

南芯，为效率而生！

上海南芯半导体科技有限公司

Your powerful bridge to future technology



/// 南芯公司简介和产品选型表 ///

2021.7



关于我们
ABOUT US



荣誉资质
THE HONOR



设计案例
DESIGN CASE



产品介绍
PRODUCTS

产品目录

[01 Charger](#)

[02 Charge Pump](#)

[03 Wireless Charger](#)

[04 PD Controller](#)

[05 DCDC](#)

[06 ACDC](#)

[07 Battery Protector](#)

[08 AMOLED PMIC](#)

[09 Load Switch](#)



01

关于我们



我们来自TI, Linear Tech, ADI, O2, Rohm等国际半导体厂商, 平均有**10年+**的行业工作经验。我们于2016年初成立了南芯半导体, 致力于**高性能国产IC研发**。

Who we are



我们以**高性能电源管理IC**为切入点, 围绕**手机、PC和便携式设备**布局, 延展至**工业和汽车领域**, 致力于成为一家 **Analog+** 的芯片设计公司。

What we do



我们有**3**个office, 分别位于上海、成都和深圳。员工总数已达**200人**规模, 其中**研发超过100人**。

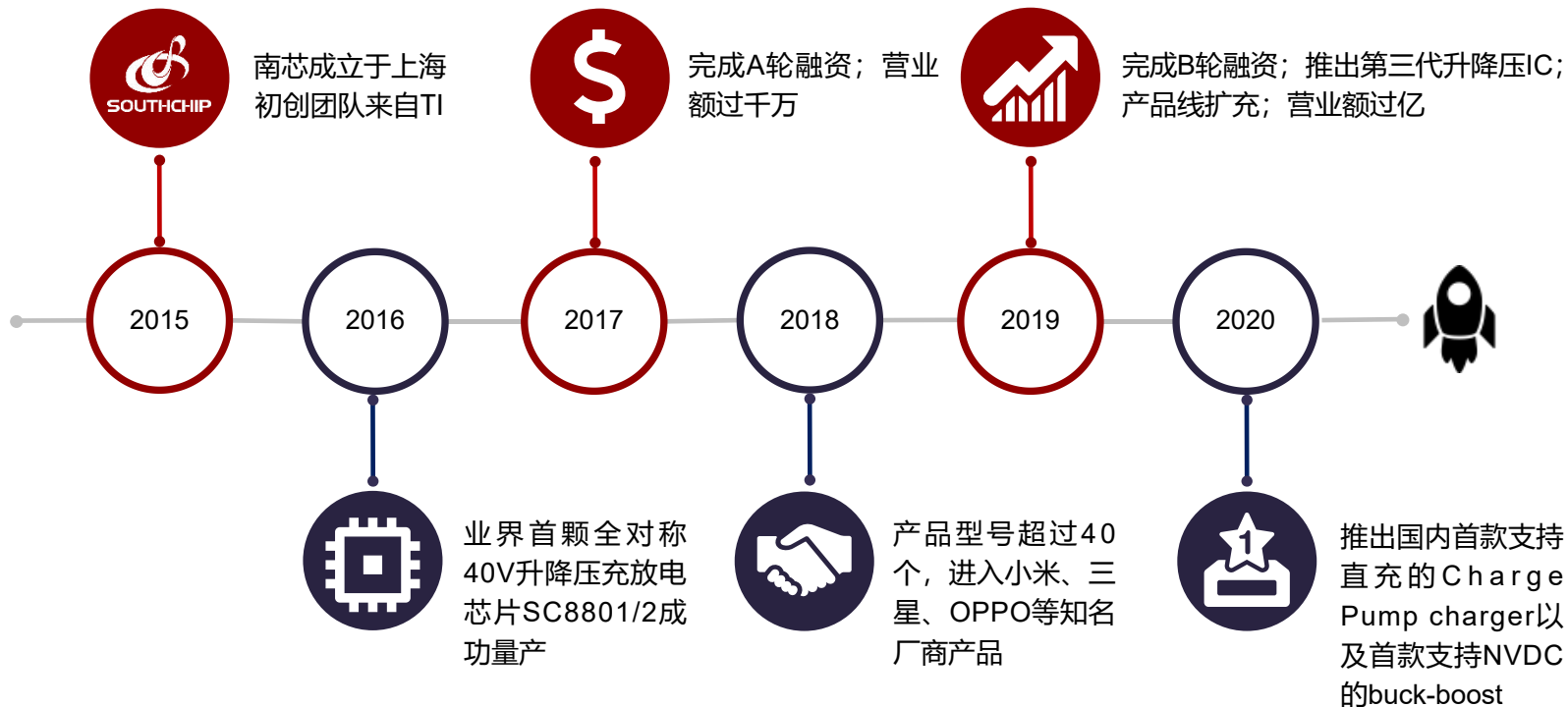
Where we locate



拥有系统、设计、应用、测试、销售、技术支持、生产管理等完整团队, **坚持自主研发, 进行严格的质量管控, 专利数量超过50**。

How we work

发展历程



南芯拥有百人团队，坚持自主研发，进行严格的质量管控





高效

**70%
硕士以上学历**

南芯研发团队毕业于清华、北大、复旦、浙大、上交、同济、成电、西电等。



安全

**100%
完整的生产流程**

南芯涵盖半导体完整的设计生产流程，从工艺、设计、系统应用到生产管理，积累了丰富的项目经验。



优质

**>200人
员工总数**

南芯以人为本，持续引进优秀人才，打造高质量的研发团队。



可靠

**>10年
平均半导体从业时间**

南芯团队来自知名半导体厂商，TI, Linear Tech, ADI, Rohm, Richtek, O2, MPS, MTK等。

