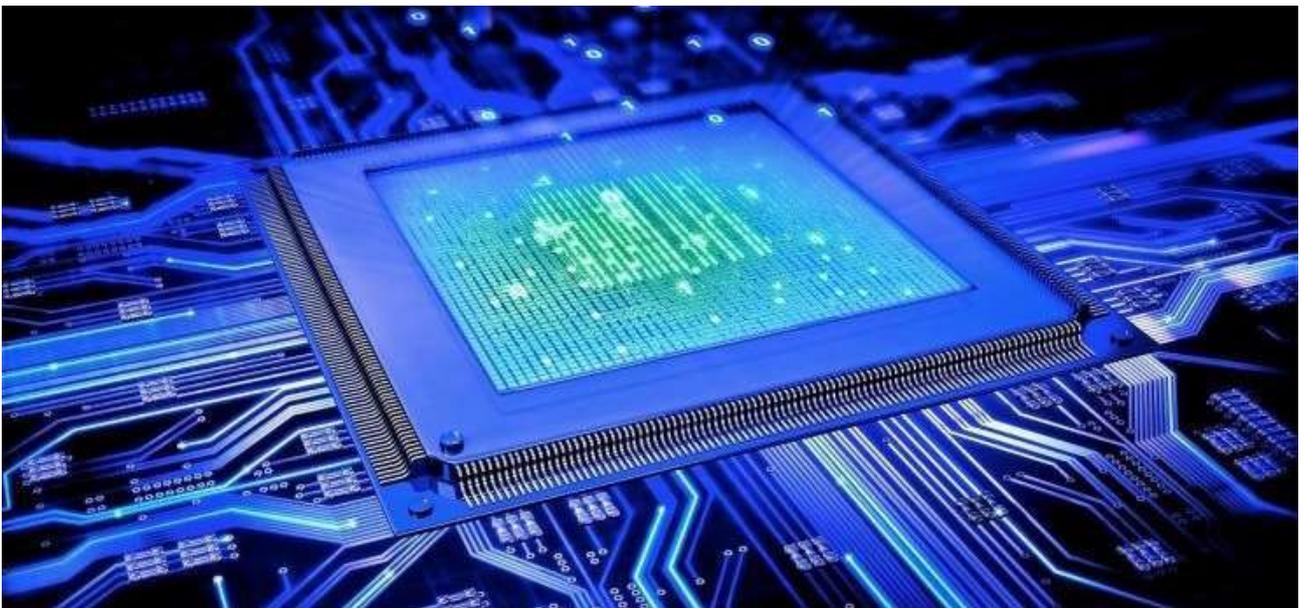
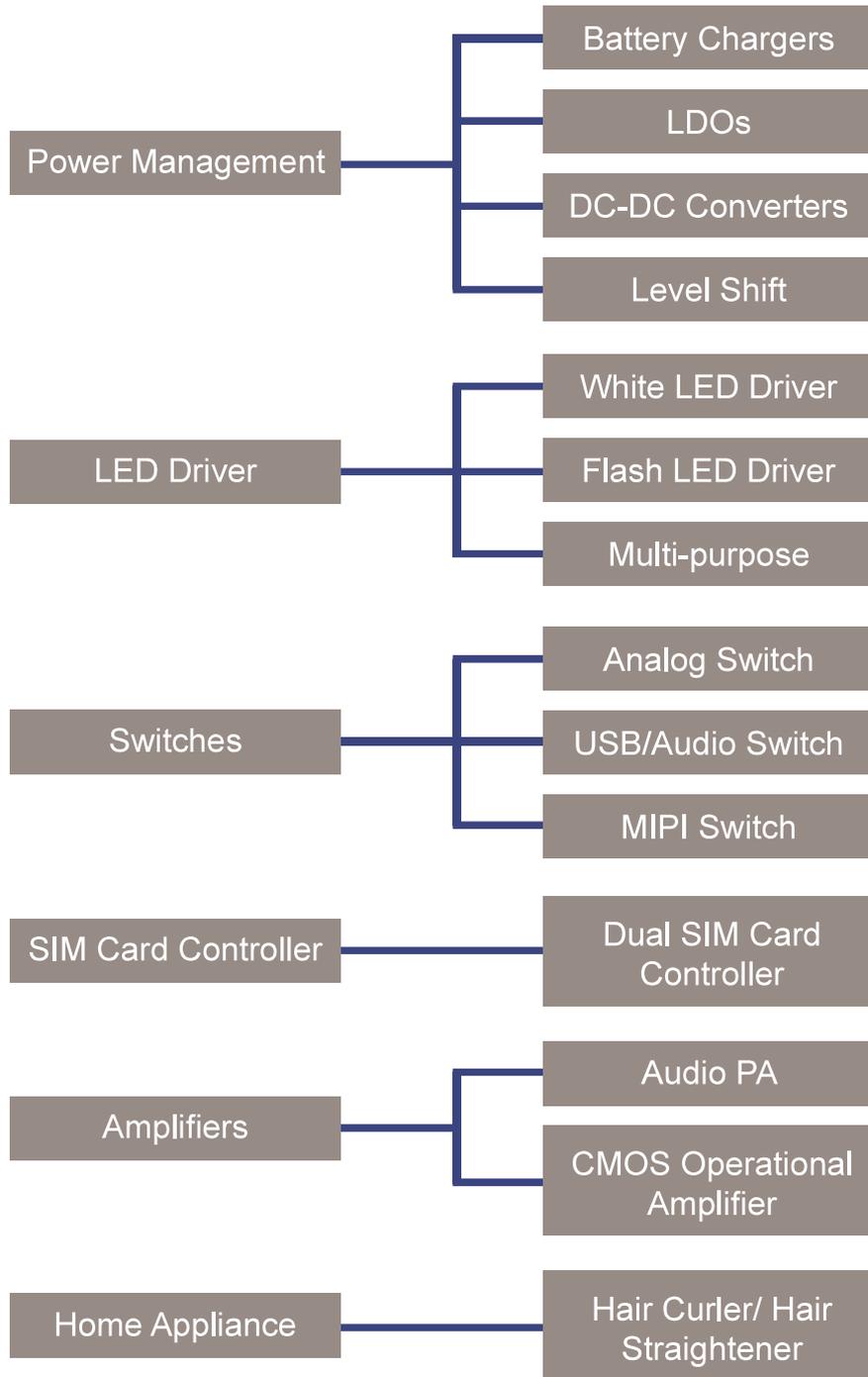


