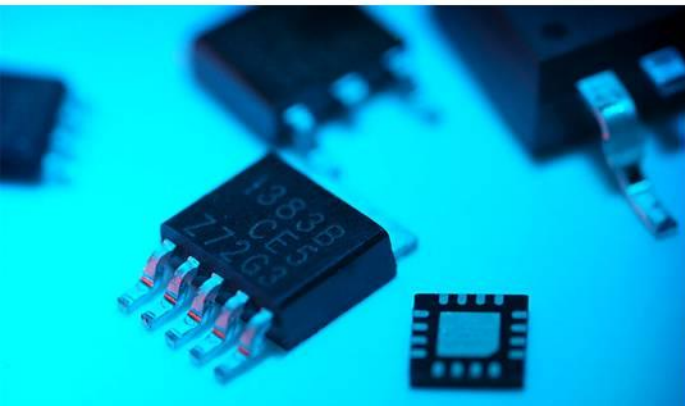




AIC Selection Guide and Products Overview

www.analog.com.tw

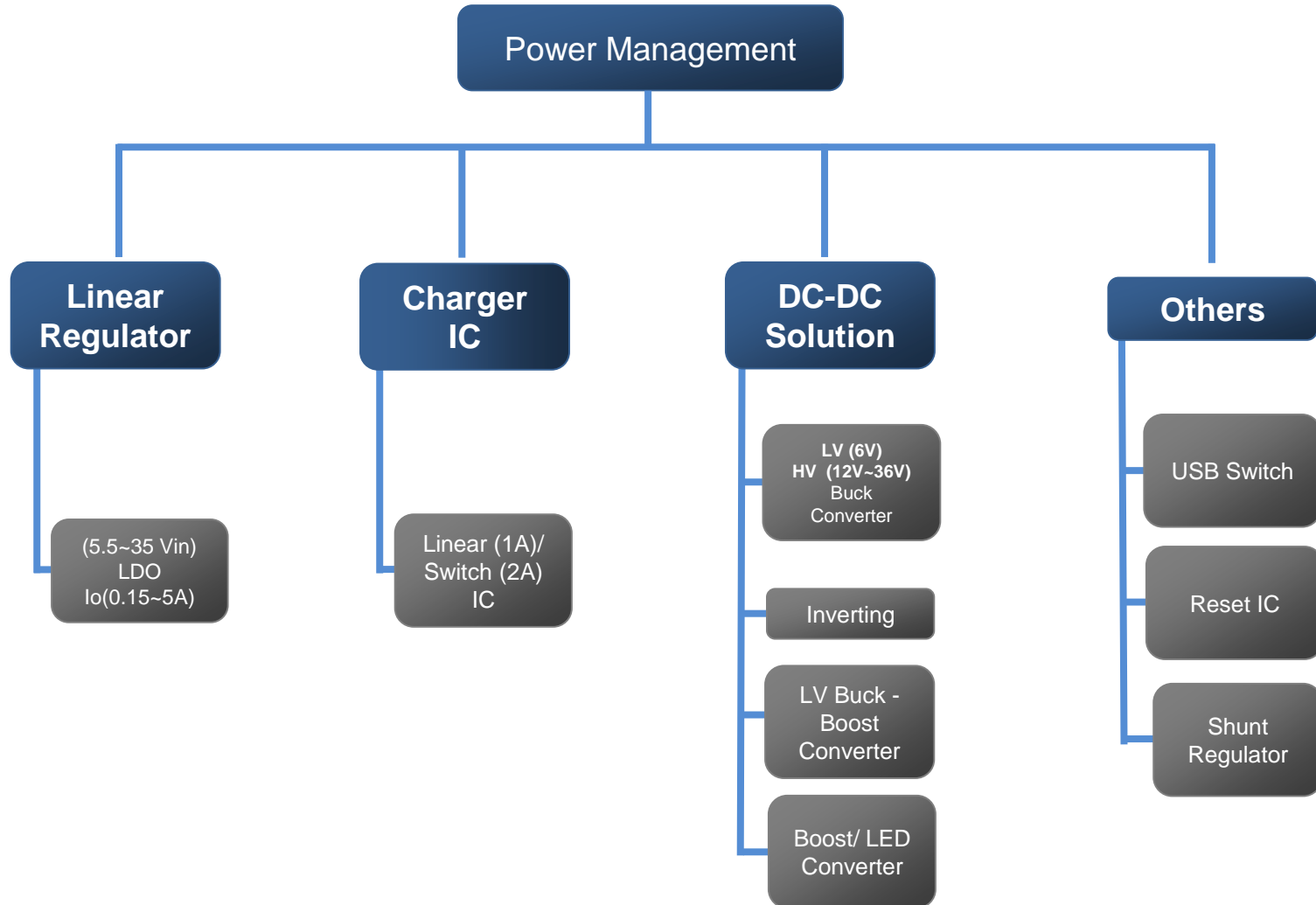


2024 Q2



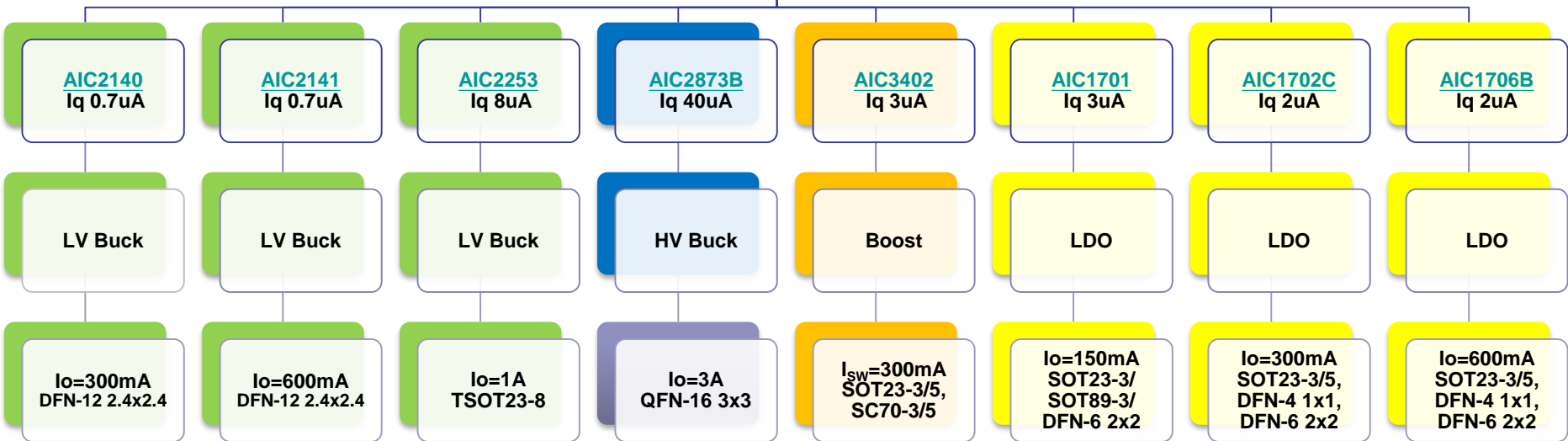
AIC IC_Web

Product Tree



Low IQ Green Products

Low IQ Products



BUCK CONVERTER

PN	Descriptions	Architect.	Vin Min (V)	Vin Max (V)	Vo Min (V)	Vo Max (V)	Vfb (V)	Fsw (Hz)	Iq (uA)	Package	Comment
AIC2140	Io=300mA, Iq=0.7uA Sync.	Sync.	2.5	5.5	1.8	3.3		1500k	0.7	DFN-12 2.4x2.4	PSM/PWM
AIC2141	Io=600mA, Iq=0.7uA Sync.	Sync.	2.5	5.5	1.8	3.3		1500k	0.7	DFN-12 2.4x2.4	PSM/PWM