提供从AC端到设备电池端的一整套方案，所有产品线聚焦 **电池应用**

Charger & BMS

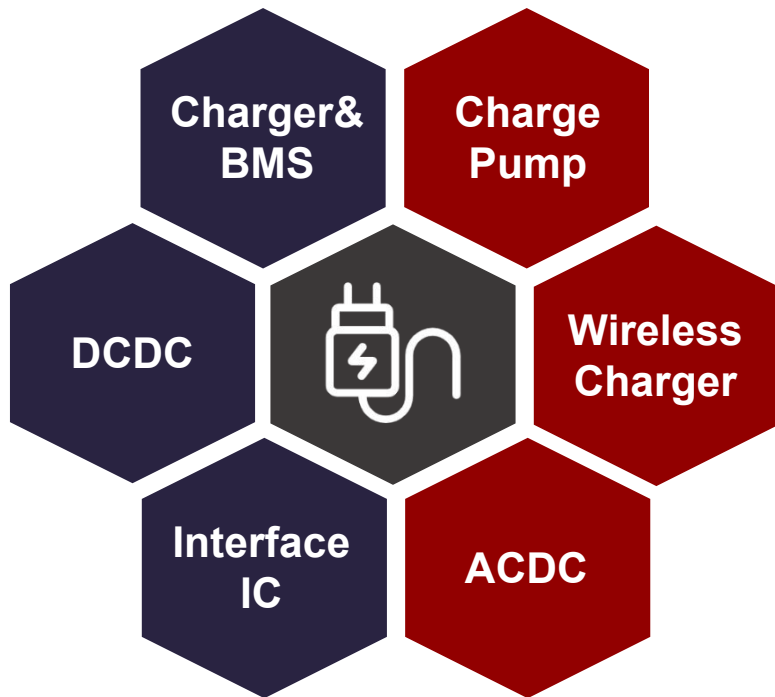
提供不同架构的充电IC，以及单串/多串电池管理/保护方案

DCDC

提供升压、降压、升降压拓扑，基于电池的DCDC方案

Interface IC

提供USB PD、各种DPDM协议芯片，实现大功率充电



Charge Pump

提供开关电容电荷泵，高效支持大功率快充

Wireless Charger

提供Tx和Rx相关无线充电模拟前端和SoC

ACDC

提供 18W~60W flyback 控制器，整流控制器等IC

专注打造高性能模拟和嵌入式IC

充电charger

DCDC

AMOLED

负载开关



锂电保护

USB PD协议IC

无线 IC

MORE

USB PD 快充方案

ACDC

南芯推出支持包含GaN应用在内的高频QR控制器、通用系列CCM/QR/DCM控制器，及其支持多种模式的同步整流控制器，为快速充电提供高性能的整套解决方案

Charger

南芯提供包含buck-boost升降压在内的多种架构不同功率等级charger IC，为1S~6S电池组提供4.5V~36V输入电压范围的安全、快速、可靠的充电方案

DCDC

南芯提供包含buck-boost升降压、charge pump电荷泵在内的多种架构DCDC，轻松支持3.3~36V、18W/30W/45W/65W/100W+宽压大功率输出

锂保芯片

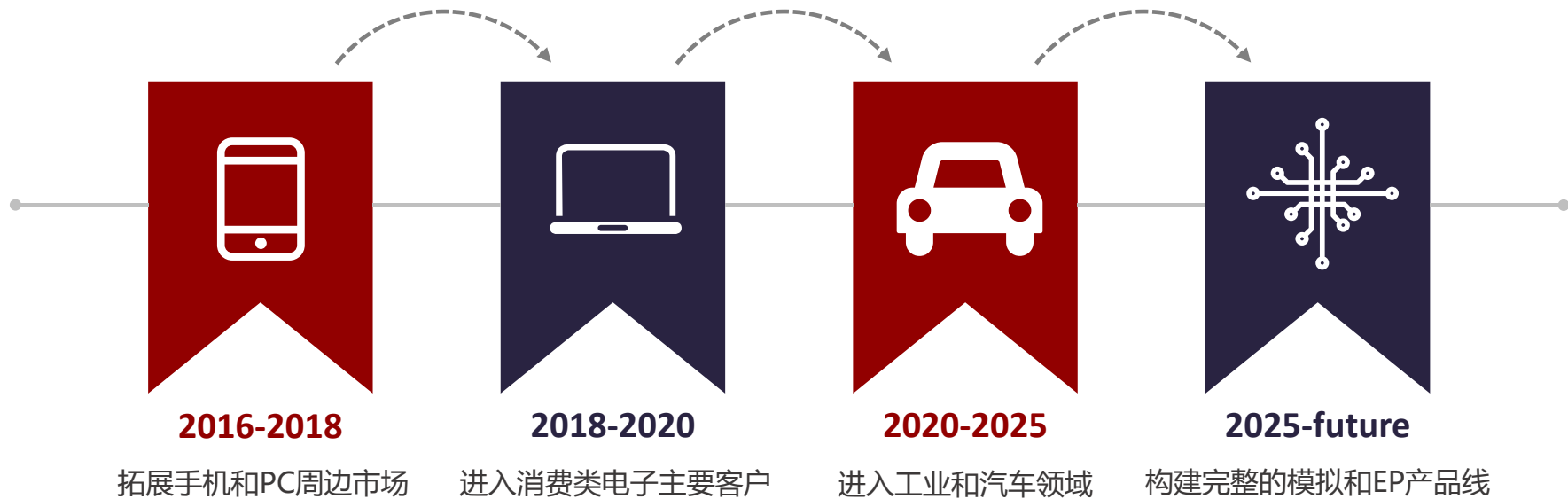
南芯提供单节锂电池保护芯片SC551x，超低Rdson，提供过充保护、过放保护、短路保护等功能，为锂电池快速充电保驾护航

无线充电解决方案

南芯提供24V耐压，可支持1~20V输入电压范围的10~20W无线充电发射器模拟前端方案以及单芯片SoC方案，轻松支持BPP、EPP以及苹果充电

协议IC

南芯提供支持USB PD 3.0 (含PPS) 协议的SC200x (TID1005) 以及SC201x (TID3405) 系列PD controller，支持多达4组DPDM全协议接口，以及最新的PD协议IC+DCDC二合一方案，轻松适配各种终端设备





02

荣誉资质

荣誉资质



南芯于2018年顺利认证为高新技术企业



南芯于2019年上海科技创新企业暨会中被授予“2019上海浦东企业发布荣誉企业证书”