Broadchip Product Line

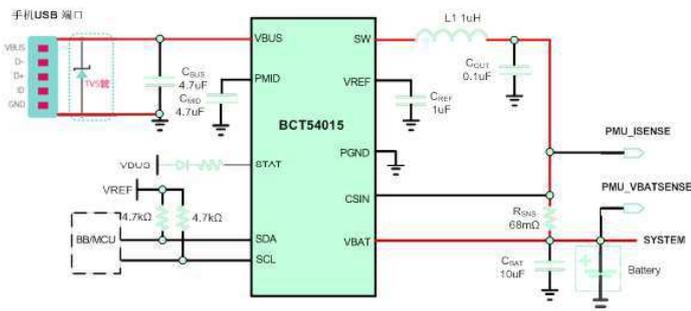


Switching Charger

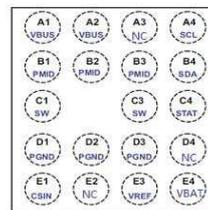
PART NO.	Description	Maximum Charge Current	VBUS(V)	VBUS_MAX (V)	Charge Voltage Range (V)	OTGBoost Current (mA)	Package	Cross Reference
BCT54015	1.6A Single-Cell Li-Ion Switching Charger with USB-OTG Boost Regulator	1.6	4.0-6.5	24	4.2-4.5	500	WLCSP-20	FAN54005 FAN54015
BCT24157	1.6A Single-Cell Li-Ion Switching Charger with USB-OTG Boost Regulator	1.6	4.0-6.5	24	4.2-4.5	500	WLCSP-20	BQ24157
BCT24158	2.0A Single-Cell Li-Ion Switching Charger with USB-OTG Boost Regulator	2.0	4.0-6.5	24	4.2-4.5	500	WLCSP-20	BQ24158
BCT24296	2.0A Single-Cell Li-Ion Switching Charger with USB-OTG Boost Regulator	2.0	4.0-6.5	24	4.2-4.5	500	QFN4X4-24	BQ24296
BCT24259	2.0A Single-Cell Li-Ion Switching Charger with USB-OTG Boost Regulator	2.0	4.0-6.5	24	4.2-4.5	500	WQFN4X4-24	BQ24259
BCT25896	High input voltage, 3.0A Single-Cell Li-Ion Switching Charger with USB-OTG Boost Regulator	3.0	4.0-6.5	24	4.2-4.5	500	QFN4X4-24	BQ25896
BCT24296P	2.0A Single-Cell Li-Ion Switching Charger with power-path	2.0	4.0-14	24	4.2-4.5	2000	WQFN4X4-24	BQ24296
BCT25896P	High, input voltage, 3.0A Single-Cell Li-Ion Switching Charger with power-path	3.0	4.0-6.5	24	4.2-4.5	500	QFN4X4-24	BQ24296
BCT24296B	3.0A Single-Cell Li-Ion Switching Charger with USB-OTG Boost Regulator	3.0	4.0-6.5	24	4.2-4.5	500	QFN4X4-24	BQ25895
BCT25895	4.5A Single-Cell Li-Ion Switching Charger with USB-OTG Boost Regulator	4.5	4.0-6.5	24	4.2-4.5	2000	WQFN4X4-24	BQ25895P
BCT25895P	4.0A Single-Cell Li-Ion Switching Charger with power-path	4.0	4.0-14	24	4.2-4.5	2000	WQFN4X4-24	BQ25895P

● Please contact our sales office for details.

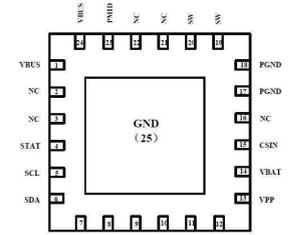
Typical Application Circuit



Pin Configuration (TOP View)



BCT54015/ BCT24157/BCT24158



BCT24296/BCT24259/BCT25896
BCT24296P/BCT25896P



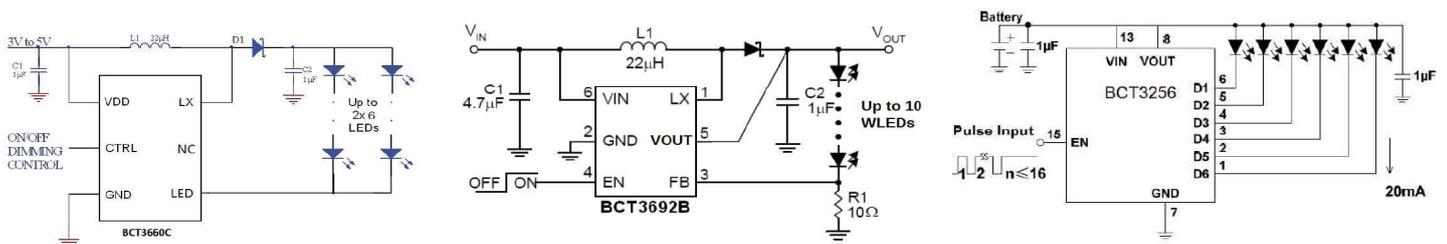
White LED Driver (Boost Serial)

PART NO.	Description	Dimming control	CH	VCC(V)	Iq(mA)	I _{sd} (μ A)	VREF(mV)	ILIM(mA)	V _{ovp} (V)	Package	Cross Reference
BCT3660B	White LED driver with PWM Dimming control for up to 10 LEDs in Series	PWM	1	3.0-5.5	1.8	1	200	700	40	DFN2x2-6L	AW9961 SGM3756 WD3138D
BCT3661B	White LED driver with digital pulse brightness control for up to 10 LEDs in Series	1-Wire	1	3.0-5.5	1.8	1	200	700	40	DFN2x2-6L	SGM3733B TPS61161
BCT3660C	60KHz, 0.8 % PWM Brightness Dimming, High Efficiency LED Driver	PWM	2x7	3.0-5.5	1.8	1	----	700	30	DFN2x2-6L	AW9961 SGM3749 TPS61161
BCT3661C	High Efficiency LED driver with digital pulse brightness control	1-Wire	2x7	3.0-5.5	0.4	1	----	700	30	DFN2x2-6L	SGM3749 TPS61161
BCT3692B	High Performance, Asynchronies Boost for 10 WLED Driver	PWM	1	3.0-5.5	0.4	1	200	700	40	SOT23-6L	KTD256/257 SGM3732/3755
BCT3693B	High Performance, Asynchronies Boost for 10 WLED Driver	1-Wire	1	3.0-5.5	0.4	1	200	700	40	SOT23-6L	RT8514, ET5120
BCT3662	True 2-Ch Boost Serial LED Driver	PWM	2	3.0-5.5	0.4	1	----	700	30	SOT23-6L	TPS61150 SGM3738 KTD3102