AIC2354	Io=1A, 280m/250m Sync.	Sync.	2.5	5.5	0.6	Vin	0.6	1500k	65	DFN-6 2x2, SOT23-5	PSM/PWM TLV62565
AIC2304	Io=1A, 280m/250m Sync.	Sync.	2.5	5.5	0.6	Vin	0.6	1500k	65	DFN-6 2x2, SOT23-5	PWM RT8010
AIC2385	Io=1.5A, 280m/250m Sync.	Sync.	2.5	5.5	0.6	Vin	0.6	1500k	65	SOT23-5	PSM/PWM SY8088/ TLV62565
AIC2354B	Io=1A, 290m/180m Sync.	Sync.	2.5	5.5	0.6	Vin	0.6	1500k	50	SOT23-5	PSM/PWM SY8088/ TLV62565
AIC2385B	Io=1.5A, 250m/150m Sync.	Sync.	2.6	5.5	0.6	Vin	0.6	2000k	80	DFN-6 2x2, SOT23-5	PSM/PWM
AIC2386B	Io=2A, 150m/70m Sync.	Sync.	2.5	6.0	0.6	Vin	0.6	1000k	40	SOT23-5	PSM/PWM SY8089/ TLV62565
AIC2386C	Io=2A, 180m/130m Sync.	Sync.	2.6	5.5	0.6	Vin	0.6	2000k	80	SOT23-5	PSM/PWM