南芯于2018年中国电子“i+”创新大赛总决赛中，荣获比赛二等奖



南芯荣获上海科技企业孵化器30年新锐创业企业奖牌



南芯CEO阮晨杰于2019年荣获“2018年上海市青年创业英才”称号

2017年荣获浦软孵化器颁与的未来之星企业奖



2018年被上海浦软件园授予莲花奖-最具发展潜力企业



2017年度荣获最具发展潜力企业-锐不可挡奖项



2018年荣获洞见长江TOP100奖项



03

设计案例



Redmi 10X Pro

小米 Redmi 10x Pro
电荷泵33W疾速闪充



BBK S5 Pro 平板
11" AMOLED全面屏



大疆 Mavic mini充电管家
双向充电，最高18W

更多设计案例，请联系我们



小米 无线车充
电动变形，高速无线



Anker 二合一充电头
苹果定制，in Apple Store



便捷无线 加速充电

三星 10000mAh 无线充电移动电源

三星 无线移动电源
支持无线充电功能

更多设计案例，请联系我们



华为 快充
P10同步发售 supercharge 技术



小米 充电器
60W PD 性能怪兽



华为 无线充电器
Mate30同步发售 27W超级快充

更多设计案例，请联系我们



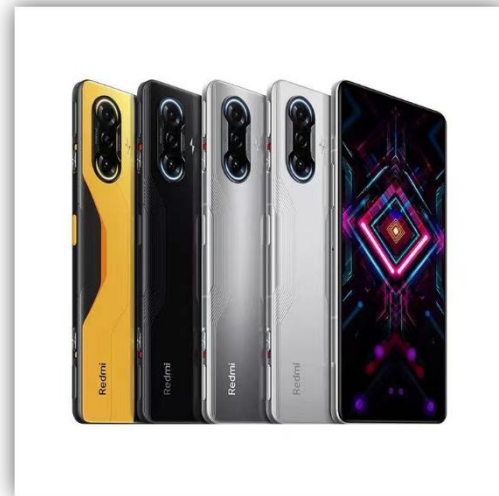
小米 K30至尊版

电荷泵IC SC8551 inside
支持33W快充



小米11 青春版

电荷泵IC SC8551 inside
支持33W有线快充



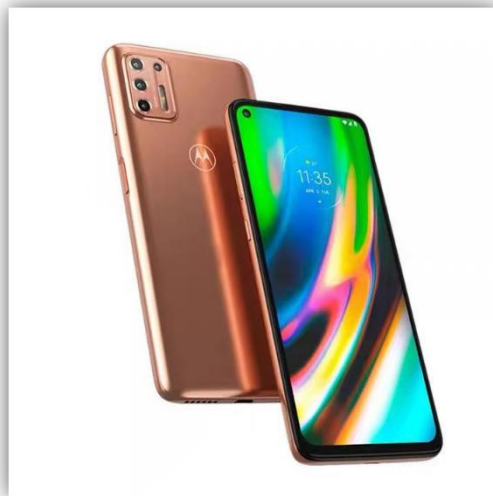
小米 K40游戏版

电荷泵IC SC8551 inside
支持67W闪充

更多设计案例，请联系我们



联想 拯救者2pro
电荷泵IC SC8551 inside
支持90W闪充



MOTO G9 plus
电荷泵IC SC8551 inside
支持30W快充



OPPO A74海外版
电荷泵IC SC8547 inside
33W超级快充

更多设计案例，请联系我们

合作伙伴





04

产品介绍



Charger

更多产品，请联系工作人员，或关注“上海南芯半导体科技有限公司”公众号或公司网站: www.southchip.com

产品一览 – Buck-Boost Charger

Part Number	VIN range	Abs. VIN (max)	Battery Cell #	MOS	Charge Current (max)	Topology	OTG voltage	Prog. OTG Voltage	Max. OTG current	Rec'd app. power level	I2C Ctrl.	Prog. Ilim	ADC	NTC	PowerPath	Other feature	Package
SC8801	2.7-36V	40V	1~6s	ext.	10A+	Buck-boost	2.7-36V	PWM prog.	5A+	60W typ.						Fast-IN-Charge (DPDM)	QFN 4x4
SC8802	2.7-36V	40V	1~6s	ext.	10A+	Buck-boost	2.7-36V	PWM prog.	5A+	60W typ.		PWM prog.					QFN 4x4
SC8812A	2.7-36V	40V	1~4s	ext.	10A+	Buck-boost	2.7-36V	I2C prog.	5A+	60W typ.	yes	I2C prog.	10-bit			Fast-IN-Charge (DPDM) , Event detection port pwr path ctrl	QFN 4x4
SC8815	2.7-36V	40V	1~6s	ext.	10A+	Buck-boost	2.7-36V	I2C prog.	5A+	60W typ.	yes	I2C prog.	10-bit			Event detection port pwr path ctrl	QFN 4x4
SC8915	2.7-26V	30V	1~6s	int.(2)	10A	Buck-boost	2.7-36V	I2C prog.	5A	36W typ.	yes	I2C prog.	10-bit			Event detection port pwr path ctrl	QFN 4x4
SC8902	2.7-22V	24V	1~4s	int.	10A	Buck-boost	2.7-22V	PWM prog.	5A	36W typ.		PWM prog.					QFN 6x6
SC8902A	2.7-22V	24V	1~3s	int.	10A	Buck-boost	2.7-22V	PWM prog.	5A	36W typ.		PWM prog.				Fast-IN-Charge (DPDM)	QFN 6x6
SC8905	2.7~22V	25V	2~4s	int	3A	Buck-boost	2.7V-22V	I2C Prog /Ext Res	5A	30W typ.	yes	I2C Prog or ext. res					QFN 4x4
SC8906	2.7~22V	25V	2~4s	int	3A	Buck-boost	NA					ext. res		yes		Fast-IN-Charge (DPDM) Status indication	QFN 4x4
SC8885	3.5~24V	29V	1~4s	ext.	8A	Buck-boost	2.7V-20.8V	I2C Prog	6.4A	65W typ.	yes, SMBus	I2C prog or ext. res	10-bit		NVDC PowerPath	Peak Power Mode, VAP, PTM Power monitor, /PROCHOT	QFN 4x4
SC8885A	3.5~24V	29V	1~4s	ext.	8A	Buck-boost	2.7V-20.8V	I2C Prog	6.4A	65W typ.	yes, SMBus	I2C prog or ext. res	10-bit		NVDC PowerPath	Peak Power Mode, VAP, PTM Power monitor, /PROCHOT	QFN 4x4
SC8886	3.5~24V	29V	1~4s	ext.	8A	Buck-boost	2.7V-20.8V	I2C Prog	6.4A	65W typ.	yes, I2C	I2C prog or ext. res	10-bit		NVDC PowerPath	Peak Power Mode, VAP, PTM Power monitor, /PROCHOT	QFN 4x4
SC8886A	3.5~24V	29V	1~4s	ext.	8A	Buck-boost	2.7V-20.8V	I2C Prog	6.4A	65W typ.	yes, I2C	I2C prog or ext. res	10-bit		NVDC PowerPath	Peak Power Mode, VAP, PTM Power monitor, /PROCHOT	QFN 4x4
SC8982	3.6~22V	30V	1~2s	int.	5A	Buck-boost	3V-21V	I2C Prog	4.1A	24W typ.	yes, I2C	I2C prog	10-bit		NVDC PowerPath	Pwr path ctrl, OOA, ICO, Status indication	QFN 4x5

*如果是外置MOS架构, 最大输出电流能力取决于外部功率器件选型

产品一览 – Buck Charger

Part Number	VIN range	Abs. VIN (max)	Battery Cell #	MOS	Charge Current (max)	Topology	OTG voltage range	Prog. OTG Voltage	Max. OTG current	Rec'd app. power level	I2C Ctrl.	Prog. Ilim	ADC	NTC	Safety Timer	Power Path	Other feature	Package
SC8803	4.5-36V	40V	1-4s	ext.	10A+	Buck	VBAT-36V	PWM prog.	5A+	24W typ. For 1S		PWM prog.						QFN 4x4
SC8803C	4.5-36V	40V	1-4s	ext.	10A+	Buck	VBAT-36V	PWM prog.	5A+	24W typ. For 1S							Fast-IN-Charge (DPDM)	QFN 4x4
SC8813	4.5-36V	40V	1-4s	ext.	10A+	Buck	VBAT-36V	I2C prog.	5A+	24W typ. For 1S	yes	I2C prog.	10-bit				Fast-IN-Charge (DPDM) Event detection and port pwr. path ctrl	QFN 4x4
SC8913	4.5-24V	30V	1-4s	int.	12A	Buck	VBAT-24V	I2C prog.	5A	20W typ. For 1S	yes	I2C prog.	10-bit				Fast-IN-Charge (DPDM) Event detection port pwr. path ctrl	QFN 6x6
SC8933	4.5-14V	16V	1s	Int.	10A	Buck	5-14V	I2C prog.	5A	24W typ.	yes	I2C prog.	IMON	yes			Event detection pwr. path ctrl * 3	QFN 4x4
SC8934	4-13.5V	16V	1s	Int.	10A	Buck	5-13.5V	I2C prog.	5A	24W typ.	yes	I2C prog.	IMON	yes			Event detection pwr. path ctrl * 3 Fast-IN-Charge (DPDM)	QFN 4x4
SC8949	4.4-6V	9V	1s	Int.	10A	Buck	4.5-6V	I2C/FB	6A	15W/18W/24W for 2S	yes	I2C	IMON	yes			Integrated N-Gate drives for up to 3USB ports; Voltage and current monitor through IMON pin	QFN 4x4
SC8930A	4-13.5V	20V	1-2s	Int.	3A	Buck				10W/15W for 1S/2S				Yes	Yes		Thermal Regulation Status indication	QFN3x3
SC8930B	4-13.5V	20V	1-2s	Int.	3A	Buck				10W/15W for 1S/2S				Yes Jeita	Yes		Thermal Regulation Status indication	QFN3x3
SC8931	4-13.5V	20V	1-2s	Int.	3A	Buck				10W							Thermal Regulation Status indication	QFN3x3
SC8932A	4-13.5V	20V	1-2s	Int.	3A	Buck				10W/15W for 1S/2S	yes			Yes Jeita	Yes		Thermal Regulation Status indication	QFN3x3
SC89133	4-24V	30V	1-3s	Int	5A	Buck				16W typ. For 1S		Res Prog		Yes Jeita	Yes	Yes	Battery Detection Thermal Regulation	QFN3.5x5.5
SC89171	4-24V	30V	1-4s	Int	5A	Buck				16W typ. For 1S		Res Prog		Yes Jeita	Yes	Yes	Battery Detection Thermal Regulation	QFN3.5x5.5