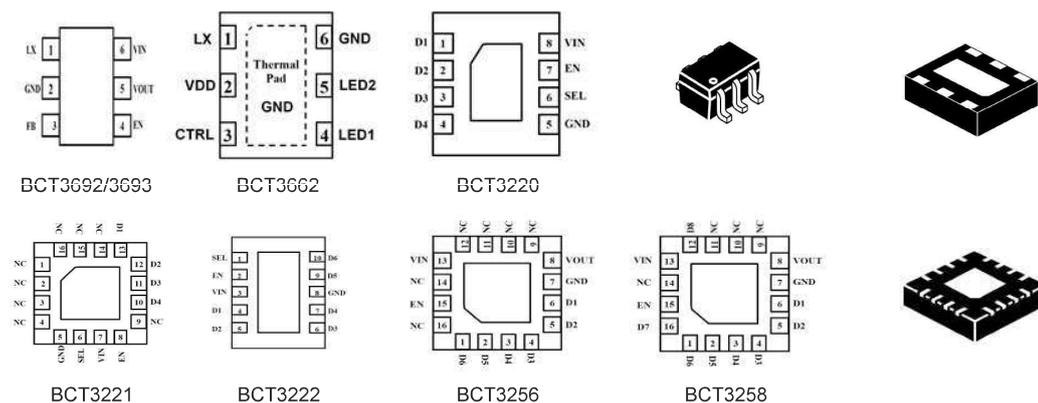
White LED Driver (Parallel)

PART NO.	Description	LED Connection	CH	V _{cc} (V)	V _{drop} (20mA)	I _{sd} (μ A)	Current Matching	V _{IH} (V)	V _{IL} (V)	Package	Cross Reference
BCT3220 BCT3221	4 Channel LED Driver	Anode or Cathode	4	2.7-5.5	50mV	1	2.00%	1.4	0.4	DFN-8L, QFN-16L	AW9364 SGM3131 SN3220
BCT3222	6 Channel LED Driver	Anode or Cathode	6	2.7-5.5	50mV	1	2.00%	1.6	0.4	DFN-10L	
BCT3256	6 Channel LED Driver	Anode	6	2.7-5.5	50mV	1	2.00%	1.6	0.4	QFN-16L	SGM3138 AW9356
BCT3258	8 Channel LED Driver	Anode	8	2.7-5.5	50mV	1	2.00%	1.6	0.4	QFN-16L	AW9358

Typical Application Circuit



Pin Configuration (TOP View)



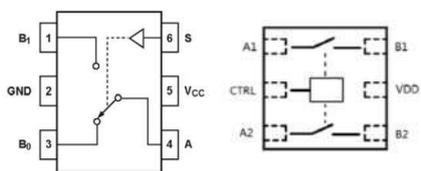
Analog Switch

PART NO.	Description	Config	VCC	ICC (uA)	RON	-3dB	VIH	VIL (V)	Package	Cross Reference
BCT4157 BCT4157B	Low-Voltage, 300MHz SPDT Analog Switch	SPDT	1.65-5.5	1	3	300	1.6	0.6	SC70-6 TDFN-6	FSA3157,PI5A3157 NLAS4157,SGM3157
BCT4257	Low-Voltage, 300MHz SPDT Analog Switch	SPDT	1.65-5.5	1	3	300	1.6	0.6	1X1DFN-6	74LVC1G3157
BCT4357	Low-Voltage, 300MHz SPDT Analog Switch	SPDT	1.65-5.5	1	3	300	1.6	0.6	SOT23-6	TS5A3159DBVR
BCT4223	Low-Voltage, Dual SPDT Analog Switch	SPDT(X2)	1.65-5.0	1	0.4	70	1.6	0.5	WQFN-10L	NLAS5223 PI3A223, SGM5223 FSA2259
BCT4268	Low-Voltage, Dual SPDT Analog Switch	SPDT(X2)	1.65-5.0	1	0.4	70	1.6	0.5	WQFN-10L	FSA2268 , PI3A2268, SGM2268
BCT4699	0.5Ω, 3.3V, Quad-SPDT Analog	SPDT(X4)	1.65-5.0	1	0.5	40	1.6	0.5	QFN-16L	FSA2467,PI3A412 SGM3699, NLAS3699
BCT4222A	High-Speed DPDT Analog Switch	DPDT	1.65-4.2	1	8	720	1.6	0.7	WQFN-10L	FSUB30 ,PI3USB10L NLAS7222 ,SGM7222
BCT4222B	High-Speed DPDT Analog Switch	DPDT	1.65-4.2	1	6.7	350	1.6	0.7	WQFN-10L	NLAS7222 ,SGM7228 TS3USB30E
BCT4222C	High-Speed DPDT Analog Switch	DPDT	1.65-4.2	1	7	720	1.6	0.7	MSOP-10L	SGM7222
BCT4227	720MHz DPDT Analog Switch for USB2.0 High Speed	DPDT	1.65-4.2	1	6.7	720	1.6	0.7	WQFN-10L	SGM7227
BCT4717	300MHz Dual SPDT Analog Switch	DPDT	1.8-5.5	1	8	300	1.5	0.6	WQFN-10L	SGM4717 NLAS4717F

USB/Audio Switch

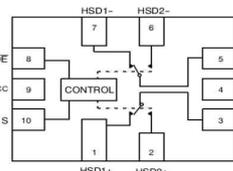
PART NO.	Description	VCC	ICC (uA)	Audio -Ron	USB -RON	USB -3dB	VIH (V)	VIL (V)	Package	Cross Reference
BCT4221	High-Speed & Low-Ron DPDT Analog Switch	1.65-4.2	0.02	1	8.5	720	1.5	0.5	WQFN-10L	FSA221
BCT4321A	High-Speed and Audio Switches with Negative Signal Capability	1.65-4.2	0.02	1	8.5	720	1.5	0.5	WQFN-10L	FSA221
BCT4321B	High-Speed & Low-Ron DPDT Analog Switch	1.65-4.2	0.02	1	8.5	300	1.5	0.5	WQFN-10L	FSA221
BCT4321N	High-Speed and Audio Switches with Negative Signal Capability(-2V)	1.65-5.5	0.02	1	8.5	720	1.5	0.5	WQFN-10L	FSA221

Pin Configuration (TOP View)

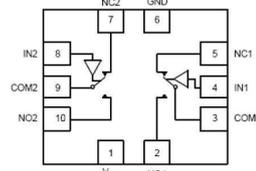


BCT4157

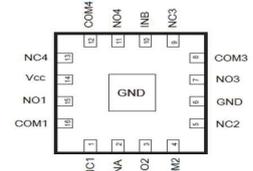
BCT4157B



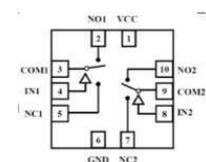
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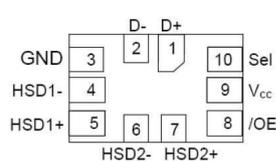
BCT4223



