Hiccup	-	✓	✓	✓	QFN-20
New! SCT82630	Buck	5.5	65	1400	Hiccup	✓	✓	✓	✓	QFN-20
New! SCT81620	Boost, Flyback, Sepic	3.2	50	450	Hiccup	✓	-	-	-	MSOP-8
New! SCT81621	Boost, Flyback, Sepic	3.1	50	415	Hiccup	✓	✓	✓	-	MSOP-10
SCT81624	Boost, Flyback, Sepic	3.1	50	415	Constant Current	-	✓	✓	-	MSOP-10

GATE DRIVER

PN	Channel	VDD MIN (V)	VDD MAX (V)	Vin MIN (V)	Vin MAX (V)	PULL Current (A)	SOURCE Current (A)	IQ @VDD=12V (uA)	IN-OUT Phase	Package
New! SCT51240	LS/Single	4.5	24	-5	24	4	4	38	In-phase/ Invert	TSOT23-5L
New! SCT52240	LS/Dual	4.5	24	-5	24	4	4	55	In-phase	SOP-8L MSOP-8L
SCT52241	LS/Dual	4.5	24	-5	24	4	4	55	In-phase/ Invert	SOP-8L
SCT52242	LS/Dual	4.5	24	-5	24	4	4	55	Invert	SOP-8L
SCT52243	LS/Dual	4.5	24	-5	24	4	4	55	Invert/ No EN pin	SOP-8L
New! SCT52250	LS/Dual	4.5	24	-5	26	5.2	6	30	In-phase	SOP-8L MSOP-8L

PN	Channel	VDD MIN (V)	VDD MAX (V)	Boot ABS (V)	Vin MIN (V)	Vin MAX (V)	PULL Current (A)	SOURCE Current (A)	IQ @VDD=12V (uA)	IN-OUT Phase	Package
New! SCT52A40	Half Bridge	8	26	120	-10	26	4	4	252	In-phase	SOP-8L, DFN3x3-9L, DFN3x3-10L, DFN4x4-8L,

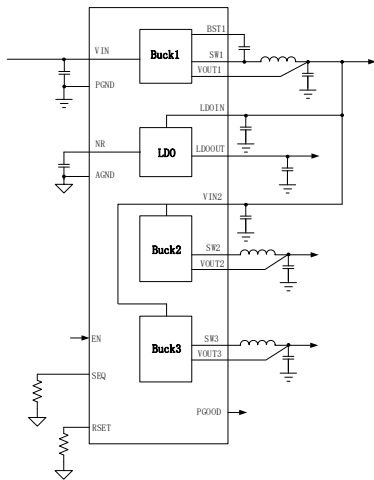
Power Interface

PN	Function	Vin MIN (V)	Vin MAX (V)	ABS MAX Vin (V)	Shutdown Current (uA)	Quiescent Current (uA)	Package
New! SCT53600	Ideal Diode Controller	4.7	60	65	0.3	60	SOT23-6
New! SCT44160	4-Channels High Side Power Switch	4	40	45	3	-	HTSSOP-28

Wireless Charging TX PMIC

PN	PVIN	VIN	Power Transfer (W)	Rdson (mohm)	Buck	LDO	Current Sensing Accuracy	Voltage Reference	Function	Package
SCT63042	4V-6V	4V-6V	7.5	7.5	-	4.8V/800mA	±2%	-	Integrated Demodulation OP AMP	QFN-15L
New! SCT63140	1V-15V	4.2V-20V	15	16	-	5V/100mA, 3.3V/100mA	±2%	-	-	QFN-15L
SCT63141	1V-15V	4.2V-20V	15	16	-	5V/100mA	-	-	Integrated OSC, Demodulation OP AMP	QFN-15L
New! SCT63142	1V-20V	4.2V-20V	15	16	-	5V/100mA, 3.3V/100mA	±2%	-	Integrated Demodulation OP AMP	QFN-19L
New! SCT63240	1V-17V	4.2V-20V	20	13	20V,5V/1A	3.3V/200mA	±2%	2.5V	-	QFN-19L
SCT63240A	1V-20V	4.2V-20V	20	13	20V,5V/1A	3.3V/200mA	±2%	2.5V	-	QFN-19L
SCT63241	1V-17V	4.2V-20V	20	13	-	3.3V/200mA	±2%	2.5V	-	QFN-19L
SCT63242	1V-20V	4.2V-20V	20	16	-	5V/100mA, 3.3V/100mA	±2%	-	Integrated Demodulation OP AMP	QFN-15L
New! SCT63340	1V-26V	4.2V-30V	30	13	30V,5V/1A	3.3V/200mA	±2%	-	Integrated Demodulation OP AMP	QFN-21L

Camera PMIC



SCT61240

Quad Channel Power Management IC for Ultra Compact Camera Module

SCT61240 is a highly integrated power management IC optimized for automotive camera system. It integrates three high efficiency synchronous BUCK converters (HVBuck1, LVBuck2, LVBuck3), and a high-PSRR low noise LDO with OV/UV monitoring on all outputs.

- HVBuck1: Vin=4.0V-20V (Power Over Coax) , Iout1=1.2A, Vout1=LDOOUT+300mV/500mV.
- LVBuck2: Vin=2.7V-5V, Iout2=0.6A, Vout2=1.8V(Fixed)
- LVBuck3: Vin=2.7V-5V, Iout3=1.2A, Vout3=1.1V/1.2V/1.3V/1.5V (Set through RSET PIN for different sensors)
- FCCM, Peak Current Mode Control
- 2.2MHz Switching Frequency
- EMI Friendly, Frequency Spread Spectrum FSS, Buck2 and Buck3 operation at 180° out-of-phase
- LDO: Vin=2.5V-5.5V, Iout=300mA, High PSRR, 40dB@1MHz, Vout=2.7V/2.8V/2.9V/3.3V (Set through RSET PIN for different sensors)
- Program power sequence of 6 sets through SEQ pin
- High voltage high precision EN pin
- Power good indicator with PGOOD pin
- QFN 2.5mmx3.5mm package reduces external components count and PCB space.

Technical advantages

High Integration

- Small QFN
- Miniature
- Reduce PCB size

High Efficiency

- Optimize LDO power dissipation
- Low MOS Rdson and BUCK efficiency

EMI Friendly

- FSS
- Out of phase operation to reduce ripple

High PSRR Low Noise LDO

- Optimize layout to reduce crosstalk
- NR Cap. reduces noise
- 2.2MHz Freq
- High PSRR

Robust Protection

- Vin, Vout OVP
- Vin, Vout UVP
- OTP

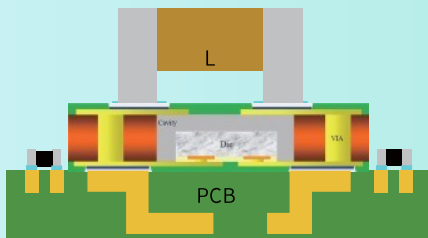
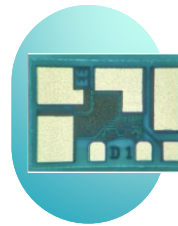
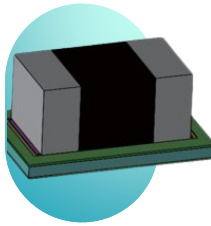
Power Module