*如果是外置MOS架构，最大输出电流能力取决于外部功率器件选型

*BC1.2: 表示集成DPDM智能接口，可以支持智能端口检测，支持BC1.2规定的DCP模式，苹果模式等

产品一览 – Boost Charger



Part Number	VIN range	Abs. VIN (max)	Battery Cell #	MOS	Charge Current (max)	Topology	OTG voltage range	Prog. OTG Voltage	Max. OTG current	Rec'd app. power level	I2C Ctrl.	Prog. Ilim	NTC	Safety Timer	Cell balance	Other feature	Package
SC8804	2.7-36V	40V	2-6s	ext.	10A+	Boost	2.7-VBAT	PWM prog.	5A+	60W typ.		PWM prog.					QFN 4x4
SC8804C	2.7-36V	40V	2-6s	ext.	10A+	Boost	2.7-VBAT	PWM prog.	5A+	60W typ.		PWM prog.				DPDM Function	QFN 4x4
SC8921	4.5-5.5V	16V	2-3s	int.	1.6A	Boost				10W				24Hr			ESOP-8
SC8922	4.5-5.5V	16V	2-3s	int.	2.5A	Boost				15W			yes	24Hr	yes	power path ctrl	QFN 4x4
SC8922A	4.5-5.5V	16V	2-3s	int.	2.5A	Boost				15W			yes	24Hr	yes		QFN 4x4

*如果是外置MOS架构，最大输出电流能力取决于外部功率器件选型

*BC1.2：表示集成DPDM智能接口，可以支持智能端口检测，支持BC1.2规定的DCP模式，苹果模式等

产品一览 – Power Bank SoC Charger



3 in 1 – without MCU

Part Number	Type	VIN range	Abs. VIN (max)	Battery Cell #	MO S	Charge Current (max)	Topology	Port Number	OTG voltage range	Max. Charging current	Light in discharging	Max. OTG current	Rec'd app. power level	Pass-through	VBAT UVP	Small Current mode	Flash-light	Other feature	Package
SC9802	3 in 1	4.5-5.5V/ 4.5-13.2V	6.5V/16V	1s	int./ext.	12A	Buck*2		5.1V / 4.5~13.2V		no	3.3A / 5A	15W + 18W					dual channel; auto port ctrl (BC1.2 & type-C); Fast-IN-Charge	QFN 5x6
NX9810	3 in 1	4.5-5.5V	6.5V	1s	Int.	5A	Buck	3, ABC	5.1V	3A	Always on	3.4A	5V3.4A	yes	2.9V	yes	yes	No cold protection for discharging mode	QFN 4x4
NX9810A	3 in 1	4.5-5.5V	6.5V	1s	Int.	5A	Buck	3, ABC	5.1V	3A	Always on	3.4A	5V3.4A	no	2.9V	yes	yes	No cold protection for discharging mode	QFN 4x4
NX9810B	3 in 1	4.5-5.5V	6.5V	1s	Int.	5A	Buck	3, ABC	5.1V	3A	Only 5s	3.4A	5V3.4A	yes	2.9V	yes	yes	No cold protection for discharging mode	QFN 4x4
NX9810C	3 in 1	4.5-5.5V	6.5V	1s	Int.	5A	Buck	3, ABC	5.1V	2A	Always on	2.7A	5V2.7A	yes	2.9V	yes	yes	No cold protection for discharging mode	QFN 4x4
NX9810E	3 in 1	4.5-5.5V	6.5V	1s	Int.	5A	Buck	3, ABC	5.1V	2A	Always on	2.1A	5V2.1A	no	2.6V	yes	no	Support cold protection for discharging mode	QFN 4x4
NX9810F	3 in 1	4.5-5.5V	6.5V	1s	Int.	5A	Buck	3, ABC	5.1V	2A	Always on	2.4A	5V2.4A	no	2.6V	yes	no	Support cold protection for discharging mode	QFN 4x4
NX9810G	3 in 1	4.5-5.5V	6.5V	1s	Int.	5A	Buck	3, ABC	5.1V	2A	Always on	3A	5V3A	no	2.6V	yes	no	Support cold protection for discharging mode	QFN 4x4
NX9810H	3 in 1	4.5-5.5V	6.5V	1s	Int.	5A	Buck	3, ABC	5.1V	2A	Always on	2.1A	5V2.1A	no	2.85V	yes	no	Support cold protection for discharging mode	QFN 4x4
NX9811	3 in 1	4.5-5.5V	6.5V	1s	Int.	5A	Buck	4, AABC	5.1V	3A	Always on	3.4A	5V3.4A	yes	2.9V	yes	yes	No cold protection for discharging mode	QFN 4x5
NX9811A	3 in 1	4.5-5.5V	6.5V	1s	Int.	5A	Buck	4, AABC	5.1V	3A	Always on	3.4A	5V3.4A	no	2.9V	yes	yes	No cold protection for discharging mode	QFN 4x5
NX9811B	3 in 1	4.5-5.5V	6.5V	1s	Int.	5A	Buck	4, AABC	5.1V	3A	Only 5s	3.4A	5V3.4A	yes	2.9V	yes	yes	No cold protection for discharging mode	QFN 4x5

产品一览 – Power Bank SoC Charger

2 in 1 – MCU needed

Part Number	Type	VIN range	Abs. VIN (max)	Battery Cell #	MOS	Charge Current (max)	Topology	Port Number	OTG voltage range	Max. Charging current	Max. OTG current	Rec'd app. power level	Pass-through	NTC	Small Current mode	Flashlight	Other feature	Package
SC9801	2 in 1	4.5-5.5V/ 4.5-13.2V	6.5V/1 6V	1s	int. /ext.	12A	Buck*2		5.1V / 4.5~13.2V		3.3A / 5A	15W + 18W					dual channel; port ctrl (BC1.2 & type-C) Fast-IN-Charge, int. power path	QFN 5x6
NX9812	2 in 1	4.5-5.5V	6.5V	1s	Int.	5A	Buck	3, ABC	5.1V	3A	3.4A	5V2.1~3.4A	Yes	Yes	Yes	Yes	Support 4.2/4.3/4.35/4.4/4.5VBAT	QFN 4x4
NX9812C	2 in 1	4.5-5.5V	6.5V	1s	Int.	5A	Buck	3, ABC	5.1V	3A	3.4A	5V2.1~3.4A	Yes	Yes	Yes	Yes	Support 4.2/4.3/4.35/4.4/4.5VBAT	QFN 4x4
NX9812D	2 in 1	4.5-5.5V	6.5V	1s	Int.	5A	Buck	3, ABC	5.1V	3A	3.25A	5V2.1~3.4A	Yes	Yes	Yes	Yes	Support 4.2/4.3/4.35/4.4VBAT	QFN 4x4
NX9813	2 in 1	4.5-5.5V	6.5V	1s	Int.	5A	Buck	4, AABC	5.1V	3A	3.4A	5V2.1~3.4A	Yes	Yes	Yes	Yes	Support 4.2/4.3/4.35/4.4/4.5VBAT	QFN 4x5
NX9813D	2 in 1	4.5-5.5V	6.5V	1s	Int.	5A	Buck	4, AABC	5.1V	3A	3.25A	5V2.1~3.4A	Yes	Yes	Yes	Yes	Support 4.2/4.3/4.35/4.4VBAT	QFN 4x5