BUCK CONVERTER

PN	Descriptions	Architect.	Vin Min (V)	Vin Max (V)	Vo Min (V)	Vo Max (V)	Vfb (V)	Fsw (Hz)	Iq (uA)	Package	Comment
AIC2259	Io=1A, 140m/110m AOT Sync.	Sync.	2.5	6.0	0.6	Vin	0.6	1500k	17	TSOT23-8	PSM/PWM MP2159
AIC2253	Io=1A, 140m/110m AOT Sync.	Sync.	2.5	6.0	0.6	Vin	0.6	1500k	8	TSOT23-8	PSM/PWM MP2159
AIC2271	Io=1A, 140m/110m AOT Sync.	Sync.	2.5	6.0	0.6	Vin	0.6	3000k	8	TSOT23-8	PSM/PWM MP2159
AIC2262	Io=2A, 85m/55m AOT Sync.	Sync.	2.5	6.0	0.6	Vin	0.6	1500K	17	DFN-8 2x1.5	PSM/PWM MP2162
AIC2362A /B	Io=2A, 110m/80m Sync.	Sync.	2.5	6.0	0.8	Vin	0.8	1100K/ 550K	200	SOP-8, SOP-8E	PSM/PWM
AIC2363A /B	Io=3.2A, 110m/80m Sync.	Sync.	2.5	6.0	0.8	Vin	0.8	1100K/ 550K	200	DFN-10 3x3, SOP-8E	PSM/PWM
AIC2322A /B	Io=2A, 110m/80m Sync.	Sync.	2.5	6.0	0.8	Vin	0.8	1100K/ 550K	550	SOP-8	PWM
AIC2323A /B	Io=3.2A, 110m/80m Sync.	Sync.	2.5	6.0	0.8	Vin	0.8	1100K/ 550K	550	DFN-10 3x3, SOP-8E	PWM

BUCK CONVERTER

PN	Descriptions	Architect.	Vin Min (V)	Vin Max (V)	Vo Min (V)	Vo Max (V)	Vfb (V)	Fsw (Hz)	Iq (uA)	Package	Comment
AIC2857F	23V/ 2A Sync. Buck	Sync.	4.75	23	0.925	12	0.925	340k	1300	SOP-8, SOP-8E	FPWM MP1482
AIC2862	23V/ 2A Sync. Buck	Sync.	4.75	23	0.925	12	0.925	340k/550k	700	SOP-8E	PSM/ PWM MP1482
AIC2858F	23V/ 3A Sync. Buck	Sync.	4.75	23	0.925	12	0.925	340k	1300	SOP-8E	FPWM MP1484
AIC2863	23V/ 3A Sync. Buck	Sync.	4.75	23	0.925	12	0.925	340k/550k	700	SOP-8E	PSM/ PWM MP1484
AIC2832	16V/ 2A Sync. Buck	Sync.	4.5	16	0.8	10	0.80	490k	500	SOT23-6	PSM/ PWM MP1470
AIC2842TB	18V/ 2A Sync. Buck	AOT Sync.	4.5	18	0.765	5	0.765	600k	350	SOT23-6	PSM/ PWM TPS562201/ TPS562200
AIC2843TB	18V/ 3A Sync. Buck	AOT Sync.	4.5	18	0.765	5	0.765	600k	300	TSOT23-6	PSM/ PWM TPS563201/ TPS563200
AIC2847B	18V/ 2A Sync. Buck	AOT Sync.	4.5	18	0.807	5	0.807	800k	300	SOT563 1.6x1.6	PSM/ PWM MP1652/ MP1657
AIC2848B	18V/ 3A Sync. Buck	AOT Sync.	4.5	18	0.807	5	0.807	600k	300	SOT563 1.6x1.6	PSM/ PWM MP1653/ MP1658
AIC2864	16V/ 4A Sync. Buck	AOT Sync.	4.5	16	0.80	6	0.765	700k	700	SOP-8E	PSM/ PWM TPS54428
AIC2865	16V/ 5A Sync. Buck	AOT Sync.	4.5	16	0.80	6	0.765	700k	700	SOP-8E	PSM/ PWM TPS54528