SCT2233M

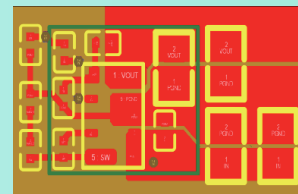
ECLGA 2.5*1.7mm

Embedded Chip Package
ECP Power Module

4.2V-8.5V_{in}, 2A_{out}



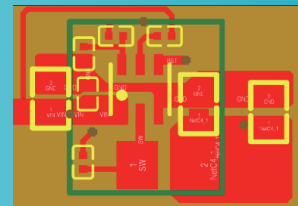
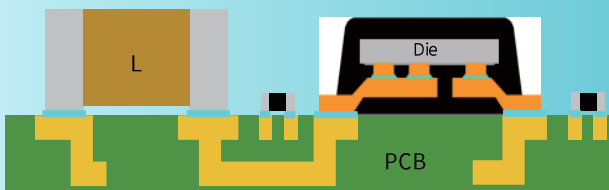
SCT ECP Power Module Solution



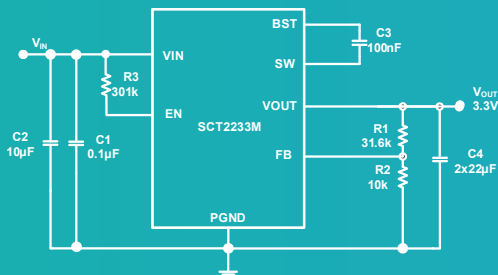
SCT2233M PPD Module™
13mm² solution size → 381W/cm³

VS

Minimum Components Discrete SOT563 Solution



SCT2230B SOT563
20mm² solution size → 269W/cm³

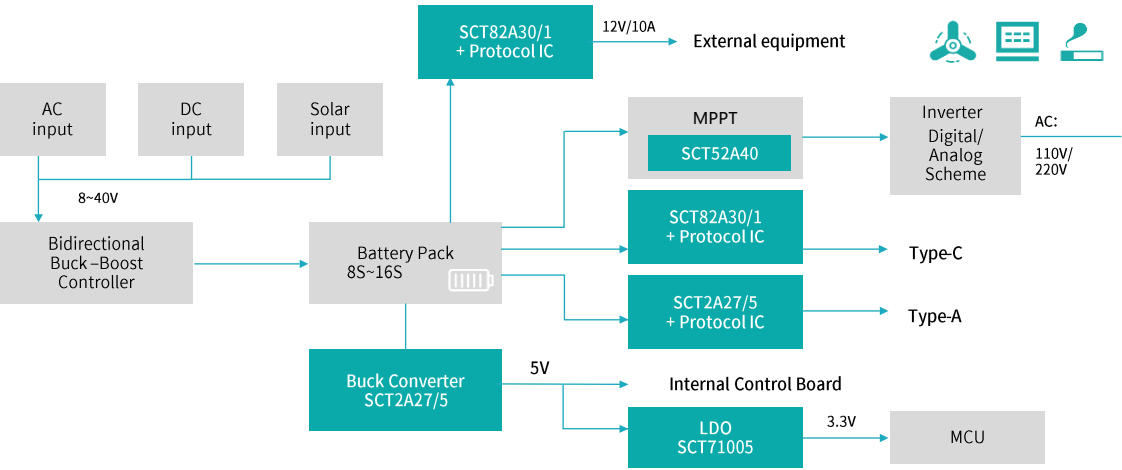


Technical Advantages

1. Ultra small size packaging solution with high power density
2. Inductor exposed solution. Lightweight and excellent heat dissipation performance
3. Not integrating capacitors for customers flexibly choosing peripheral capacitors and making PCB layouts
4. High reliability and easy-to-use. Reducing verification process of inductor selection and the research and development cycle

Battery

Outdoor Energy Storage



PN	Channels	VDD MIN (V)	VDD MAX (V)	Boot ABS (V)	Vin MIN (V)	Vin MAX (V)	PULL Current (A)	SOURCE Current (A)	IQ @VDD=12V (uA)	IN-OUT Phase	Package
SCT52A40	Half Bridge	8	26	120	-10	26	4	4	252	In Phase	SOP-8L,DFN3x3-9L, DFN3x3-10L, DFN4x4-8L,

PN	Topologies	Vin MIN (V)	Vin MAX (V)	Quiescent Current (uA)	Overcurrent Protection	EXTVCC	EN	PGOOD	Package
SCT82A30	Buck	5.5	100	1400	Hiccup	√	√	√	QFN-20
SCT82A31	Buck	5.5	100	1400	Constant Current	√	√	√	QFN-20

PN	Vin MIN (V)	Vin MAX (V)	RDSON_High(mΩ)	RDSON_Low(mΩ)	Feedback Voltage(V)	Current Limit (A)	Quiescent Current (uA)	Switching Frequency (Hz)	Package
SCT2A27	5.5	100	500	Non-sync	1.2	2	140	300K	ESOP-8L
SCT2A25	5.5	100	500	Non-sync	1.2	2	135	300K	ESOP-8L

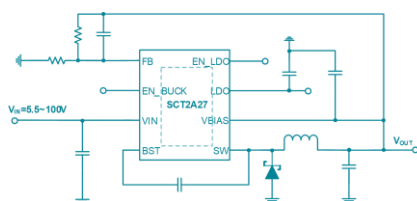
PN	Vin MIN (V)	Vin MAX (V)	Quiescent Current (uA)	Output Voltage (V)	Output Current (mA)	EN	Package
SCT71005	1.6	5.5	10	1.2/1.8/3.3	500	√	SOT23-5/TDFN2x2-6/TDFN2x3-8/DFN1x1-4



SCT2A27

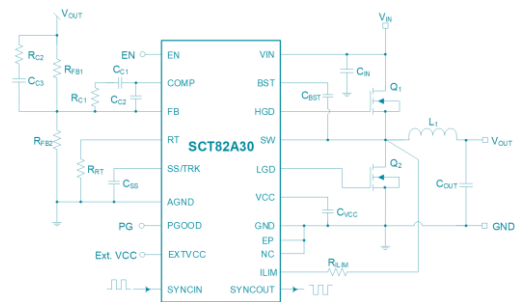
5.5V-100V Vin, 4A Peak Current Limit, High Efficiency Asynchronous Stepdown DCDC Converter

- 5.5V-100V Wide Input Range
- 30V Maximum Output Voltage
- 2A Continuous Output Current
- 4A Peak Current Limit
- 500mΩ Integrated High-Side Power MOSFET
- 200mA Integrated LDO. Selectable 5V or 3.3V
- 25uA Quiescent Current with VBIAS Connected to an auxiliary power supply higher than 6V
- 1.2V $\pm 1\%$ Feedback Reference Voltage
- 4ms Internal Soft-start Time
- 300KHz Fixed Switching Frequency
- COT Control Mode with Integrated Loop Compensation
- Precision Enable Threshold for Programmable Input Voltage Under-Voltage Lock Out Protection (UVLO) Threshold and Hysteresis
- Cycle-by-Cycle Current Limiting
- Over-Voltage Protection
- Over-Temperature Protection
- Available in ESOP-8 Package