Battery Protector

更多产品，请联系工作人员，或关注“上海南芯半导体科技有限公司”公众号或公司网站: www.southchip.com

产品一览 – Battery Protector

Single cell battery protector

Part Number	Support cell	Rdson	VOCV	VOCV hys.	VODV	VODV hys.	IODC	IOCC	t _{ocv} /t _{odv} /t _{odc} /t _{occ}	0V charger	Package
SC5510A	1	9mΩ	4.3V	200mV	2.5V	400mV	8A	8A	128ms/40ms/8ms/8ms	√	DFN 2x2-8L
SC5510B	1	9mΩ	4.425V	200mV	2.8V	200mV	8A	8A	128ms/40ms/8ms/8ms	√	DFN 2x2-8L
SC5510C	1	9mΩ	4.3V	200mV	2.8V	200mV	8A	8A	128ms/40ms/8ms/8ms	√	DFN 2x2-8L
SC5510D	1	9mΩ	4.425V	200mV	2.5V	400mV	8A	8A	128ms/40ms/8ms/8ms	√	DFN 2x2-8L
SC5510E	1	9mΩ	4.275V	200mV	2.5V	400mV	7A	6A	128ms/40ms/8ms/8ms	√	DFN 2x2-8L
SC5510EH	1	9mΩ	4.275V	200mV	2.5V	400mV	7A	6A	128ms/40ms/8ms/8ms	×	DFN 2x2-8L
SC5510F	1	9mΩ	4.3V	200mV	2.5V	400mV	11A	10A	128ms/40ms/8ms/8ms	√	DFN 2x2-8L
SC5510FH	1	9mΩ	4.3V	200mV	2.5V	400mV	11A	10A	128ms/40ms/8ms/8ms	×	DFN 2x2-8L
SC5510G	1	9mΩ	4.3V	200mV	2.5V	400mV	13A	10A	256ms/80ms/16ms/16ms	√	DFN 2x2-8L
SC5510H	1	9mΩ	4.4V	200mV	2.8V	400mV	7A	6A	128ms/40ms/8ms/8ms	√	DFN 2x2-8L
SC5510I	1	9mΩ	4.475V	200mV	2.5V	400mV	11A	10A	128ms/40ms/8ms/8ms	√	DFN 2x2-8L
SC5510J	1	9mΩ	4.275V	200mV	2.5V	400mV	5A	5A	128ms/40ms/8ms/8ms	√	DFN 2x2-8L
SC5510K	1	9mΩ	4.475V	200mV	2.5V	400mV	8A	8A	128ms/40ms/8ms/8ms	√	DFN 2x2-8L
SC5510L	1	9mΩ	4.3V	200mV	2.95V	200mV	8A	8A	128ms/40ms/8ms/8ms	√	DFN 2x2-8L
SC5510M	1	9mΩ	4.275V	200mV	2.5V	400mV	13A	10A	256ms/80ms/16ms/16ms	√	DFN 2x2-8L
SC5511A	1	9mΩ	4.425V	200mV	2.5V	400mV	8A	5.3A	128ms/40ms/8ms/8ms	√	DFN 2.5x3.5-6L
SC5516A	1	19mΩ	4.3V	200mV	2.4V	600mV	10A	2.4A	256ms/80ms/16ms/16ms	√	SOT23-5
SC5516B	1	19mΩ	4.425V	200mV	2.8V	200mV	5.2A	4.8A	256ms/80ms/16ms/16ms	√	SOT23-5
SC5516C	1	19mΩ	4.275V	200mV	2.8V	200mV	5.2A	4.8A	256ms/80ms/16ms/16ms	√	SOT23-5

产品一览 – Battery Protector

Multi-cells battery protector

Part Number	Support cell	R _{dson}	V _{ocv}	V _{ocv hys.}	V _{odv}	V _{odv hys.}	I _{odc}	I _{occ}	t _{DOC1} /t _{DOC2} /t _{sc} /t _{coc}	T _{COT} /T _{CUT} /T _{DOT} /T _{DUT}	0V battery charging	Cell balancing	V _{BAL}	Stacked application	Package
SC5550BABA	2-5	Ext. Mos	4.375V	200mV	2.5V	200mV	+45mV	-15mV	24ms/1024μs/512μs/10ms	+45°C/+0°C/+70°C/-15°C	√	×	/	√	TSSOP - 20
SC5650AIAA	2-5	Ext. Mos	4.425V	100mV	2.3V	200mV	+80mV	-10mV	24ms/1024μs/512μs/10ms	+45°C/+0°C/+70°C/-15°C	√	√	4V	√	TSSOP - 20



DC-DC

更多产品，请联系工作人员，或关注“上海南芯半导体科技有限公司”公众号或公司网站：www.southchip.com

产品一览 – Buck-boost DCDC




Part Number	VIN range	Abs. VIN (max)	VOUT range	IOUT (max)	MOS	Topology	fsw	I2C Ctrl	Prog. Vout	Input ILIM	Constant Current Mode	IOUT monitor	PFM	FPWM	Other feature	Package
SC8701	2.7-36V	40V	2.7-36V	5A~10A	ext.	Buck-boost	200kHz ~ 600kHz		PWM	√	√	ILIM pin		√		QFN 4x4
SC8703	2.7-28V	30V	2.7-28V	5A~10A	ext.	Buck-boost	200kHz ~ 600kHz		PWM	√	√	ILIM pin	√			QFN 4x4
SC8903	2.7-22V	24V	2.7-22V	5A	int.	Buck-boost	230kHz / 460kHz		PWM	√	√	ILIM pin	√	√		QFN 6x6
SC8903A	2.7-22V	24V	2.7-22V	5A	int.	Buck-boost	230kHz / 460kHz		PWM	√	√	ILIM pin	√	√	No Short protection	QFN 6x6
SC8721	2.7-22V	25V	2.4-22V	5A	int	Buck-boost	260kHz ~ 920kHz	√	I2C		√	CSO pin	√		2.4V short circuit Vth	QFN 4x4
SC8721A	2.7-22V	25V	0.7-22V	5A	int	Buck-boost	260kHz ~ 920kHz	√	I2C		√	CSO pin	√		0.7V short circuit Vth	QFN 4x4
SC8721B	2.7-22V	25V	0.7-22V	5A	int	Buck-boost	260kHz ~ 920kHz	√	I2C		√	CSO pin	√		No short circuit protection, for e-cigar application	QFN 4x4
SC8815	2.7-36V	40V	2.7-28V	5A~10A	ext.	Buck-boost	150kHz ~ 450kHz	√	I2C	√	√	10-bit ADC	√	√		QFN 4x4
SC8915	2.7-36V	40V	2.7-28V	5A	int. (2)	Buck-boost	150kHz ~ 450kHz	√	I2C	√	√	10-bit ADC	√	√		QFN 5x5