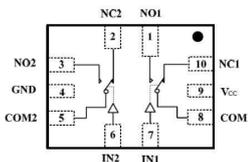
BCT4699



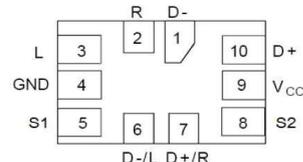
BCT4717



BCT4227



BCT4268



BCT4321A/B/N

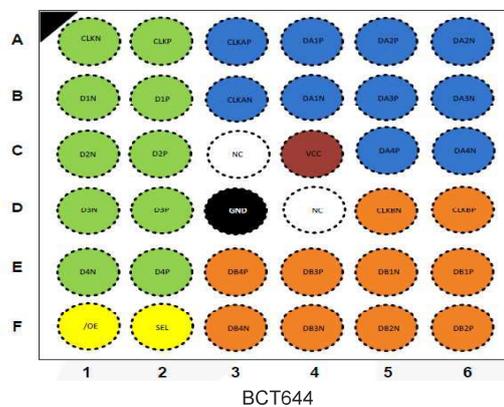
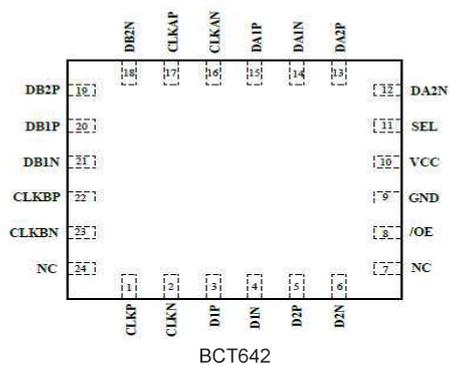
MIPI Switch

PART NO.	Description	Vin(V)	Configuration	Channels	Bandwith	Channel Signal Types	Package	Cross Reference
BCT642	Low Power, Three Port, Hi-Speed Differential Switch	2.65-4.35	SPDT(6x)	2DATA 1CLK	1Gbps/L	MIPI, Differential	QFN-24	FSA642
BCT644	2:1 MIPI D-PHY (1.5Gbps) 4-Data Lane Switch	2.65-4.35	SPDT(10x)	4DATA 2CLK	1.5Gbps/L	MIPI, Differential	WLCSP-36	FSA644

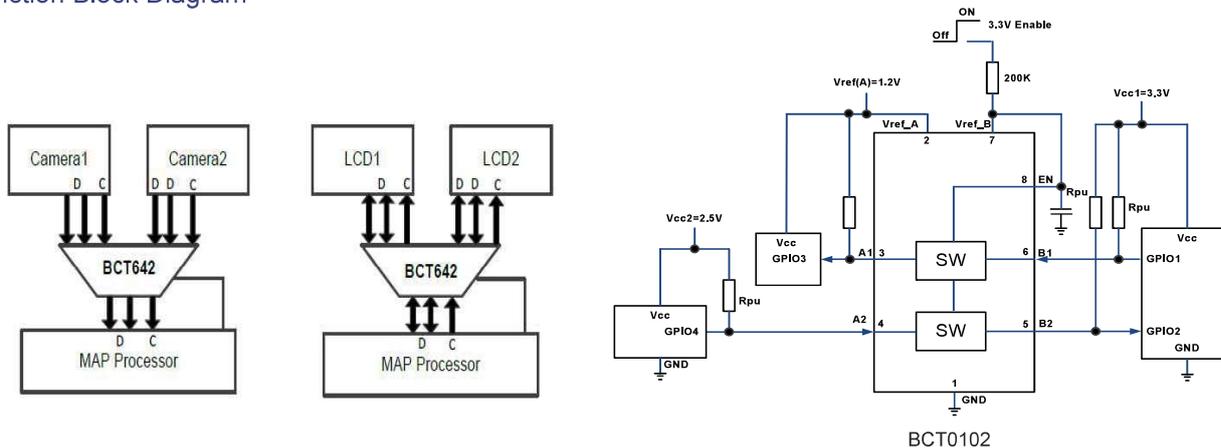
Level Shifter

PART NO.	Description	Vref_A (V) Min	Vref_A (V) Max	Vref_B (V) Min	Vref_B (V) Max	Ipass (mA) Max	Max Data Rate (Mbps)	No. of Bits	Package	Cross Reference
BCT0101	1Bit Bidirectional Level-Shifting	0.95	4.5	Vref_A +0.8	Vref_A +0.8	64	100	1	SOT23-6, SC70-6	TXB0101,SGM4552
BCT0102	2Bit Bidirectional Level-Shifting	0.95	4.5	Vref_A +0.8	Vref_A +0.8	64	100	2	WCSP-8	TXB0102,UM3302
BCT0104	4Bit Bidirectional Level-Shifting	1.65	3.6	2.3	5.5	100	24	4	QFN-14, WCSP-12	TXB0104,UM3304
BCT0202	2Bit Bidirectional Level-Shifting With Auto Direction Sensing	1.65	3.6	1.65	3.6	100	15	2	WCSP-8	TXB0102,UM3302M
BCT0204	4Bit Bidirectional Level-Shifting With Auto Direction Sensing	1	4.5	Vref_A +0.8	5.5	120	100	4	QFN-14, WCSP-12	TXB0104,UM3304M

Pin Configuration (TOP View)



Function Block Diagram



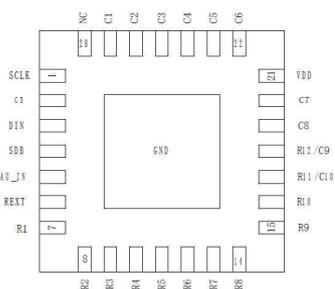
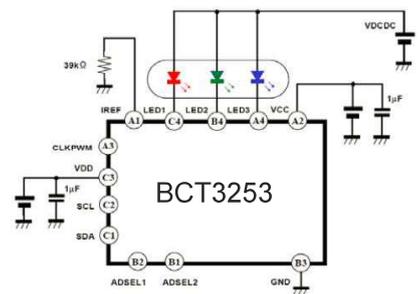
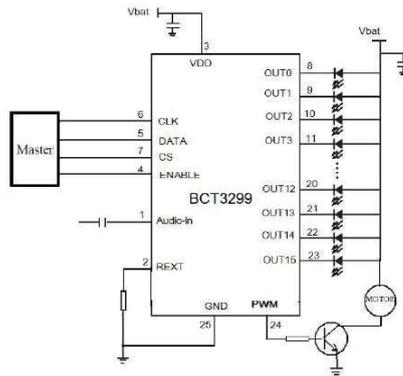
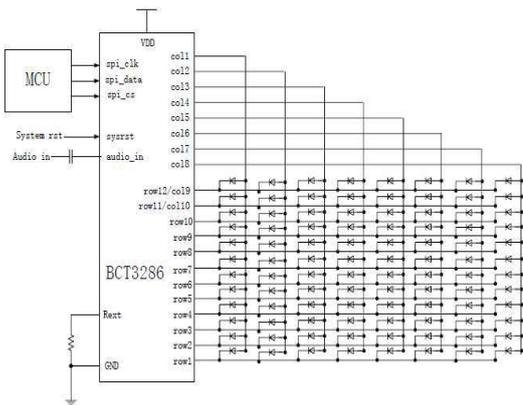
Multi-purpose LED Driver