SCT82A30

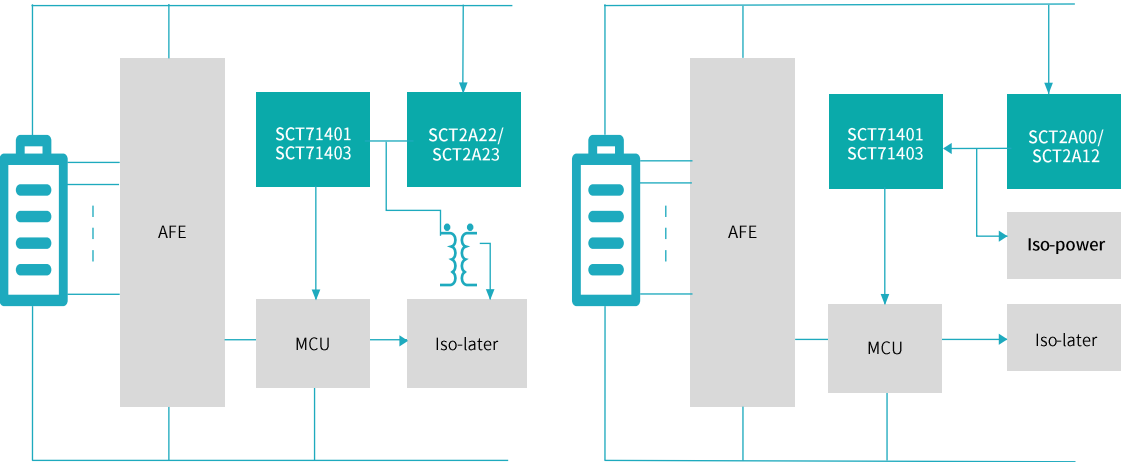
5.5V-100V Wide Input Voltage Range Synchronous Buck Controller



- Synchronous DCDC Buck Controller
5.5V-100V Wide Input Range, 0.8V-60V Adjustable Output Voltage
0.8V $\pm 1\%$ Reference Voltage; 40ns Minimum t_{ON} for low duty ratio
150ns Minimum t_{OFF} for high duty ratio
- 100 KHz to 1.2 MHz Switching Frequency
Clock Synchronization In/Out capability
Selectable Diode Emulation or FPWM
Frequency Spread Spectrum Modulation
- 7.5 V Gate Drivers
2.3-A Source and 3.5-A Sink Current
Low-side Soft Start for pre-biased Start-up
- Fast Line and Load Transient Response
Voltage-mode control with line feedforward
High Gain Bandwidth Error Amplifier
- Protection Features for Robustness
Adjustable Soft Start time
Hiccup-mode Overcurrent Protection
Input UVLO with hysteresis
VCC and Gate-drive UVLO Protection
Precision Enable Input Threshold
Open-drain Power Good Indicator
Over Temperature Shutdown Protection
- External VCC Input for Bypassing Internal LDO
- Available in QFN-20L 3.5mmx4.5mm Package

Battery

BMS Protection Board



PN	Vin MIN (V)	Vin MAX (V)	RDSOn_High (mΩ)	RDSOn_Low (mΩ)	Feedback Voltage (V)	Current Limit (A)	Power Saving Mode	Quiescent Current (uA)	Switching Frequency (Hz)	Package
SCT2A23A	4.5	100	600	300	1.2	1.2	PFM/USM/FPWM	160	300K	ESOP-8L
SCT2A23	4.5	100	530	220	1.2	1.2	PFM/USM/FPWM	160	300K	ESOP-8L
SCT2A00	5.5	100	975	Async	1.2	0.6	PFM	49	270K	SOT23-6
SCT2A12	5.5	100	975	Async	1.2	1	PFM	49	390K	ESOP-8L

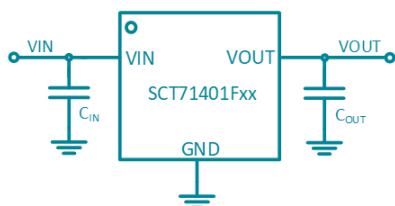
PN	Vin MIN (V)	Vin MAX (V)	Quiescent Current (uA)	Output Voltage (V)	Output Current (mA)	EN	Package
SCT71401	3	40	2.5	5/3.3	150	-	SOT23-5/SOT23-3/SOT89-3
SCT71403	3	40	2.4	5/3.3	300	✓	TDFN-6/TDFN-8/MSOP-8/SOT23-5/SOT223-4



SCT71401

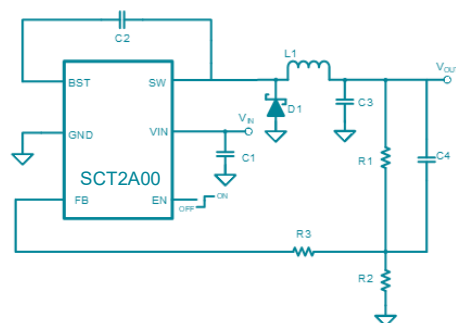
3V-40V Vin, 150mA, 2.5uA IQ, Low-Dropout Regulator

- 3V - 40V Wide Input Range
- Up to 45V Transient Input Voltage
- 150mA Maximum Output Current
- 3.3V and 5V Output Voltage or Adjustable
- $\pm 1\%$ at $T_J = 25^\circ\text{C}$ Output Voltage Accuracy:
- 2.5uA Low Quiescent Current
- Low Dropout Voltage :
- 204mV at 50mA load current
- 643mV at 150mA load current
- Support Output Capacitors Range:
- 3.3uF~220uF
- Low-ESR: $0.001\Omega \sim 5\Omega$
- 660us Internal Soft-start Time
- Integrated Short-Circuit Protection with OCFB (Over Current Fold-back) Feature
- Over-Temperature Protection
- Available in SOT23-5 /SOT23-3 /SOT89-3 Package



SCT2A00

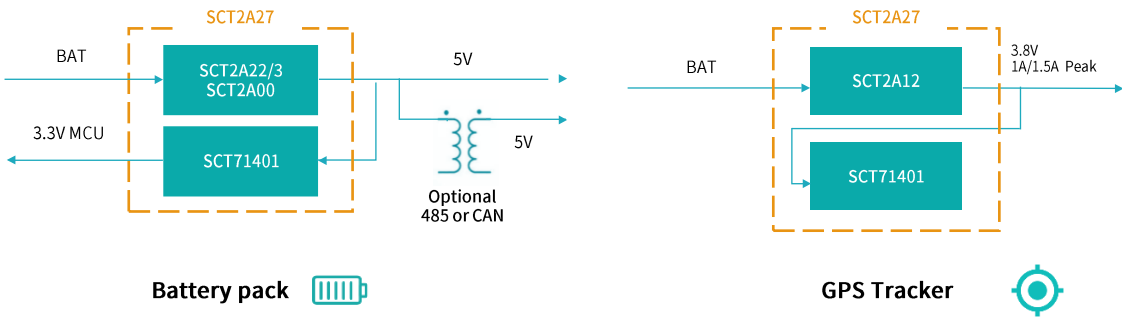
5.5V-100V Vin, 1.3A Peak Current Limit, High Efficiency Asynchronous Step-down DCDC Converter



- 5.5V-100V Wide Input Voltage Range
- Up to 30V Maximum Output Voltage
- 0.6A Continuous Output Current
- 1.3A Peak Current Limit
- $975\text{m}\Omega$ Integrated High-Side Power MOSFET
- 49uA Quiescent Current
- 1.2V Feedback Reference Voltage
- 3.5ms Internal Soft-start Time
- 270KHz Fixed Switching Frequency
- COT Control Mode with Integrated Loop Compensation
- Precision Enable Threshold for Programmable Input Voltage Under-Voltage Lock Out Protection (UVLO) Threshold and Hysteresis
- Cycle-by-Cycle Current Limiting
- Over-Voltage Protection
- Over-Temperature Protection
- Available in SOT23-6L Package