产品一览 – Buck DCDC

Part Number	VIN range	Abs. VIN (max)	VOUT range	IOUT (max)	MOS	Topology	fsw	Almost 100% mode	Cable comp.	PFM	FPWM	Constant Current Mode	Constant Power Mode	Other feature	Package
SC8001	2.7-36V	40V	2.7-VIN	5A~10A	ext.	Buck	200kHz ~ 600kHz				√	1-rail, high side sense		Prg, VOUT by PWM; Input current limit	QFN 4x4
SC8001A	2.7-36V	40V	2.7-VIN	5A~10A	ext.	Buck	200kHz ~ 600kHz			√		1-rail, high side sense		adj. UVLO; Input current limit	QFN 4x4
SC8002	4.6-36V	42V	4.6-VIN / Fixed 5V	5A~10A	ext.	Buck	80kHz ~ 600kHz	√	Fixed	√	√	2-rail, low side sense	√	Adjustable peak current limit	QFN 3x3
SC8014	2.7-36V	40V	2.7-VIN	6A	ext.	Buck	150kHz ~ 450kHz	√		√	√	1-rail, high side sense		Voltage adjust by PWM	QFN 6x6
SC8102	4.6-36V	42V	4.6-VIN / Fixed 5V	6A	int.	Buck	80kHz ~ 600kHz	√	Fixed	√	√	2-rail, low side sense	√	Dual DPDM port (BC1.2) interface	QFN 5x5
SC8102A	4.6-36V	42V	4.6-VIN / Fixed 5V	6A	int.	Buck	80kHz ~ 600kHz	√	Fixed	√		2-rail, low side sense	√	DPDM port (BC1.2) + Type-C	QFN 5x5
SC8103	4.6-36V	42V	4.6-VIN / Fixed 5V	4.5A	int.	Buck	80kHz ~ 600kHz	√	Fixed	√	√	2-rail, low side sense	√	DPDM port (BC1.2) + Type-C	QFN 5x5
SC8111	4.6-36V	42V	4.6-VIN / Fixed 5V	6A	int.	Buck	80kHz ~ 600kHz	√	Adj.	√	√	2-rail, high side sense Apple OCP supported	√	Dual DPDM port (BC1.2)	QFN 5x5
SC8112A	4.6-36V	42V	4.6-VIN / Fixed 5V	6A	int.	Buck	80kHz ~ 600kHz	√	Adj.	√		2-rail, high side sense Apple OCP supported	√	DPDM port (BC1.2) + Type-C	QFN 5x5
SC8112	4.6-36V	42V	4.6-VIN / Fixed 5V	6A	int.	Buck	80kHz ~ 600kHz	√	Adj.	√	√	2-rail, high side sense	√	Dual DPDM port (BC1.2)	QFN 5x5
SC8101	4.6~32V	40V	4.6-VIN / Fixed 5.1V	5A	Int.	Buck	80kHz ~ 1.2MHz	√	Adj.	√		1-rail, high side sense	√	External low-side power-MOS driver	QFN 3x3
NEW SC8171	5-100V	110V	1.2-VIN	1.2A	Int.	Buck	100kHz ~ 1MHz	√	Adj.	√		NA		Low Iq, COT with fast load transient; Enable, Power Good, Few external components	ESOP8

产品一览 – Boost DCDC

Part Number	VIN range	Abs. VIN (max)	VOUT range	MOS	Topology	Fsw	Prog. Vout	Peak current limit	Input ILIM	Constant Current Mode	IOUT monitor	PFM	FPWM	Isolation MOS driver	Other feature	Package
SC8201	2.7-30V	40V	VIN-36V	ext.	Boost	200kHz ~ 600kHz	PWM	20A	√	√	ILIM pin		√			QFN 4x4
SC8329	2.7~13V	20V	VIN~17V	Int.	Boost	200kHz ~ 2.2MHz		20A				√	√	√		QFN 4x3
 SC8328	2.7~13V	20V	VIN~17V	Int.	Boost	200kHz ~ 2.2MHz		15A				√	√			QFN 4x3



AMOLED PMIC

更多产品，请联系工作人员，或关注“上海南芯半导体科技有限公司”公众号或公司网站: www.southchip.com

产品一览 – AMOLED Display Power Supply



Part Number	VIN range	ELVDD & ELVSS IOUT(max)	AVDD IOUT(max)	ELVDD voltage range	ELVSS voltage range	AVDD voltage range	ELVSS topology	MODE	ELVDD OCP	Target size	Other feature	Package
SC6104	2.5-4.6V	1.2A	≥ 150mA	4.6V~5.6V, ±0.5%	-1.4V~ -6.4V, ±1%	5.8V~7.9V, ±1%	Dual phase, inverting buck-boost	ELVDD: FPWM ELVSS: FPWM AVDD: PFM	0.5~1.2A prog.	≥ 8"	P2P TPS65635	QFN 4x4 – 32L
SC6008	2.5-4.6V	800mA	100mA	4.6V~5.0V, ±0.5%	-1.4V~ -5.4V, ±1.2%	5.8V~6.1V, ±1%	Single phase, inverting buck-boost	ELVDD: FPWM ELVSS: PFM AVDD: PFM	Internal	~8"	P2P SGM3836A	QFN 3x3 – 16L
SC6006	2.5-4.6V	650mA	100mA	4.6V~5.0V, ±0.5%	-1.4V~ -5.4V, ±1.2%	5.8V~6.1V, ±1%	Single phase, inverting buck-boost	ELVDD: FPWM ELVSS: PFM AVDD: PFM	Internal	~6"	P2P TPS65651	QFN 3x3 – 16L



AC-DC

更多产品，请联系工作人员，或关注“上海南芯半导体科技有限公司”公众号或公司网站：www.southchip.com

产品一览 – 通用类SSR控制器



SSR Multi-Mode Flyback Controller

Part Number	Standby	Fsw_Max	Control Mode	Jitter	Ext-OTP	Int-OTP	ZCD Pin			OLP	Adaptive OCP	VDD OVP	Recommended Application	Package
							Line OVP	Bin Bout	OVP					
SC3030	<50mW	67KHz	CCM/QR/DCM	A	/	A	/	165uA / 150uA	3.5V	A	A	37.2V	高性价比	SOT23-6

A: Auto-recovery;

Y: The feature is enabled;

/ : The feature is not enabled;

产品一览 – USB-PD快充SSR控制器(支持CCM模式)



SSR PMW Flyback Controller (USB PD)