PART NO.	Description	Channels	Bright level	VCC (V)	Control	Current match	Display	VIH (V)	VIL (V)	Package	Cross Reference
BCT3253	3ch Current Sink RGB LED Driver for illumination	3	256	2.7-5.5	I2C	±1%	YES	1.4	0.7	WCSP-12	AN30259 KTD204
BCT3119	9-Channel 64 steps Constant-Current LED Driver	9	64	3.2-5.5	SPI	±1%	NO	1.4	0.7	QFN-28L	AW9110
BCT3288	16-Channel 64 steps Constant-Current LED Driver	16	64	3.2-5.5	SPI	±1%	NO	1.4	0.7	QFN-24L	AW9523
BCT3299	16-Channel 256 steps Constant-Current LED Driver	16	256	2.7-5.5	SPI	±1%	YES	1.4	0.7	QFN-24L	
BCT3286	RGB/Matrix/Audio EQ/16 Level LED Driver	10,9,8	16	2.7-5.5	SPI	±1%	YES	1.5	0.78	QFN-24L	IS31FL3731

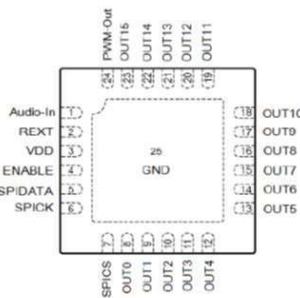
Flash LED Driver

PART NO.	Description	Vin (V)	IOUT-FlashMode (mA)	IOUT-FlashTorch (mA)	Freq (MHz)	Mode	Efficiency	Vref (mV)	ISDHN (uA)	Package	Cross Reference
BCT3140	700mA output Flash LED Driver	2.7-5.5	700	220	1.5	1X,2X	90%	47	1	DFN-10L	SGM3140
BCT3141	1A output Flash LED Driver	2.7-5.5	1000	220	1.5	1X,2X	90%	47	1	DFN-10L	SGM3141 OCP8100 AW3641

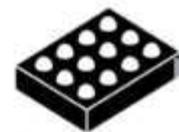
Typical Application Circuit



BCT3286



BCT3299



WCSP-12

Dual SIM Card Controller

PART NO.	Description	Vin(V)	VIO Operating Voltage (V)	SIM Card Supplies(V)	LowInput Threshold(V)	High Input Threshold(V)	Package	Cross Reference
BCT4302B	Dual SIM Card Controller	2.7-5.5	1.8 - 3.2	1.8/3	0.15*VIO	0.85*VIO	QFN-20L	MTK6302 AW6302
BCT4303	Dual SIM Card Controller	2.7-5.5	1.5 - 5.5	1.8/3	0.15*VIO	0.85*VIO	QFN-20L	MTK6302 AW6302

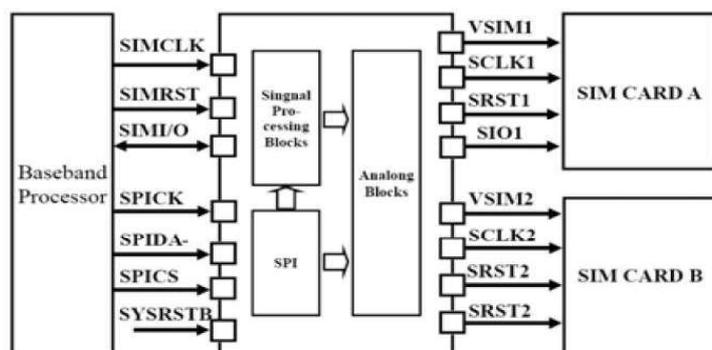
Audio PA

PART NO.	Description	Class	Po- 8Ω (W)	Vin(V)	Input	ISHDN(μA)	PSRR(dB)	TWU(mS)	Package	Cross Reference
BCT2890	Low-Cost, Mono 1.8W Audio Power Amplifier	AB	1.3	2.5-5.5	Single end	0.01	63	120	AQFN-9L	LM2890 NCP2890

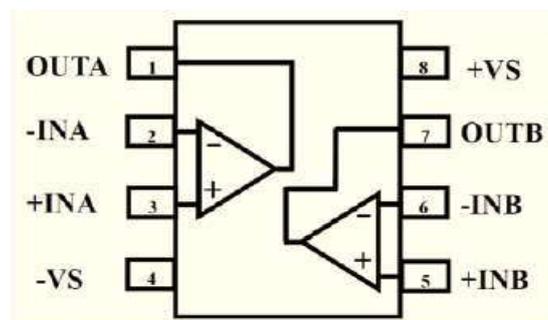
CMOS Operational Amplifier

PART NO.	Description	Vin(V) Range	I _{ss} (mA)	V _{offset} (mV)	Rail to Rail	PSRR(dB)	Gain Bandwidth (MHz)	Slew Rate (V/μS)	Package	Package
BCT2232	High-Output-Drive, 10MHz, RRIO CMOS Amplifier	2.7-5.5	1.1	0.85	Y	85	10	10	SOP-8	MAX2232
BCT2358	Dual Channel RRIO 1MHz, CMOS Amplifier	2.7-5.5	0.08	5	Y	82	1	0.52	SOP-8	SGM358 LM358