Battery

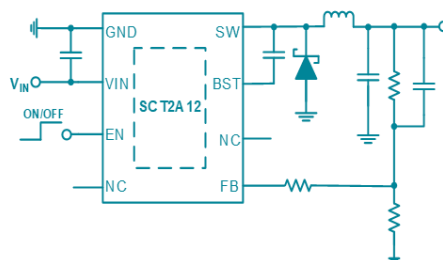
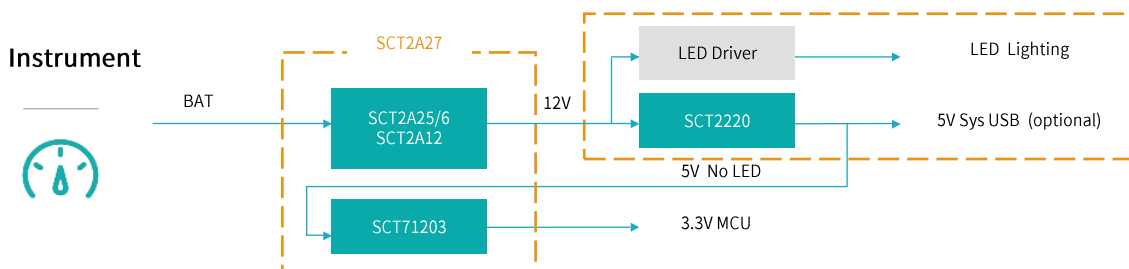
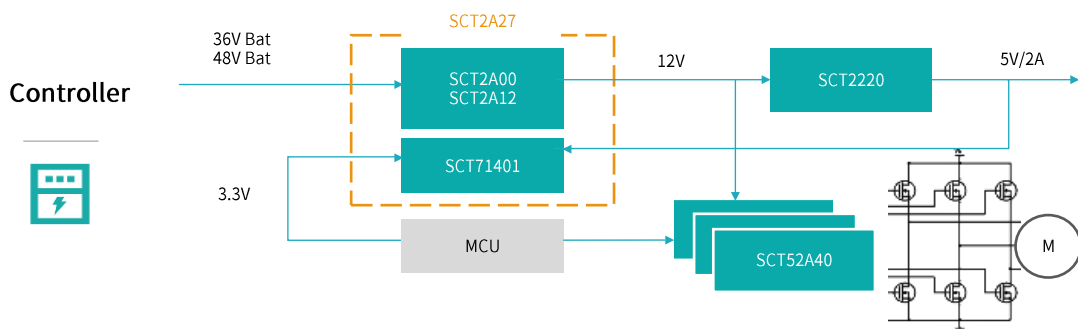
Electric Vehicle (Two wheeled)



PN	Channels	VDD MIN (V)	VDD MAX (V)	Boot ABS (V)	Vin MIN (V)	Vin MAX (V)	PULL Current (A)	SOURCE Current (A)	IQ @VDD=12V (uA)	IN-OUT Phase	Package
SCT52A40	Half Bridge	8	26	120	-10	26	4	4	252	In-phase	SOP-8L DFN-9L, 3x3 DFN-10L, 3x3 DFN-8L, 4x4

PN	Vin MIN (V)	Vin MAX (V)	RDSON_High (mΩ)	RDSON_Low (mΩ)	Feedback Voltage (V)	Current Limit (A)	Power Saving Mode	Quiescent Current (uA)	Switching Frequency (Hz)	Package
SCT2A00	5.5	100	975	Non-sync	1.2	0.6	PFM	49	270K	SOT23-6
SCT2A12	5.5	100	975	Non-sync	1.2	1	PFM	49	390K	ESOP-8L
SCT2A23	4.5	100	530	220	1.2	1.2	PFM/USM /FPWM	160	300K	ESOP-8L
SCT2A25	5.5	100	500	Non-sync	1.2	2	PFM	135	300K	ESOP-8L
SCT2A26	5.5	100	500	Non-sync	1.2	2	PFM	140	300K	ESOP-8L

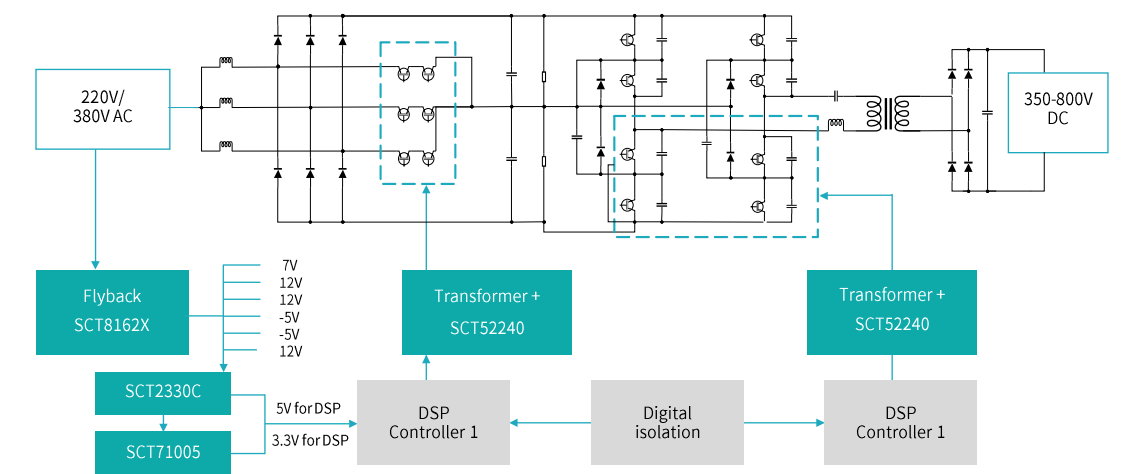
PN	Vin MIN (V)	Vin MAX (V)	Quiescent Current (uA)	Output Voltage (V)	Output Current (mA)	EN	Package
SCT71401	3	40	2.5	5/3.3	150	-	SOT23-5/SOT23-3/SOT89-3
SCT71203	3	28	2.4	5/3.3	300	√	SOT23-5



- 5.5V-100V Wide Input Voltage Range
- Up to 30V Maximum Output Voltage
- 1A Continuous Output Current
- 1.8A Peak Current Limit at VIN<60V
- Integrated 970mΩ High-Side Power MOSFET
- 49uA Quiescent Current
- 1.2V Feedback Reference Voltage
- 3.5ms Internal Soft-start Time
- 390KHz Fixed Switching Frequency
- COT Control Mode with Integrated Loop Compensation
- Precision Enable Threshold for Programmable Input Voltage Under-voltage Lock Out Protection (UVLO) Threshold and Hysteresis
- Cycle-by-Cycle Current Limiting
- Over-Voltage Protection
- Over-Temperature Protection
- Available in ESOP-8 Package

New Energy

Charging Station



PN	Topology	Vin MIN (V)	Vin MAX (V)	IQ (μA)	Over Current Mode	FSS	EXTVcc	EN	Package
SCT81621	Boost, Flyback, SEPIC	3.1	50	415	Hiccup	✓	✓	✓	MSOP-10

PN	Channels	VDD MIN (V)	VDD MAX (V)	Vin MIN (V)	Vin MAX (V)	IQ @VDD=12V (uA)	IN-OUT Phase	Package
SCT52240	LS/Dual	4.5	24	-5	24	55	In-phase	SOP-8L/MSOP-8L

PN	Vin MIN (V)	Vin MAX (V)	Feedback Voltage (V)	Iout (A)	Light Load Mode	IQ (μA)	Switching Frequency(Hz)	Package
SCT2330C	3.8	28	0.8	3	PSM	25	400K	TSOT23-6L