Part Number	Standby	Fsw_Max	Control Mode	HV_Pin Bin Bout	X-Cap Dis-charge	Jitter	Ext-OTP	Int-OTP	ZCD Pin			OLP	Adaptive OCP	VDD OVP	Recommended Application	Package
									Line OVP	Bin Bout	OVP					
SC3001A	<50mW	67kHz	CCM/QR/DCM		/	A	/	A	/			A	A		高性价比	SOT23-6
SC3001B	<50mW	85kHz	CCM/QR/DCM	/	/	A	/	A	/			A	A		两段式过压保护	
SC3001C	<50mW	100kHz	CCM/QR/DCM		/	A	/	A	/			A	/		高频、高性价比	
SC3002A	<50mW	67kHz	CCM/QR/DCM	/	/	A	A	A	/	165uA / 150uA	4.5V	A	A	40V	具备自适应过流保护供适用于单口超宽范围	SOP8
SC3002B	<50mW	85kHz	CCM/QR/DCM		/	A	A	A	/			A	A			
SC3002C	<50mW	100kHz	CCM/QR/DCM		/	A	A	A	/	A		/				
SC3002D	<50mW	67kHz	CCM/QR/DCM		/	A	A	A	/	A		/				
SC3002E	<50mW	85kHz	CCM/QR/DCM		/	A	A	A	/	A		/				
SC3002H	<50mW	130kHz	CCM/QR/DCM		/	A	A	A	/			A	/		高频版本, 无原边LPS 低漏感平面变压器	SOP8
SC3005B	<30mW	85kHz	CCM/QR/DCM	A	Y	A	A	A	/	/		A	A		原边LPS	
SC3005E	<30mW	85kHz	CCM/QR/DCM	A	Y	A	A	A	/	/		A	/		小功率、多口	

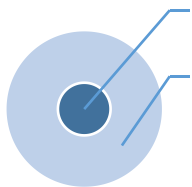


* 粗体为现阶段主推版本

产品一览 – USB-PD快充SSR控制器(高频QR系列)

SSR for USB-PD QR Flyback Controller

Part Number	Standby	Fsw_Max	Control Mode	HV_Pin BIN/BOUT	X-Cap Dis-charge	Jitter	Ext-OTP	Int-OTP	ZCD OVP	OLP	Adaptive OCP	VDD OVP	DRV	Recommended Application	Package
SC3021A	<30mW	170kHz	QR/DCM	105Vdc / 90Vdc	A	A	A	A	4.45V	A	A	36.8V	GaN直驱	单口65W, 有原边LPS	SSOP10
SC3021B	<30mW	260kHz	QR/DCM		A	A	A	A		A	A			单口65W高频, 有原边LPS	
SC3021C	<30mW	170kHz	QR/DCM		A	A	A	A		/	/			多口, X电容放电	
SC3021D	<30mW	170kHz	QR/DCM		/	A	A	A		/	/			多口, 小功率, 无X电容放电	
SC3021P	<30mW	170kHz	QR/DCM		A	A	A	A		A	A		Peakload		
SC3022A	<30mW	170kHz	QR/DCM		A	A	A	A		A	A		MOS驱动	单口65W, 有原边LPS	
SC3022B	<30mW	260kHz	QR/DCM		A	A	A	A		A	A			单口65W高频, 有原边LPS	
SC3022C	<30mW	170kHz	QR/DCM		A	A	A	A		/	/			多口, X电容放电	
SC3022D	<30mW	170kHz	QR/DCM		/	A	A	A		/	/			多口, 小功率, 无X电容放电	
SC3022L	<30mW	130kHz	QR/DCM		A	A	A	A		A	A			低频130KHz版本	



SC30
21x系
列支持
GaN
直驱
兼容
xxx13
42

产品一览 – USB-PD快充SSR控制器(高频QR系列)

SSR for USB-PD FSSR for USB-PD QR Flyback Controller Integrated GaN

Part Number	Standby	Fsw_Max	Control Mode	HV_Pin Bin/Bout (Vdc)	X-Cap Dis-charge	Jitter	Ext-OTP	Int- OTP	ZCD Pin OVP(V)	FB OLP	Adaptive OCP	VDD OVP (V)	DRV	Recommended Application	Package
SC3050	<30mW	175KHz	QR/DCM	105/90	/	A	/	A	4.45	A	/	40	Int-GaN	25W~40W	DFN5x6-14
SC3056	<30mW	175KHz	QR/DCM	105/90	/	A	/	A	4.45	A	/	40	Int-GaN	25W~40W	DFN5x6-14

NEW

产品一览 - 次级同步整流SR



SR 控制器

Part Number	Mode	HV and VSEN Pin Rating	Maximum Frequency	DRV Voltage	DRV Sink Current	Quiescent Current	Minimum Turn-on Time	Turn-on Delay	Turn-off Delay	Turn-off Propagation	Other Feature	Package
SC3501	CCM/QR/DCM	120V	Up to 400KHz	8V/6V	4A	105uA	0.70~0.90~1.20(uS)	40nS	20nS	10nS		SOT23-6
SC3502	CCM/QR/DCM	120V	Up to 300KHz	8V/6V	4A	105uA	0.95~1.25~1.55(uS)	25nS	20nS	10nS	低频抗干扰	SOT23-6
SC3503	CCM/QR/DCM	120V	Up to 1MHz	8V/6V	4A	105uA	0.30~0.40~0.50(uS)	20nS	20nS	10nS	高频 GaN	SOT23-6
SC3520	CCM/QR/DCM	120V	Up to 1MHz	5V	4A	105uA	0.30~0.40~0.50(uS)	20nS	20nS	10nS	次级GaN驱动	SOT23-6

SR Integrated MOSFET

Part Number	Mode	VDS Rating	Maximum Frequency	Quiescent Current	Minimum Turn-on Time	Turn-on Delay	Turn-off Delay	Turn-off Propagation	RDS(ON)	Application	Package
SC3510	CCM/QR/DCM	100V	Up to 400KHz	110uA	0.70~0.90~1.20 (uS)	40nS	25nS	10nS	10mΩ	45W	DFN5x6
SC3511	CCM/QR/DCM	100V	Up to 400KHz	110uA	0.70~0.90~1.20 (uS)	40nS	25nS	10nS	10mΩ	33W	SOP8
SC3512	CCM/QR/DCM	60V	Up to 400KHz	110uA	0.70~0.90~1.20 (uS)	40nS	25nS	10nS	12mΩ	20W	SOP8



Charge Pump

更多产品，请联系工作人员，或关注“上海南芯半导体科技有限公司”公众号或公司网站: www.southchip.com

产品一览 – Charge Pump



Part Number	VIN range	Abs. VIN (max)	VOUT range	IOUT (max)	Topology	Support reverse mode	ADC integrated	Other feature	Package
SC8551	3-11V	20V	3-5V	8A	2:1 charger		√		CSP56 3.32mmx3.35mm
SC8551A	3-11V	20V	3-5V	8A	2:1 charger		√		CSP56 3.00mmx3.25mm
SC8547	3-11V	20V	3-5V	6A	2:1 charger		√	VOOC PHY integrated	CSP36 2.62mmx2.62mm
SC8545	3-11V	20V	3-5V	6A	2:1 charger		√	SCP PHY integrated	CSP36 2.62mmx2.62mm
SC8549	3-11V	20V	3-5V	6A	2:1 charger		√		CSP36 2.62mmx2.62mm
SC8502	4-21V	28V	4-11V	5A	4:2 charger/converter	√			CSP36 2.7mmx2.9mm