Typical Application Circuit



BCT4302B



BCT2232/BCT2358

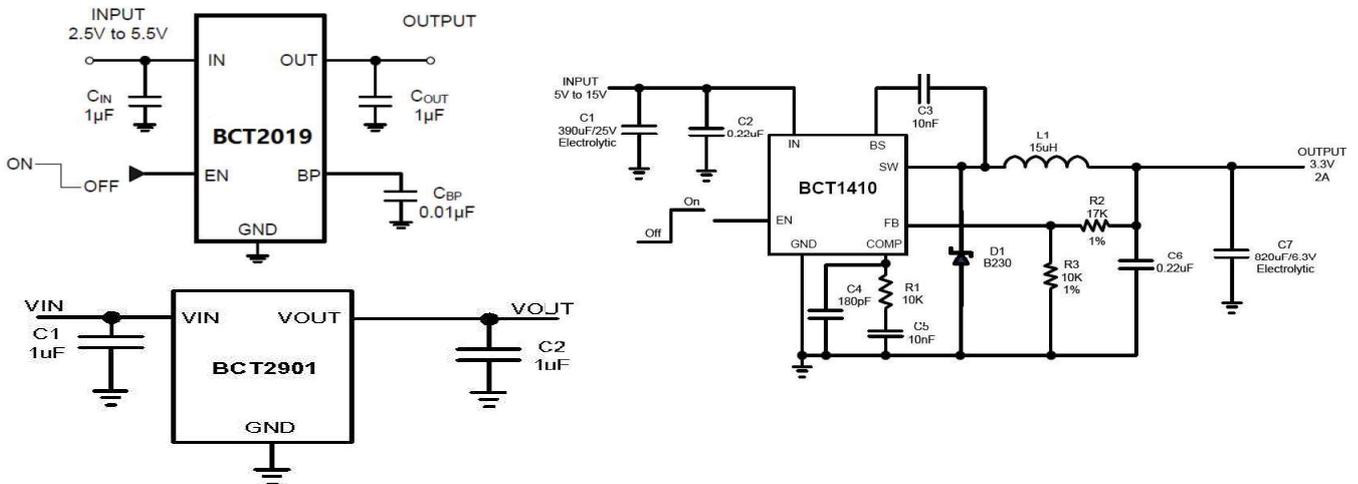
LDO

PART NO.	Description	VinRange(V)	VoutRange(V)	I _{ss} (uA)	I _{out} (mA)	PSRR (dB@1KHz)	Package	Cross Reference
BCT2019	Low Power, Low Dropout, RF-Linear Regulators	2.5~5.5	1.2-5.0	100	300	74	SOT-23-5, SC70-5, DFN1*1-4	SGM2019, BL9193, LP3985
BCT2901	Low Power, Low Dropout, RF-Linear Regulators	2.5~5.5	1.2-5.0	100	300	74	SOT23-3, SOT89-3	
BCT1117	1A Bipolar Linear Regulator	2.5~15.0	1.2-12.0	2000	1000	---	SOT223, TO-252	BL1117, LM1117
BCT1117B	800mA Bipolar Linear Regulator	2.5~15.0	1.2-12.0	2000	800	---	SOT223, TO-252	BL1117B, LM1117

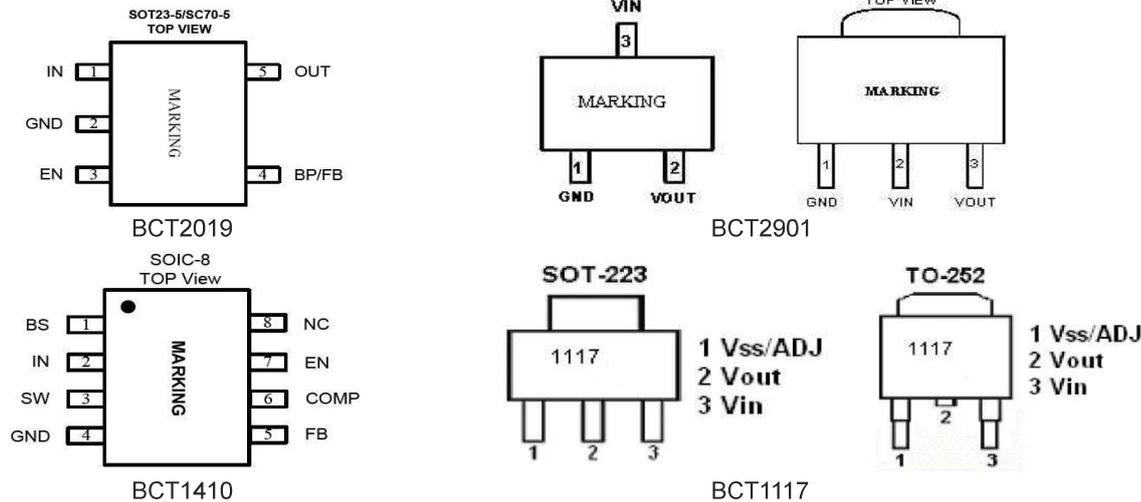
DC-DC (Step Down)

PART NO.	Description	VinRange(V)	VoutRange(V)	I _{ss} (uA)	I _{out} (mA)	PSRR (dB@1KHz)	Package	Cross Reference
BCT1410	2A, Step-Down Converter	4.75~15	1.22~13	95	2000	380	SOIC-8	MP1410

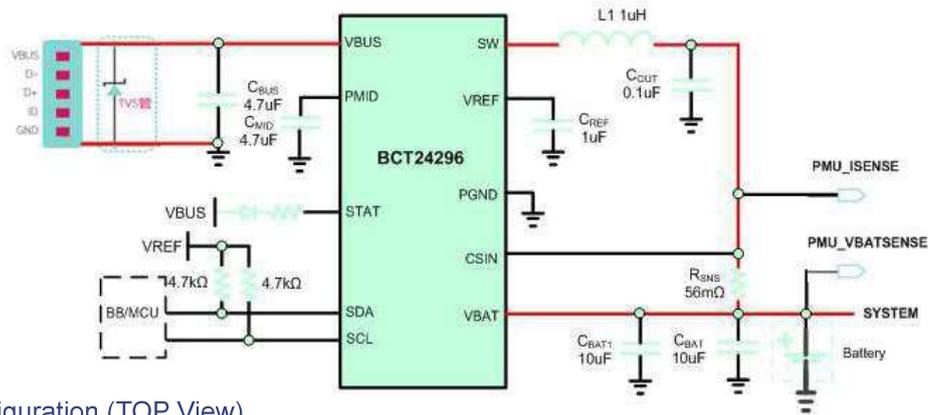
Typical Application Circuit



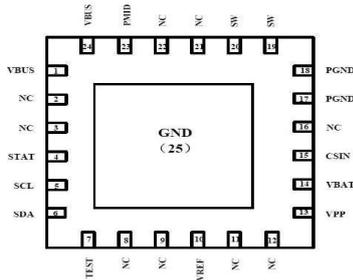
Pin Configuration (TOP View)



Switching Charger



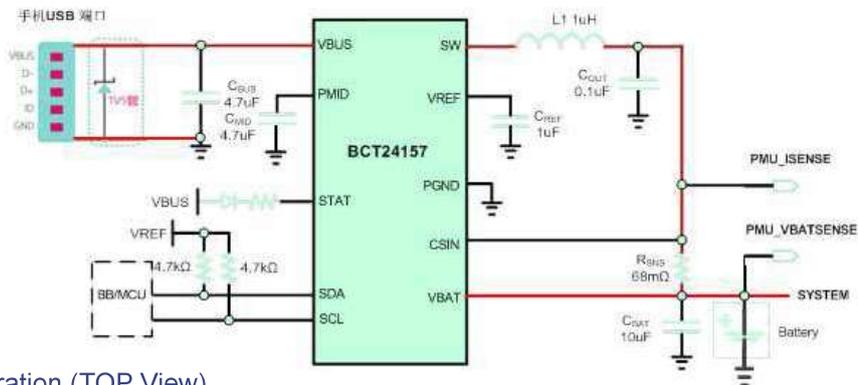
Pin Configuration (TOP View)