BUCK CONVERTER

PN	Descriptions	Architect.	Vin Min (V)	Vin Max (V)	Vo Min (V)	Vo Max (V)	Vfb (V)	Fsw (Hz)	Iq (uA)	Package	Comment
AIC2873B	17V/ 3A Sync. Buck	AOT Sync.	4.5	17	0.9	5	0.80	1250k	40	QFN-16 3x3	PSM/ PWM TLV62130 100% Duty
AIC1563	30V/ 1.5A Non-Sync. Buck	Non-Sync.	3	30	1.25	Vin	1.25	100~100k	1600	DIP-8, SOP-8, SOP-8E	PSM 34063B/ LT1176/ LM2575
AIC2893	30V/ 3A AOT Sync. Buck	AOT Sync.	4.5	30	0.80	5.0	0.765	650k	550	SOP-8E	PSM/ PWM
AIC2933B	30V/ 3A Sync. Buck	Sync.	8	30	2	12	0.80	130k~500k	1000	SOP-8E	FPWM
AIC2935B	36V/ 5A Sync. Buck	Sync.	4	36	0.80	12	0.80	180k	100	SOP-8E	PSM/ PWM
AIC2964B	60V/ 4A Non-Sync. Buck	Non-Sync.	4.5	60	0.805	40	0.805	200k	400	SOP-8E	PSM/ PWM
AIC2972	75V/ 2A Non-Sync. Buck	Non-Sync.	4.5	75	0.805	50	0.805	200k	400	SOP-8E	PSM/ PWM

BUCK-BOOST CONVERTER

PN	Descriptions	Architect.	Vin Min (V)	Vin Max (V)	Vo Min (V)	Vo Max (V)	Vfb (V)	Fsw (Hz)	Iq (uA)	Package	Comment
AIC2341	Io=1A, Buck-Boost Sync.	Sync.	2.5	5.5	1.8	5.5	0.5	2500k	65	DFN-10 3x3	PSM/PWM TPS63000/ MP2155

PN	Description	Architect.	Vin Min (V)	Vin Max (V)	Vo Min (V)	Vo Max (V)	Vfb (V)	PSRR (dB)/ Hz	Dropout (V/A)	Iq (uA)	Package	Comment
AIC1701	150mA LDO	Linear	2.0	6.0	0.80	5.0		40dB/ 1k	200m/ 150m	3	SOT23-3/5, SOT-89, DFN-6 2x2	Vout fixed MLCC Compatible LP33921
AIC1702	350mA LDO	Linear	2.0	6.8	0.80	5.0		40dB/ 1k	550m/ 350m	3	SOT23-3/5, SOT-89, DFN-6 2x2	Vout fixed MLCC Compatible
AIC1702C	300mA LDO	Linear	1.2	5.5	1.2	3.3		75dB/ 1k	180m/ 300m	2	SOT23-3/5, DFN-4 1x1, DFN-6 2x2	Vout fixed/Adj. MLCC Compatible RT9078
AIC1706B	600mA LDO	Linear	1.2	5.5	1.2	3.3		75dB/ 1k	360m/ 600m	2	SOT23-3/5, DFN-4 1x1, DFN-6 2x2	Vout fixed/Adj. MLCC Compatible RT9080
AIC1746	150mA LDO	Linear	2.0	6.0	1.1	3.8		60dB/ 1k	140m/ 150m	80	SOT23-3/5, SOT-89, DFN-6 2x2	Vout fixed MLCC Compatible
AIC1747	300mA LDO	Linear	2.0	6.0	1.1	4.0		60dB/ 1k	270m/ 300m	80	SOT23-3/5, SOT-89, DFN-6 2x2	Vout fixed MLCC Compatible TLV733P
AIC1747B	300mA LDO	Linear	2.5	5.5	1.2	3.3		70dB/ 1k	320m/ 300m	37	DFN-4 1x1	Vout fixed MLCC Compatible NCP170/ NCP115/ NCP134
AIC1748	600mA LDO	Linear	2.3	6.0	0.8	4.5	0.80	65dB/ 1k	350m/ 600m	75	SOT23-3/5, SOT-89, TO252, SOT223	Vout fixed/ Adj. MLCC Compatible AME8805A