Wireless Charger

更多产品，请联系工作人员，或关注“上海南芯半导体科技有限公司”公众号或公司网站: www.southchip.com

产品一览 – Wireless Charger

Wireless AFE

Part Number	Type	VIN range	Abs. VIN (max)	Pout_max	Power Supply	Integrated MOS and Driver	Rdson	Current Demodulation	Voltage Demodulation	Q Detect	Other Feature	Package
SC5001	Tx	4V ~ 14V	16V	15W	Integrated LDO	yes	4* 15mΩ	√	√			FCQFN19_3x3
SC5002	Tx	4V ~ 16V	19V	15W	Integrated Buck	Yes	4* 14mΩ	√	√	√		FCQFN21_4x4
SC5003	Tx	2V ~ 20V	22V	20W	Integrated Buck	Yes	4* 14mΩ	√	√	√		FCQFN21_4x4
<small>AEC-Q100</small> SC5003Q	Tx	2V ~ 20V	22V	20W	Integrated Buck	Yes	4* 14mΩ	√	√	√		FCQFN21_4x4
SC5004	Tx	4V ~ 13V	15V	15W	Integrated LDO	Yes	4* 15mΩ	√	√			FCQFN19_4x4

Wireless SoC

Part Number	Type	VIN range	Abs. VIN (max)	Pout_max	Integrated MOS and Driver	Rdson	Current Demodulation	Voltage Demodulation	Q Detect	DPDM interface	CC1/2 interface	Package
SC9602	Tx	4V ~ 14V	16V	10W	yes	4* 20mΩ	√	√	√	√		FCQFN21_3x3
SC9603	Tx	1V ~ 14V	16V	10W	yes	4* 20mΩ	√	√	√	√		FCQFN21_3x3
<small>NEW</small> SC9608	Tx	2V ~ 14V	16V	15W	yes	4* 22mΩ	√	√	√	√	√	FCQFN25_4x4
SC9651	Rx	4V ~ 14V	16V	5W	yes	4* 20mΩ						FCQFN21_3x3



PD Controller

更多产品，请联系工作人员，或关注“上海南芯半导体科技有限公司”公众号或公司网站: www.southchip.com

产品一览 – PD Controller

Part Number	VIN range	Abs. VIN (max)	Integrated Driver	Integrated Vol. and Cur. Sense	Int'd LDO	Control Interface	Total ADC channels	ADC Resolution	Typical Application	DPDM	Type-C Port Role	PD	Proprietary protocol	OVP/UVP/ OCP/SCP/ OTP	Memory Type	Package
SC2001	2.7~24.5V	30V	NMOS	yes	yes	I2C/FB	8	10-bit	General DRP	DPDM x 4	DRP	PD 2.0/ 3.0 + PPS	FC/FCP/ AFC/ SCP/VOOC*	yes	MTP	QFN 4x4
SC2001V	2.7~24.5V	30V	NMOS	yes	yes	I2C/FB	8	10-bit	General DRP	DPDM x 4	DRP	PD 2.0/ 3.0 + PPS	FC/FCP/ AFC/ SCP/VOOC*	yes	MTP	QFN 4x4
SC2002	2.7~24.5V	30V	NMOS	yes	yes	I2C/FB/ OPTO	5	10-bit	Wall charger, Car charger 1A1C	DPDM x 2	DFP	PD 2.0/ 3.0 + PPS	FC/FCP/ AFC/ SCP/VOOC	yes	MTP	QFN 4x4
SC2003	2.7~24.5V	30V	NMOS	yes	yes	I2C	8	10-bit	1S Power bank AABC	DPDM x 4	DRP	PD 2.0/ 3.0 + PPS	FC/FCP/ AFC/ SCP/VOOC*	yes	MTP	QFN 4x4
SC2004	2.7~24.5V	30V	NMOS	yes	yes	NA	5	10-bit	Mobile Devices	DPDM x 1	UFP	PD 2.0/ 3.0 + PPS	FC/FCP/ AFC/ SCP	yes	MTP	QFN 4x4
SC2010A	2.5~24.5V	30V	2×NMOS	Yes	No	I2C/FB	8	10-bit	General DRP	DPDM×3	DRP	PD 2.0/ 3.0 + PPS	FC/FCP/ AFC /SCP/VOOC*	yes	OTP	QFN 4x4
SC2011	2.5~24.5V	30V	2×NMOS	Yes	No	I2C/FB	8	10-bit	Wall charger, Car charger 1A1C	DPDMx2	DFP	PD 2.0/ 3.0 + PPS	FC/FCP/ AFC /SCP/VOOC	yes	OTP	QFN 3x3
SC2012	2.5~24.5V	30V	1×NMOS	Yes	No	I2C/FB	5	10-bit	Wireless TX, Mobile devices, Bluetooth speaker	DPDMx1	UFP	PD 2.0/ 3.0 + PPS	FC/FCP/ AFC /SCP	yes	OTP	QFN 3x3
SC2151A	3.3V-22V	26V	1×NMOS	Yes	Yes	I2C/OPTO	7	10-bit	wall adapter, Travel adapter	DPDMx1	DFP	PD 2.0/ 3.0 + PPS	Apple/BC1.2 /FC2.0/FC3.0 /AFC/FCP/S CP/VOOC	yes	OTP	QFN 4x4
NEW SC2021A	3.3V-22V	26V	1×NMOS	Yes	Yes	I2C/FB/ OPTO	10	10-bit	wall adapter, Travel adapter, Car charger	DPDMx2	DFP	PD 2.0/ 3.0 + PPS	Apple/BC1.2 /FC2.0/FC3.0 /AFC/FCP/S CP/VOOC	yes	MTP	QFN 4x4
SC9711	4.6-36V	40V	1xNMOS	Yes	Yes				Wall charger, Multi-port charger	DPDMx2	DFP	PD 2.0/ 3.0 + PPS	SCP/FCP/ AFC/FC2.0//FC 3.0/Apple	yes		QFN4x5



Load Switch

更多产品，请联系工作人员，或关注“上海南芯半导体科技有限公司”公众号或公司网站：www.southchip.com

产品一览 – Load Switch



Part Number	Number of Outputs	VIN range	Abs. VIN (max)	I _{max}	R _{dson}	Current Limit	I _q typ.	Enable Ctrl	Status Indicator	DPDM Interface	Type-C Interface	Input UVP and OVP	Short Circuit Protection	Thermal Protection	Package
SC7000	1	4-5.6V	7V	6A	12 mΩ	0.5-5A prog.	92 μA			√		√	√	√	TSOT23-6
SC7001	1	4-5.6V	7V	6A	12 mΩ	0.5-5A prog.	92 μA	√	√			√	√	√	TSOT23-6
SC7002	1	4-5.6V	7V	6A	12 mΩ	0.5-5A prog.	92 μA			√		√	√	√	TSOT23-6
SC7004	1	4-5.6V	7V	6A	12 mΩ	0.5-5A prog.	92 μA		√	√		√	√	√	TSOT23-8
SC7005	1	4-5.6V	7V	6A	12 mΩ	0.5-5A prog.	145 μA		√		√	√	√	√	TSOT23-8



www.southchip.com

Your powerful bridge to future technology

高效 | 安全 | 优质 | 可靠

Thanks

欢迎来邮垂询产品信息

华南

frank-huang@southchip.com

华东/华北

gene-lu@southchip.com

台湾/其他地区

guoyu-yang@southchip.com

联系我们

上海

地址：上海市浦东新区晨晖路1000号214室

电话：021-5830 9616

深圳

地址：深圳市南山区留仙大道4168号众冠时代广场A座31楼

电话：0755-2691 9359