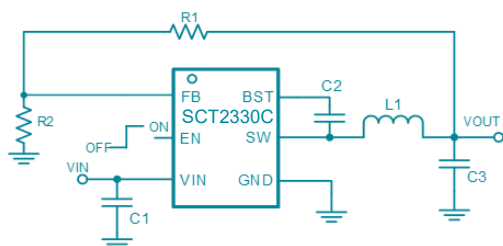
PN	Vin MIN (V)	Vin MAX (V)	IQ (μA)	Vout (V)	Iout (mA)	EN	Package
SCT71005	1.6	5.5	10	1.2/1.8/3.3/ADJ	500	✓	SOT23-5/TDFN2x2-6/TDFN2x3-8/DFN1x1-4



SCT2330C

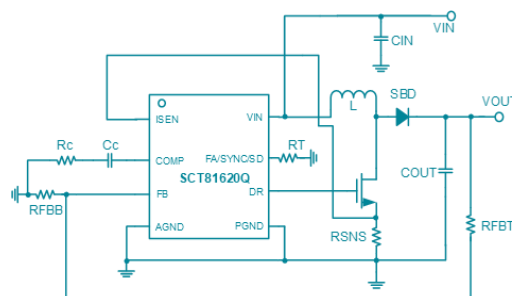
3.8V-28V VIN, 3A, Low EMI, Low Quiescent Current Step-down DCDC Converter

- 25uA Quiescent Current
- 3.8V-28V Wide Input Voltage
- 3A Continuous Output Current
- $0.8V \pm 1\%$ Feedback Reference Voltage
- Integrated 80m Ω (Rdson) HS MOSFE and 42m Ω (Rdson) LS MOSFET
- 1uA Shutdown Current
- 80ns Minimum On Time
- 400KHz Switching Frequency
- Programable UVLO Threshold Voltage
- Precision EN ON/OFF Threshold Voltage
- 4ms Internal Soft-start Time
- Output Over Voltage Protection
- SW Voltage Anti-ring, EMI Friendly
- PSM Operation at Light Load
- 160°C Over Thermal Protection
- Available in TSOT23-6L Package



SCT81620

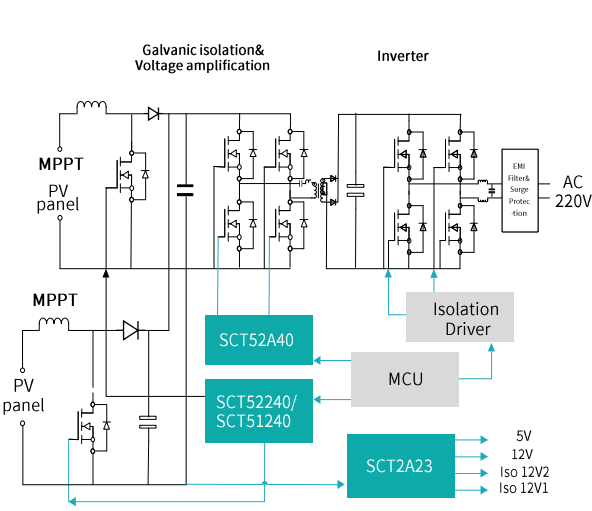
50V VIN Boot/Flyback/SEPIC PWM Controller



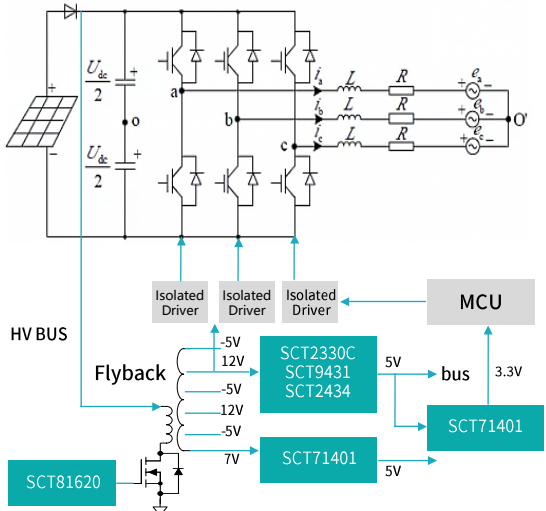
- 3.2V-50V Wide Input Voltage
- 3.7uA Shutdown Current
- 450uA Quiescent Current
- $\pm 2.5\%$ Feedback Reference Voltage
- 100KHz-2.2MHz Programable Switching Frequency
- Frequency Spread Spectrum FSS to Reduce EMI
- Clock Synchronization
- Internal Slope Compensation
- 22ms Internal Soft-start time
- Peak Current OCP with Hiccup Mode
- Output Over Voltage Protection
- Programable UVLO Threshold Voltage
- 165°C Over Thermal Protection
- Available in MSOP-8L (3mmx3mm) Package

Photovoltaic

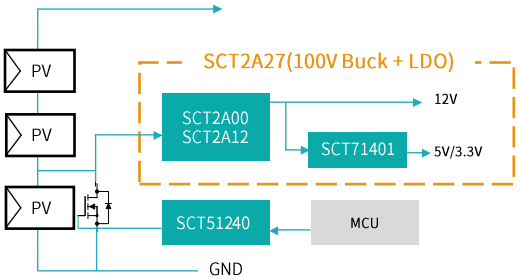
Photovoltaic Microinverter



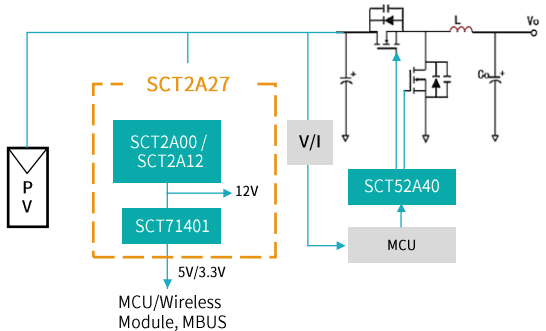
High Power Microinverter



String Combination Solar Inverter



Smart Shutdown Device



Optimizer

PN	Channels	VDD MIN (V)	VDD MAX (V)	Boot ASB Voltage (V)	Vin MIN (V)	Vin MAX (V)	PULL Current (A)	SOURCE Current (A)	IQ@VDD=12V (uA)	IN-Out Phase	Package
SCT51240	LS/Single	4.5	24	-	-5	24	4	4	38	In-phase Inverting	TSOT23-5L
SCT52240	LS/Dual	4.5	24	-	-5	24	4	4	55	In-phase	SOP-8L MSOP-8L
SCT52A40	Half Bridge	8	26	120	-10	26	4	4	252	In-phase	SOP-8L DFN-9L, 3x3 DFN-10L, 3x3 DFN-8L, 4x4

PN	Vin MIN (V)	Vin MAX (V)	IQ (uA)	Vout (V)	Iout (mA)	EN	Package
SCT71401Fxx	3	40	2.5	5/3.3	150	-	SOT23-5/SOT23-3/SOT89-3

PN	Topology	Vin MIN (V)	Vin MAX (V)	IQ (uA)	OCP Mode	FSS	Package
SCT81620	Boost, Flyback, Sepic	3.2	50	450	Hiccup	√	MSOP-8