LDO

PN	Description	Architect.	Vin Min (v)	Vin Max (V)	Vo Min (V)	Vo Max (V)	Vfb (V)	PSRR (dB)/ Hz	Dropout (V/A)	Iq (uA)	Package	Comment
AIC1952	Dual 300mA LDO	Linear	1.6	6.0	0.8	3.8		70dB/ 1k	200m/ 300m	50	SOT23-6, DFN-6 2x2	Vout fixed MLCC Compatible
AIC1953	Dual 600mA LDO	Linear	1.6	6.0	0.8	3.8		70dB/ 1k	470m/ 600m	50	SOP-8, SOP-8E	Vout fixed MLCC Compatible
AIC1117	800mA LDO	Linear		7.0	1.25	3.3	1.25	72dB/ 120	1200m/ 800m		TO-252, TO-263, TO-220, SOT 223	Vout fixed/ Adj. LM1117
AIC1117 A	1000mA LDO	Linear		7.0	1.25	3.3	1.25	72dB/ 120	1300m/ 1000m		TO-252, TO-263, TO-220, SOT 223	Vout fixed/ Adj. LM1117
AIC1221	2000mA LDO	Linear	1.8	6.0	0.8	5.5	0.8	70dB/ 1k	480m/2000m	30	SOT223, SOP-8E, TO252	Vout fixed/ Adj. MLCC Compatible

LDO

PN	Description	Architect.	Vin Min (V)	Vin Max (V)	Vo Min (V)	Vo Max (V)	Vfb (V)	PSRR (dB)/ Hz	Dropout (V/A)	Iq (uA)	Package	Comment
AIC1086	1500mA LDO	Linear		7.0	1.25	5	1.25	72dB/ 120	1300m/ 1500m		TO-252, TO263, TO220, SOT223	Vout fixed/ Adj.
AIC1085	3000mA LDO	Linear		7.0	1.25	5	1.25	72dB/ 120	1300m/ 3000m		TO-252, TO263, TO220	Vout fixed/ Adj.
AIC1084	5000mA LDO	Linear		7.0	1.25	5	1.25	72dB/ 120	1400m/ 5000m		TO-252, TO263, TO220	Vout fixed/ Adj.
AIC1722A	300mA LDO	Linear		8.0	1.5	5.2			470m/ 300m	55	SOT23-3, SOT89	Vout fixed
AIC1731	300mA LDO	Linear		12.0	1.3	3.3		55dB/ 1k	470m/ 300m	35	SOT23-5, SOT89-5	Vout fixed
AIC1734	300mA LDO	Linear		12.0	1.8	5.2			470m/ 300m	55	SOT23-3, SOT89	Vout fixed
AIC1733	500mA LDO	Linear		12.0	1.3	3.3		55dB/ 1k	650m/ 500m	30	SOT23-5, SOT89-5, TO252	Vout fixed
AIC1735	500mA LDO	Linear		12.0	1.8	5.2			650m/ 500m	65	SOT23-3, SOT89, TO-252, SOT223	Vout fixed
AIC1117A B	1000mA LDO	Linear	2.75	12.0	1.25	5	1.25	60dB/ 120	1300m/ 1000m		TO-252, SOT 223	Vout fixed/ Adj. MLCC Compatible

LDO

PN	Description	Architect.	Vin Min (V)	Vin Max (V)	Vo Min (V)	Vo Max (V)	Vfb (V)	PSRR (dB)/ Hz	Dropout (V/A)	Iq (uA)	Package	Comment
AIC1755B	200mA LDO	Linear	2.0	30.0	1.2	12.0		70dB/ 100	150m/ 100m	2.2	SOT23-5, DFN-4 1x1	Vout fixed MLCC Compatible Enable
AIC1756B	400mA LDO	Linear	2.0	30.0	1.2	12.0		70dB/ 100	150m/ 100m	2.2	SOT23-5, DFN-4 1x1	Vout fixed MLCC Compatible Enable
AIC1757B	200mA LDO	Linear	2.0	30.0	1.2	12.0		70dB/ 100	150m/ 100m	2.2	SOT23-3/5, SOT89-3	Vout fixed MLCC Compatible
AIC1758B	400mA LDO	Linear	2.0	30.0	1.2	12.0		70dB/ 100	150m/ 100m	2.2	SOT23-3/5, SOT89-3	Vout fixed MLCC Compatible
AIC1763B	200mA LDO	Linear	2.0	36.0	1.8	12.0		70dB/ 100	660m/ 100m	2.2	SOT23-5, DFN-4 1x1	Vout fixed MLCC Compatible Enable
AIC1704B	200mA LDO	Linear	2.0	36.0	1.8	12.0		70dB/ 100	660m/ 100m	2.2	SOT23-3/5, SOT89-3	Vout fixed MLCC Compatible
AIC1765B	200mA LDO	Linear	2.0	55.0	1.8	12.0		70dB/ 100	660m/ 100m	2.2	SOT23-5, SOP-8E	Vout fixed/ Adj. MLCC Compatible Enable
AIC1766B	200mA LDO	Linear	3.6	55.0	1.8	12.0		70dB/ 100	660m/ 100m	3.5	SOT23-5	Vout fixed/ Adj. MLCC Compatible Enable; UVLO
AIC1767B	200mA LDO	Linear	2.0	55.0	1.8	12.0		70dB/ 100	660m/ 100m	2.2	SOT23-5, DFN-4 1x1, DFN-6 2x2	Vout fixed MLCC Compatible Enable
AIC1768B	200mA LDO	Linear	2.0	55.0	1.8	12.0		70dB/ 100	660m/ 100m	2.2	SOT23-3/5, SOT89-3	Vout fixed MLCC Compatible