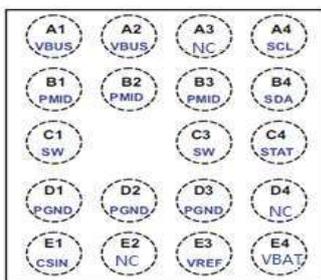
BCT24296 - 2.0A Single-Cell Li-Ion Switching Charger with USB-OTG

Features

- Integrated Power FETs for Up To 2.0A Charge Current
- 24V Absolute Maximum Input Voltage Rating
- 6.5V Maximum Operating Input Voltage
- Up to 90% Efficiency



Pin Configuration (TOP View)



BCT24157 - 1.6A Single-Cell Li-Ion Switching Charger with USB-OTG

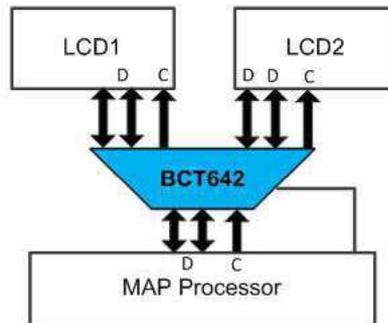
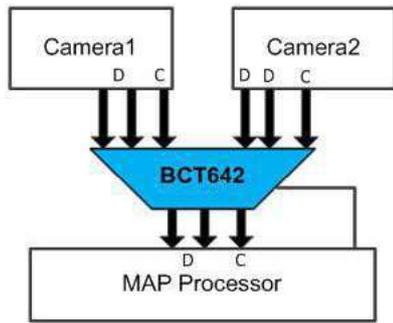
Features

- Integrated Power FETs for Up To 1.6A Charge Current
- 24V Absolute Maximum Input Voltage Rating
- 6.5V Maximum Operating Input Voltage
- Up to 90% Efficiency
- EOS 180V (Using PTVSHC3D12V) / 300V (Using SMAJ12A)

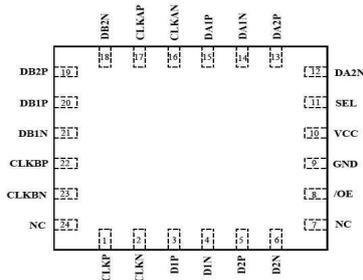
Applications



MIPI Switch



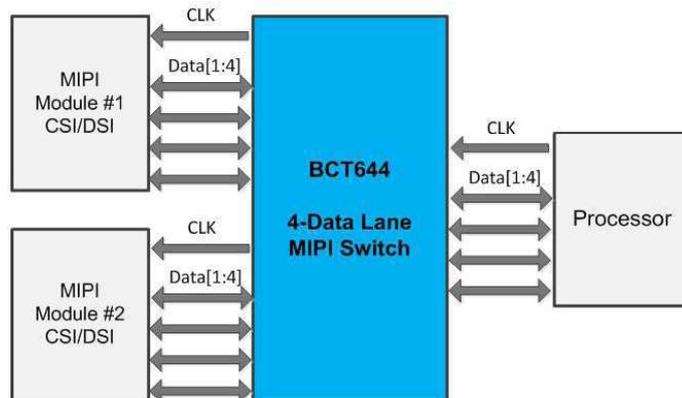
Pin Configuration (TOP View)



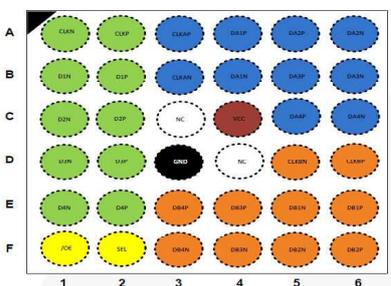
BCT642 - Low Power, Three Port, Hi-Speed Differential Switch

Features

- Low On Capacitance: 7.0pF Typical
- Low On Resistance: 7.0Ω Typical
- -3dB Bandwidth: 1GHz Typical
- 24-lead QFN (2.5mm x 3.4mm) Package



Pin Configuration (TOP View)



BCT644 - 2:1 MIPI D-PHY (1.5Gbps) 4-Data Lane Switch

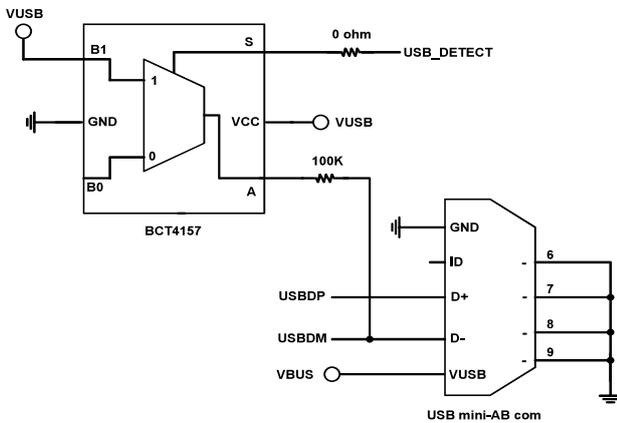
Features

- Signal Types: MIPI, D-PHY
- Ron: 6.0Ω Typical HS MIPI/ 8.0Ω Typical LP MIPI
- Bandwidth: 1,100MHz Minimum Typical
- ICC: 32uA Maximum
- Con: 5.2pF
- 36-Ball WLCSP Package

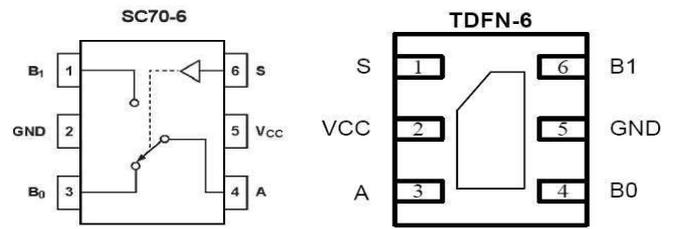
Applications



Analog Switch



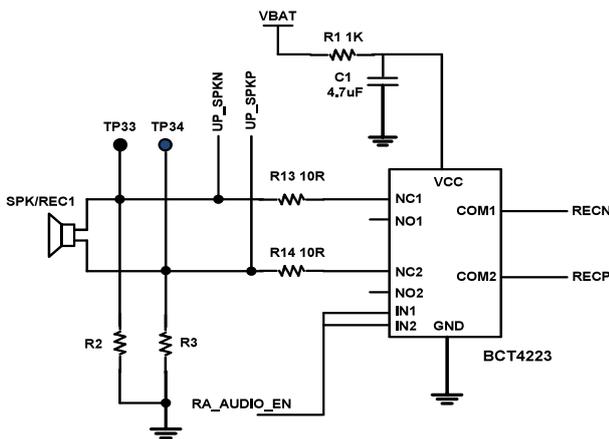
Pin Configuration (TOP View)