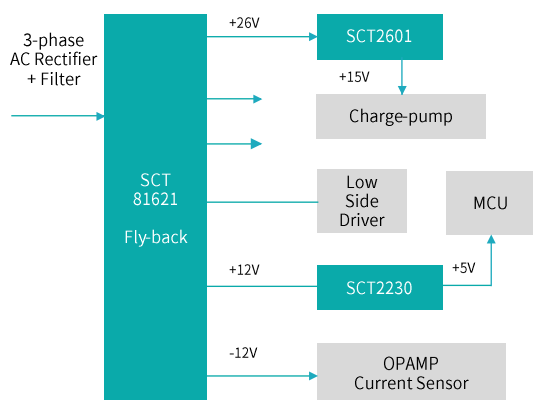
PN	Vin MIN (V)	Vin MAX (V)	HS Rdson (mohm)	LS Rdson (mohm)	Vref (V)	Iout (A)	Light Load Operation	IQ (uA)	FREQ (Hz)	Package
SCT2330C	3.8	28	80	42	0.8	3	PSM	25	400K	TSOT23-6L
SCT9431	3.8	36	74	40	0.8	3	PSM	22	400K	FCQFN2X3-9L
SCT2434A	3.6	36	60	36	1	3.5	PSM	25	400K	QFN-12L
SCT2434C	3.6	36	60	36	1	3	PSM	25	2.1M	QFN-12L
SCT2A23	4.5	100	530	220	1.2	1.2	PFM/USM /FPWM	160	300K	ESOP-8L
SCT2A00	5.5	100	975	Async	1.2	0.6	PFM	49	270K	SOT23-6
SCT2A12	5.5	100	975	Async	1.2	1	PFM	49	390K	ESOP-8L
SCT2A27	5.5	100	500	Async	1.2	2	PFM	140	300K	ESOP-8L

Automation

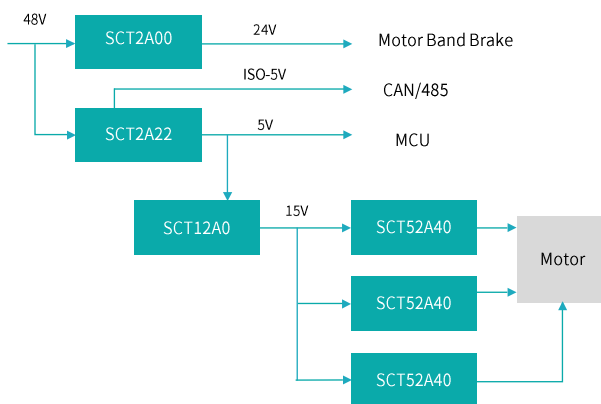
Stepping Servo Motor Driver | IPC | PLC

Stepping Servo Driver

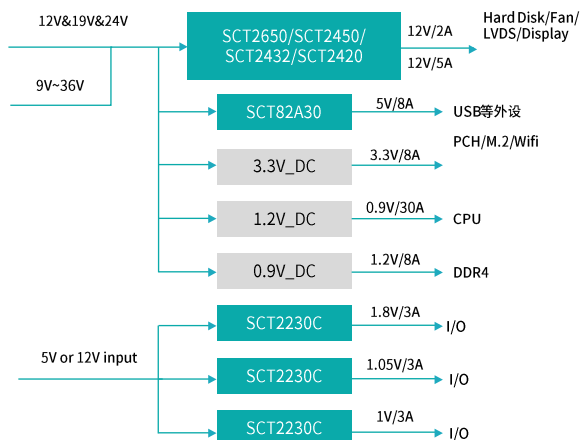
High Voltage Stepping Servo Driver



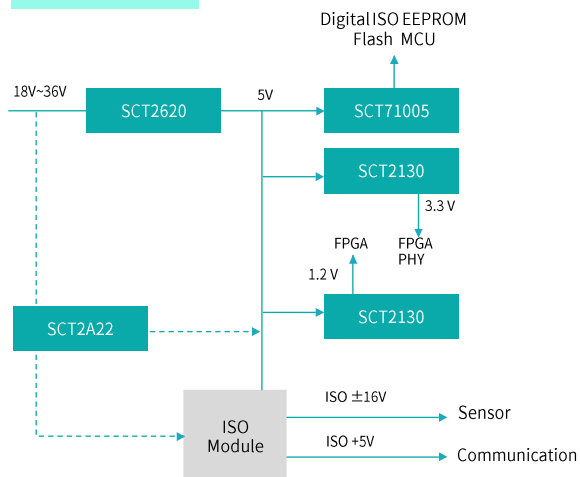
Low Voltage Stepping Servo Driver



IPC



Mini PLC



PN	Topology	Vin MIN (V)	Vin MAX (V)	IQ (μA)	OCP	FSS	EXT Vcc	EN	PGOOD	Package
SCT82A30	Boost	5.5	100	1400	Hiccup	-	✓	✓	✓	QFN-20
SCT81621	Boost,Flyback, SEPIC	3.1	50	415	Hiccup	✓	✓	✓	-	MSOP-10

PN	Vin MIN (V)	Vin MAX (V)	HS Rdson (mohm)	LS Rdson (mohm)	Vref (V)	Iout (A)	Light Load Operation	IQ (uA)	FREQ (Hz)	Package
SCT2330C	3.8	28	80	42	0.8	3	PSM	25	400K	TSOT23-6L
SCT2450	3.8	36	45	20	0.8	5	PSM	25	100K-2.2M	ESOP-8L
SCT2432	3.8	40	80	50	0.8	3.5	PSM	25	300K-2.2M	ESOP-8L
SCT2420	3.8	40	160	80	0.8	2	PSM	25	100K-2.2M	ESOP-8L
SCT2620	3.8	60	220	Async	0.8	2.5	PSM	190	100K-1.2M	EMSOP-10L
SCT2601	4.5	60	500	Async	0.765	0.6	PSM	80	700K	TSOT23-6L
SCT2650	4.5	60	80	Async	0.8	5	PSM	175	100K-1.2M	ESOP-8L
SCT2A22	4.5	100	530	220	1.2	1.2	FPWM	150	100K-600K	ESOP-8L
SCT2A00	5.5	100	975	Async	1.2	0.6	PFM	49	270K	SOT23-6
SCT2130	2.8	6	30	25	0.6	3	FPWM	1000	2.2M	QFN-8L SOT23-8L
SCT2230	4.2	17	75	45	0.8	3	PSM	155	750K	TSOT23-6L SOT563-6L

PN	Vin MIN (V)	Vin MAX (V)	Vout MAX (V)	OCP Threshold (A)	IQ (uA)	FREQ (Hz)	Light Load Operation PFM/FPWM	Pacakge
SCT12A0	2.7	14	14.6	12	120	200K-2.2M	PFM/FPWM	DFN-20L

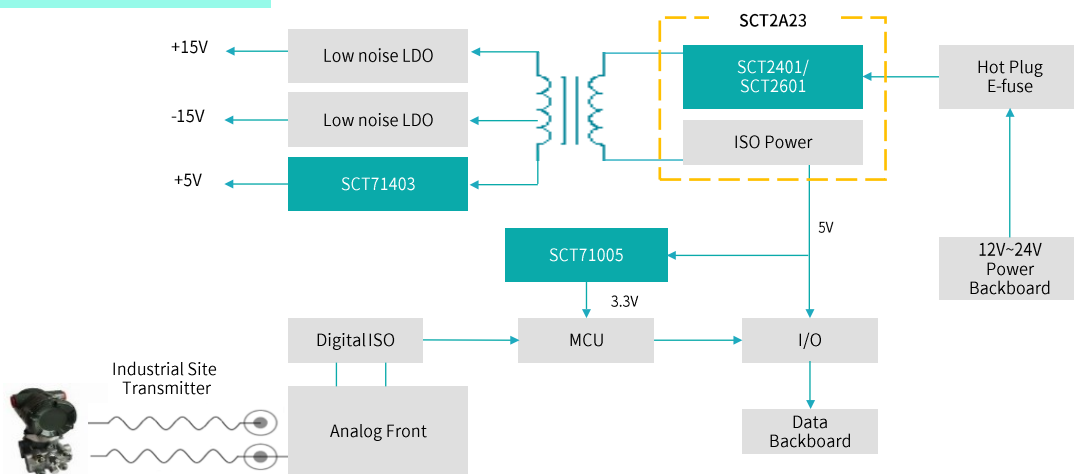
PN	Channel	VDD MIN (V)	VDD MAX (V)	Boot ABS Voltage (V)	Vin MIN (V)	Vin MAX (V)	PULL Current (A)	SOURCE Current (A)	IQ @VDD=12V (uA)	IN-OUT Phase	Package
SCT52A40	Half Bridge	8	26	120	-10	26	4	4	252	同相	SOP-8L DFN-9L, 3x3 DFN-10L, 3x3 DFN-8L, 4x4