DDR

PN	Description	Architect.	V _{CNTL} Min (V)	V _{CNTL} Max (V)	V _{in} Min (V)	V _{in} Max (V)	V _o (V)	I _q (uA)	Package	Comment
AIC1385	2000mA DDR	Linear	2.375	5.5	1.1	5.5	V _{REF}	2	SOP-8E	Vout adjustable DDR I/ II/ III/ IV APL5337
AIC1387	Peak 3000mA DDR	Linear	2.375	5.5	1.1	5.5	V _{REF}	2	SOP-8E	Vout adjustable DDR I/ II/ III/ IV APL5337

PN	Description	Architect.	V _{AVIN} Min (V)	V _{AVIN} Max (V)	V _{PVIN} Min (V)	V _{PVIN} Max (V)	V _o (V)	I _q (uA)	Package	Comment
AIC1386	2000mA DDR	Linear	2.375	5.5	1.1	V _{AVIN}	0.5*V _{DDQ}	2	SOP-8E	Vout adjustable DDR I/ II/ III/ IV
AIC1388	Peak 3000mA DDR	Linear	2.375	5.5	1.1	V _{AVIN}	0.5*V _{DDQ}	2	SOP-8E	Vout adjustable DDR I/ II/ III/ IV

BOOST CONVERTER

PN	Description	Architect.	Vin Min (V)	Vin Max (V)	Vo Min (V)	Vo Max (V)	I _{sw} (A)	Vfb (V)	Fsw (Hz)	Iq (uA)	Package	Comment
AIC1642	0.9V Non-Sync. Boost	Non-Sync.	0.9	4.2	2.0	5.0			105k	15	SOT23-3/5, SOT-89, TO92	0.8V start up, Iq=15uA, Vo Fixed. PFM
AIC3402	0.75V Sync. Boost	Sync.	0.75	4.2	2.0	5.0	0.45		800k	3.0	SOT23-3/5	0.75V start up, Iq=3uA, Vo Fixed.
AIC3411	0.7V Sync. Boost	Sync.	0.70	5.0	1.65	5.5	0.40	0.50		7.5	SC70-6	0.7V start up, Iq=7.5uA TPS61220/ TLV61220
AIC3412	0.7V Sync. Boost	Sync.	0.70	5.0	1.65	5.5	0.48	0.50		12	SOT23-6	0.75V start up, Iq=12uA TLV61070
AIC3413/A	0.9V Sync. Boost	Sync.	0.90	4.2	2.70	5.25	0.90	1.20	1200k	40	SOT23-6	0.9V start up, Iq=40uA AIC3413 PSM/PWM, AIC3413A PWM.
AIC3415/A	0.9V Sync. Boost	Sync.	0.90	4.2	2.70	5.25	1.30	1.20	1200k	40	SOT23-6	0.9V start up, Iq=40uA AIC3415 PSM/PWM, AIC3415A PWM.
AIC3417	0.9V Sync. Boost	Sync.	0.90	4.2	2.50	5.0	2.70	0.50		20	DFN-10 3x3, SOP-8E	0.90V start up, Iq=20uA TPS61021A
AIC3418	0.9V Sync. Boost	Sync.	0.90	4.2	2.50	5.0	3.70	0.50		20	DFN-10 3x3, SOP-8E	0.90V start up, Iq=20uA TPS61021A
AIC3420	0.9V Sync. Boost	Sync.	0.90	4.2	2.50	5.0	5.50	0.50		20	DFN-10 3x3, SOP-8E	0.90V start up, Iq=20uA TPS61021A