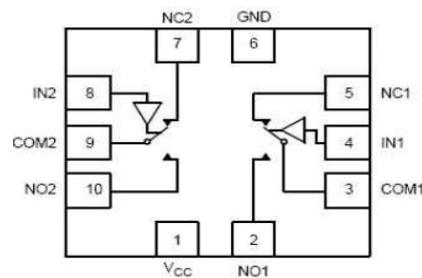
BCT4157 -Low-Voltage, 300MHz SPDT Analog Switch

Features

- Wide VCC Range: 1.65V ~ 5.5V



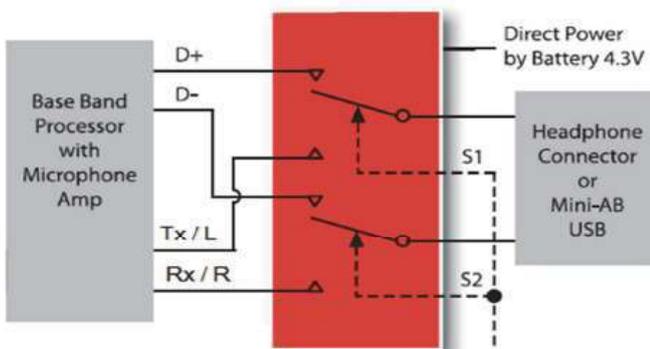
Pin Configuration (TOP View)



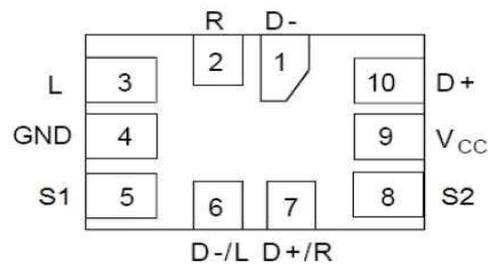
BCT4223 -Low-Voltage, Dual SPDT Analog Switch

Features

- Wide VCC Range: 1.65V ~ 5.0V



Pin Configuration (TOP View)

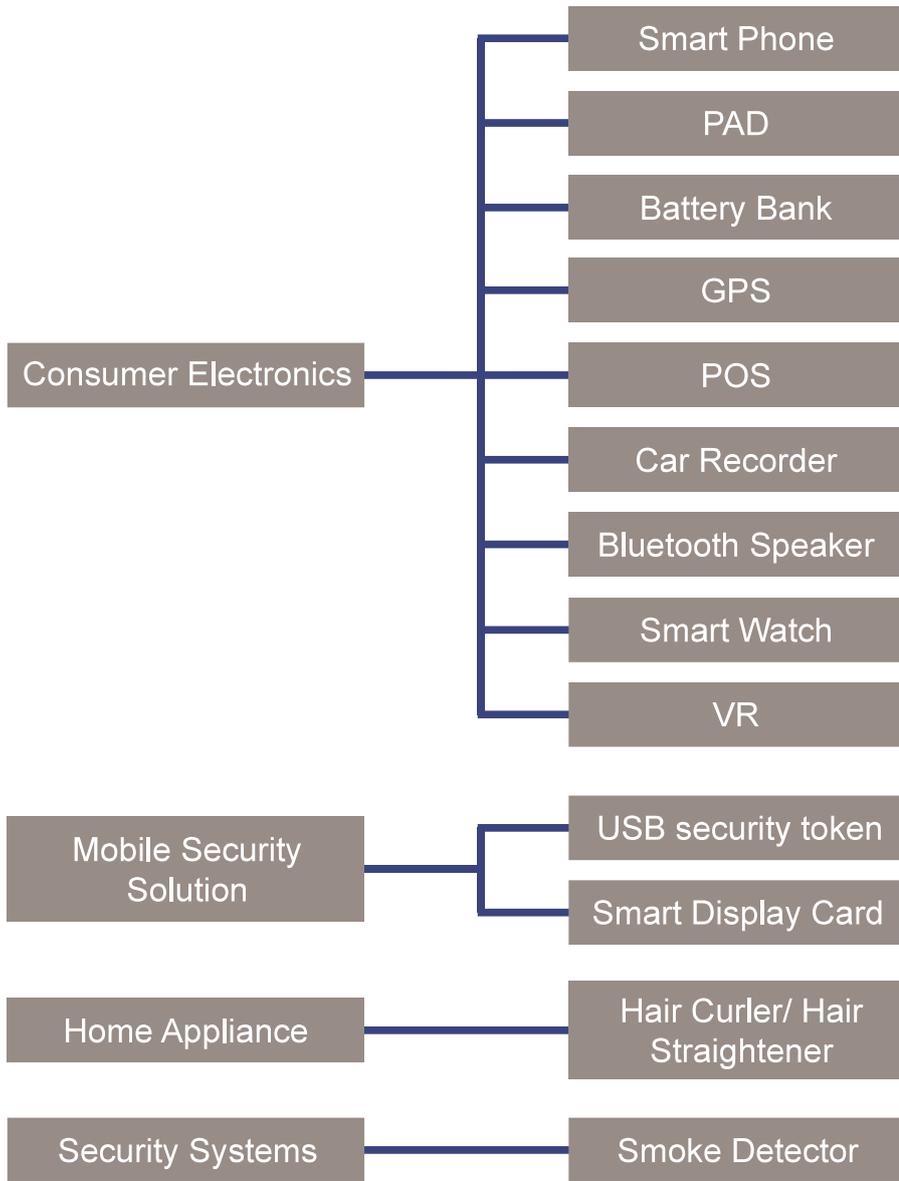


BCT4321N -High-Speed and Audio Switches with Negative Signal Capability(-2V)

Features

- Wide VCC Range: 1.65V ~ 5.5V
- Negative Signal Handling: -2.0V
- Low On Resistance: 1Ω Typical (audio)
- Bandwidth: 720MHz
- Rail-to-Rail Signal Handling

Broadchip Total Solutions



Smart Phone Solution



Recommended Parts

BCT24296/BCT24158

2A Switching Charge IC with USB OTG

BCT24157/BCT54015

1.6A Switching Charge IC with USB OTG

BCT3660B/3660C

PWM Control LED Driver

BCT3253

RGB LED Driver

BCT4321N

-2V Negative Capability USB2.0 and Audio High Speed Switch

BCT2019

300mA High PSRR LDO

BCT642

3-Port High Speed MIPI Switch

BCT644

2:1 MIPI D-PHY (1.5Gbps) 4-Data Lane Switch