PN	Vin MIN (V)	Vin MAX (V)	IQ (μA)	Vout (V)	Iout (mA)	Package
SCT71005Fxx	1.6	5.5	10	1.2/1.8/3.3/ADJ	500	SOT23-5/TDFN2x2-6/TDFN2x3-8/DFN1x1-4

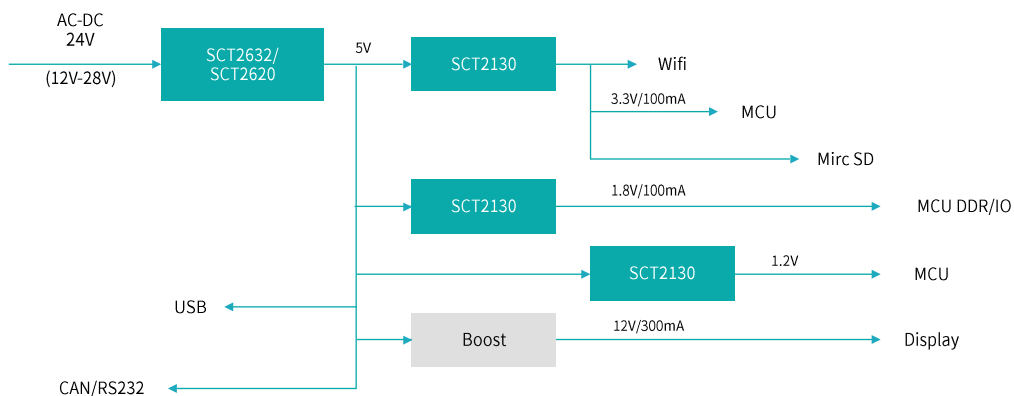
Automation

DCS IO | HMI

DCS IO Board



HMI



PN	Vin MIN (V)	Vin MAX (V)	HS Rdson (mohm)	LS Rdson (mohm)	Vref (V)	Iout (A)	Light Load Operation	IQ (uA)	FREQ (Hz)	Package
SCT2A23	4.5	100	530	220	1.2	1.2	PFM/USM/FPWM	160	300K	ESOP-8L
SCT2401	4.5	40	600	300	0.81	0.6	PSM	90	1.2M	TSOT23-6L
SCT2601	4.5	60	500	Async	0.765	0.6	PSM	80	700K	TSOT23-6L
SCT2620	3.8	60	220	Async	0.8	2.5	PSM	190	100K-1.2M	EMSOP-10L
SCT2632	4.2	60	220	Async	0.8	3	PSM	100	100K-1.2M	ESOP-8L
SCT2130	2.8	6	30	25	0.6	3	FPWM	1000	2.2M	QFN-8L

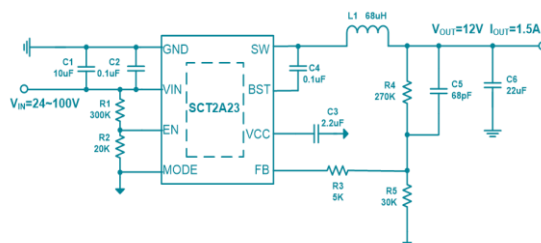
PN	Vin MIN (V)	Vin MAX (V)	IQ (uA)	Vout (V)	Iout (mA)	Package
SCT71005	1.6	5.5	10	1.2/1.8/3.3/ADJ	500	SOT23-5/TDFN2x2-6/TDFN2x3-8/DFN1x1-4
SCT71403	3	40	2.4	5/3.3	300	TDFN-6/TDFN-8/MSOP-8/SOT23-5/SOT223-4



SCT2A23

4.5V-100V Vin, 1.2A, Step-down DCDC Converter

- 1.2A Continuous Current
- 1.8A Peak Current Limit
- Integrated 530mΩ HS and 220mΩ LS Power MOSFET
- 15uA Iq with an External VCC Diode.
160uA Iq without VCC Diode
- Selectable PFM, USM or FPWM Mode
- 1.2V±2% Feedback Reference Voltage
- 4.3ms Internal Soft-start Time
- 300KHz Switching Frequency
- COT Control Mode

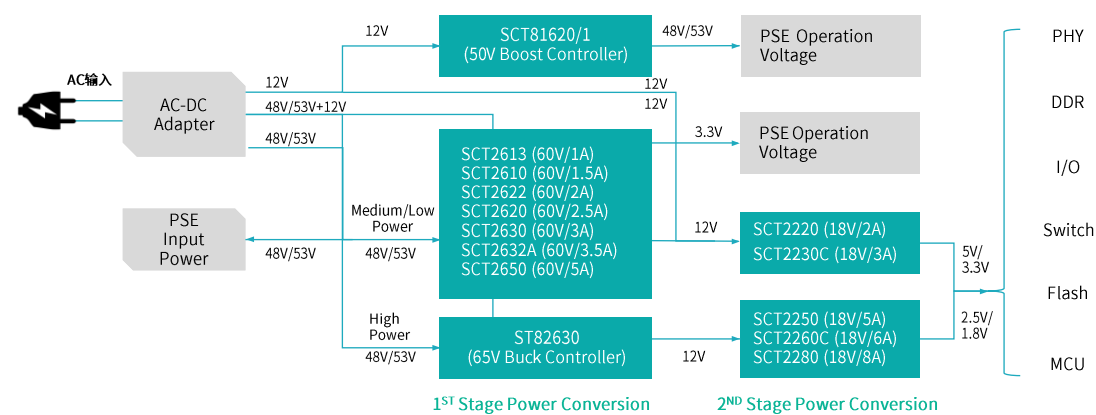


- ISO-Buck Topology at FPWM Modes
- Programable UVLO Threshold
- Precision EN ON/OFF Voltage
- Cycle-by-cycle Current Limit
- Over Voltage Protection
- Over Thermal Protection
- Available in ESOP-8 Package

Industrial IOT

PoE Switch

PoE Switch



PN	Topology	Vin MIN (V)	Vin MAX (V)	IQ (μA)	OCp	FSS	EXT Vcc	EN	Package
SCT81620	BOOST, Flyback, SEPIC	3.2	50	450	Hiccup	√	-	-	MSOP-8
SCT81621	BOOST, Flyback, SEPIC	3.1	50	415	Hiccup	√	√	√	MSOP-10
SCT82630	BOOST	5.5	65	1400	Hiccup	-	√	√	QFN-20