BOOST CONVERTER

PN	Description	Architect.	Vin Min (V)	Vin Max (V)	Vo Min (V)	Vo Max (V)	I _{sw} (A)	Vfb (V)	Fsw (Hz)	Iq (uA)	Package	Comment
AIC3632	24Vo/ Non-Sync. Boost	Non-Sync.	2.70	5.5	Vin	24	0.101	1.226		30	SOT23-6	Vo Adj.
AIC3634	24Vo/ Non-Sync. Boost	Non-Sync.	2.70	5.5	Vin	24	0.484	1.226		60	SOT23-6	Vo Adj.
AIC1896	30Vo/ Non-Sync. Boost	Non-Sync.	2.50	10	Vin	30		1.23	1400k	100	SOT23-6	Vo Adj. Io up to 200mA at 5Vin to 12Vo

LED DRIVER

PN	Description	Architect.	Vin Min (V)	Vin Max (V)	Vo Min (V)	Vo Max (V)	I _{sw} (A)	Vfb (V)	Fsw (Hz)	Iq (uA)	Package	Comment
AIC1647	1x6 LEDs Driver	Non-Sync.	2.50	5.5	Vin	30		0.095	1200k	70	SOT23-5	Vo Adj. TPS61041
AIC1648	1x5 LEDs Driver	Non-Sync.	2.50	5.5	Vin	22		0.095	1200k	70	SOT23-6	Vo Adj. Built-in OVP
AIC3643	1x5 LEDs Driver	Non-Sync.	2.50	5.5	Vin	22	1	0.1	1200k	150	SOT23-6	Vo Adj. Built-in OVP
AIC1634	1x6LEDs Driver	Non-Sync.	2.60	10	Vin	30	0.5	1.23	1400k	100	SOT23-6	Vo Adj. Adj SS time
AIC1896	1x6LEDs Driver	Non-Sync.	2.50	10	Vin	30		1.23	1400k	100	SOT23-6	Vo Adj. Adj SS time

Charger IC

PN	Description	Architect.	Vin Min (V)	Vin Max (V)	V _{O(REG)} (V)	I _o (A)	Fsw (Hz)	Package	Comment
AIC1790	1A/ 1 cell Li-ion Battery Charger	Linear	4.5	5.5	4.2/4.35	0.2~1		DFN-10 3x3, MSOP-10E	Battery Recharge/ Safety Timer Cutoff/ Battery temp. Protection
AIC6511	2A/ 1 cell Li-ion Battery Charger	Switch	4.5	6	4.2/4.35	~2	1500	TSSOP-16E	Battery Recharge/ Safety Timer Cutoff/ Battery temp. Protection

Inverting

PN	Description	Architect.	Vin Min (V)	Vin Max (V)	Vo Min (V)	Vo Max (V)	I _{SW} (A)	Fsw (Hz)	Iq (uA)	Package	Comment
AIC1650	Inverting PFM DC/DC Controller	Non-Sync.	4.0	20	-1.22	-40		100k-320k	100	SOP-8	PFM
AIC1652	Inverting PFM DC/DC Controller	Non-Sync.	2.4	7.0	-1.22	-40		70k-160k	80	SOP-8	PFM
AIC1653	Inverting PFM DC/DC Converter	Non-Sync.	1.8	10	-1.23	-28	0.1	-	15	SOT23-5	PFM

Reset IC

PN	Description	I _{out} (mA)	V _{in} Min (V)	V _{in} Max (V)	Det. Volt. Accuracy (%)	Timeout (mS)	V _{TH} (V)	I _q (uA)	Package	Comment
AIC809/N	AIC809: Push-Pull Active Low/ AIC809N: Open-Drain Active Low	20	0.9	6	+/- 1.5	230	2.3~4.6	1	SOT23-3	LM809/ TLV809
AIC811	Push-Pull Active Low	20	0.9	6	+/- 1.5	230	2.3~4.6	1	SOT23-5, SOT143, SOT23-6	
AIC1680 N/P/C	N-CH/ P-CH/ CMOS	20	1.5	10	+/- 2.5	0.2	1.6~6.0	0.7~3.2	SOT23-3, SOT23-5, SOT-89, TO92	

Shunt Regulator

PN	Cathode Voltage Max (V)	Reference Voltage (V)	Sink Current	Reference Voltage Accuracy (%)	Package	Comment
AIC431	30	2.495	250μA ~ 200mA	+/- 0.5	SOP-8, SOT23-3, SOT89-3, TO92-3	
TL431A	30	2.495	250μA ~ 200mA	+/- 1.0	SOP-8, SOT23-3, SOT89-3, TO92-3	
TL431	30	2.495	250μA ~ 200mA	+/- 1.6	SOP-8, SOT23-3, SOT89-3, TO92-3	