PN	Vin MIN (V)	Vin MAX (V)	HS Rdson (mohm)	LS Rdson (mohm)	Iout (A)	IQ (uA)	POWER GOOD	Package
SCT2613	4.5	60	500	Nonsynchronous	1	80	-	TSOT23-6L
SCT2610	3.8	60	220	Nonsynchronous	1.5	190	√	EMSOP-10L
SCT2620	3.8	60	220	Nonsynchronous	2.5	190	√	EMSOP-10L
SCT2622	4.2	60	220	Nonsynchronous	2	100	√	ESOP-8L
SCT2630	4.2	60	220	Nonsynchronous	3	190	-	ESOP-8L
SCT2632A	4.5	60	80	Nonsynchronous	3.5	100	-	ESOP-8L
SCT2650	4.5	60	80	Nonsynchronous	5	175	-	ESOP-8L
SCT2230C	4.2	17	90	54	3	135	-	TSOT23-6L
SCT2250	4.5	18	42	17	5	130	√	QFN-12L 2x3mm
SCT2260C	4.5	18	42	17	6	130	√	QFN-12L 2x3mm
SCT2280	4.5	18	25	12	8	130	√	QFN-12L 2x3mm



5.5V-65V Wide Input Voltage Range Step-down DCDC PWM Controller

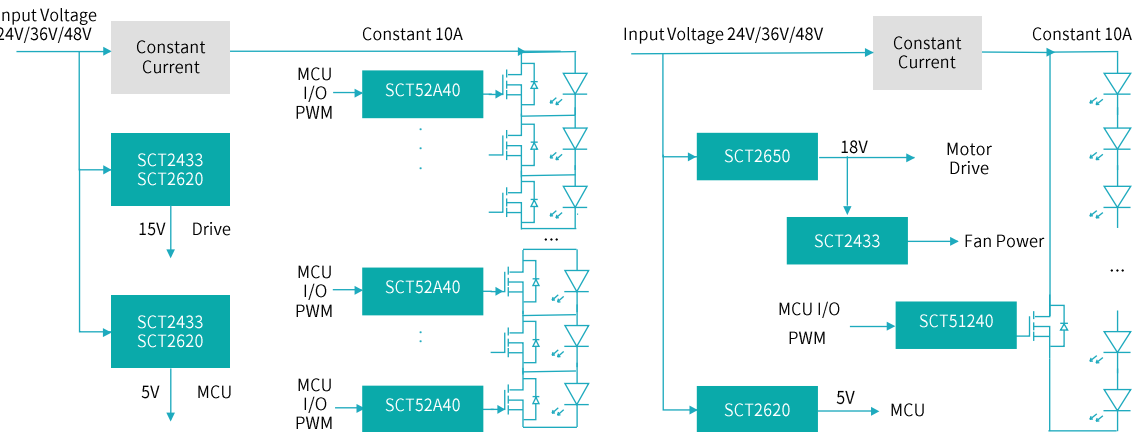
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4.5V-60V_{Vin} 3A Step-down DCDC Converter



More Applications

Stage Lights



染色灯 Wash Light

摇头灯 Head Shaking Light

PN	Channel	VDD MIN (V)	VDD MAX (V)	Boot ABS (V)	Vin MIN (V)	Vin MAX (V)	PULL Current (A)	SOURCE Current (A)	IQ @VDD=12V (uA)	IN-OUT Phase	Package
SCT51240	LS /Single	4.5	24	-	-5	24	4	4	38	In-phase Inverting	TSOT23-5L
SCT52A40	Half Bridge	8	26	120	-10	26	4	4	252	In-phase	SOP-8L DFN-9L, 3x3 DFN-10L, 3x3 DFN-8L, 4x4

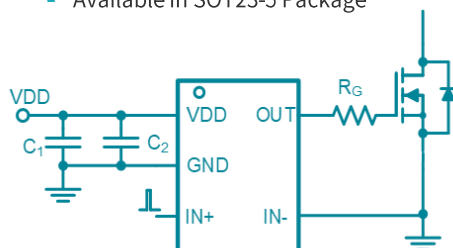
PN	Vin MIN (V)	Vin MAX (V)	HS Rdson (mohm)	LS Rdson (mohm)	Feedback Voltage (V)	Iout (A)	Light Load Mode	IQ (uA)	Switching Frequency (Hz)	Package
SCT2433	3.8	40	80	50	0.8	3.5	PSM	25	570K	ESOP-8L
SCT2620	3.8	60	220	Non-sync	0.8	2.5	PSM	190	100K-1.2M	EMSOP-10L
SCT2650	4.5	60	80	Non-sync	0.8	5	PSM	175	100K-1.2M	ESOP-8L



SCT51240

Single Channel 4A High Speed MOSFET/IGBT Gate Driver

- 4.5-24V Wide Supply Voltage Range
- 4A Peak Pull and Source Current
- Support In-phase Input and Inverting Input
- Down to -5V Negative Input
- 12ns Propagation Delay
- Fast Transition Time
(Typical 9ns Ton Time, 6ns Toff Time)
- 38uA Quiescent Current
- Input Low at Floating
- 170°C Over Thermal Protection
- Available in SOT23-5 Package

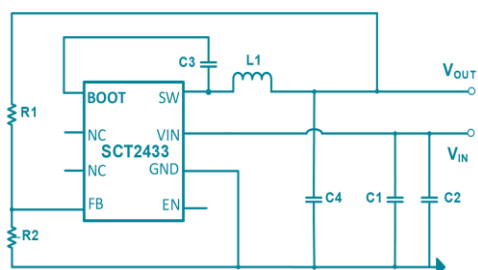


SCT51240 is a single channel high speed low side gate driver with wide supply voltage range driving MOSFET, IGBT, SiC or GaN power devices. Up to 24V wide voltage range enhances the tolerance headroom of the ringing voltage at the gate voltage of the power device. The minimum 12ns input output transmission delay characteristic is suitable for high-frequency power conversion applications.



SCT2433

3.8V-40V Vin, 3.5A, High Efficiency Synchronous Step-down DCDC Converter



- 3.8V-40V Wide Input Voltage range
- Up 3.5A Continuous Current
- $0.8V \pm 1\%$ Feedback Reference Voltage
- Integrated 80mΩ/50mΩ Rds(on) HS/LS MOSFETs
- FPMW Operation Mode
- 290uA Quiescent Current at Sleep
- 100ns Minimum On-time
- 2ms Internal Soft-start Time
- 570KHz Switching Frequency
- Programmable UVLO Threshold
- Precision EN ON/OFF Voltage
- Support LDO Operation
- Frequency Spread Spectrum FSS to Reduce EMI
- Support Negative Output Voltage
- Output Over Voltage Protection
- Over Thermal Protection
- Available in ESOP-8 Package

EMPOWERMENT

The company qualified ISO9001, ISO 26262 certifications, and has IATF16949/VDA6.3 compliance.

The test floor equips ACCO and ETS88 Automatic Tester Equipment, EXIS 250 handler, and sets of thermal streams for 3-temperature test on automotive products, supporting new product on-time release with testing program development, debugging product abnormalities, and validation.

The reliability laboratory has HTOL, HAST, etc. equipment for reliability tests and supporting ORT of mass production process, ensuring product high quality and reliability



Experienced R&D Team

- Experienced DE/PE/TE/Package/PTE/ Simulation/ Reliability Team
- WW Semiconductor Companies Background
- DFMEA/Robust Development Process

Advanced Test Equipment

- High Precision ATE and Handler
- Advanced Thermal Stream AEC Products

Business Process

- IATF16949/VDA6.3, ISO 26262/ ISO9001 Qualification
- APQP/PPAP NPI Process
- ERP/PLM/CRM/BPM/BI Information System
- Risk Assessment, DFMEA, SBL/SYL Monitoring

In-House Reliability Lab

- Validation
- ORT Monitoring
- Full Package Qual & HTOL/BHAST



INFORMATION SYSTEM



Automotive Grade Product Selection
Scan and Download Product Brochure



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SILICON CONTENT TECHNOLOGY



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