USB Power Switch

PN	Description	Vin Max (V)	Rds-on (mΩ)	No. of Channel	Short-Circuit Protection Response Time	Current Limit (A)	Accuracy (%)	Package	Comment
AIC6151	1A USB Power Switch	5.5	60	1	1.3μS	0.5 ~ 1.2	±15	SOT23-6	Adjustable Current Limit
AIC6152	2A USB Power Switch	5.5	60	1	1.3μS	0.5 ~ 2.4	±15	SOT23-6	Adjustable Current Limit TPS2553 BD2222/42/43 NCP380 RT9728
AIC6156	3A USB Power Switch	5.5	60	1	1.3μS	0.5 ~ 3.6	±15	SOP-8E, SOT23-6	Adjustable Current Limit
AIC6170	1.8A USB Power Switch	5.5	85	1		0.4 ~ 2	±7 ~ 12	SOT23-6	Adjustable Current Limit MP65150/51
AIC6161	0.5A USB Power Switch	6.5	85	1		0.55 ~ 1	±25	SOT23-5	
AIC6162	0.75A USB Power Switch	6.5	85	1		0.85 ~ 1.4	±25	SOT23-5	
AIC6163	1A USB Power Switch	6.5	85	1		1.1 ~ 2	±25	SOT23-5	
AIC6163B	1A USB Power Switch	5.5	60	1	12μS	1.15 ~ 1.73		SOT23-5	
AIC6164	1.5A USB Power Switch	6.5	85	1		1.6 ~ 3.2	±25	SOT23-5	
AIC6165B	1.5A USB Power Switch	5.5	60	1	12μS	1.6 ~ 2.3		SOT23-5	

USB Power Switch

PN	Description	Vin Max (V)	Rds-on (mΩ)	No. of Channel	Short-Circuit Protection Response Time	Current Limit (A)	Accuracy (%)	Package	Comment
AIC6176	0.5A USB Power Switch	6.5	100	2		0.6 ~ 1.25	±30	SOP-8	
AIC6178	1A USB Power Switch	6.5	100	2		1 ~ 2	±30	SOP-8	
AIC6186	0.5A USB Power Switch	6.5	85	2		0.52 ~ 0.8	±20	SOP-8	
AIC6188	1A USB Power Switch	6.5	85	2		1.05 ~ 1.55	±20	SOP-8	

Regulatory USB Power Switch

PN	Description	Vin Max (V)	Rds-on (mΩ)	No. of Channel	Short-Circuit Protection Response Time	Current Limit (A)	Accuracy (%)	Package	Comment
AIC6168	0.5A/1A Regulatory USB Power Switch	7	150	1	4μS	0.72/1.45	±18	SOP-8E	

Bare-Bone USB Switch

PN	Description	Vin Max (V)	Rds-on (mΩ)	No. of Channel	Short-Circuit Protection Response Time	Current Limit (A)	Accuracy (%)	Package	Comment
AIC6191	0.5A Bare-Bone USB Switch	5.5	170	1		0.55 ~ 1		SOT23-3	
AIC6193	1A Bare-Bone USB Switch	5.5	170	1		1.05 ~ 1.8		SOT23-3	

AIC61xx Series Power Switch

Current Limit		Single Channel	Dual Channel
USB Power Switch	≤1A	AIC6161 (SOT23-5)(0.5A) AIC6162 (SOT23-5)(0.75A) AIC6163 (SOT23-5)(1.0A) AIC6163B (SOT23-5)(1.1A) TI, SY pin to pin AIC6151 (SOT23-6) _(1.3uS) (adj)	AIC6176(SOP-8) (0.5A) (Accuracy: ±30%) AIC6178(SOP-8) (1.0A) (Accuracy: ±30%) AIC6186(SOP-8) (0.5A) (Accuracy: ±20%) AIC6188(SOP-8) (1.0A) (Accuracy: ±20%)
	≤2A	AIC6165B(SOT23-5)(1.6A) TI, SY pin to pin AIC6152 (SOT23-6) _(1.3uS) (adj) AIC6170 (SOT23-6) (adj) AIC6164 (SOT23-5)(1.5A)	<div style="border: 1px solid black; background-color: #4b0082; color: white; padding: 5px; display: inline-block;"> Fast SCP 1.3uS, ±15% Curr. Accuracy </div>
	≤3A	AIC6156 (SOT23-6) _(1.3uS) (adj)	
Regulatory USB Switch	≤1A	AIC6168(SOP-8E) _(4uS)	<div style="border: 1px solid black; background-color: #4b0082; color: white; padding: 5px; display: inline-block;"> Fast SCP 4uS </div>
Bare-Bone USB Switch	≤0.5A	AIC6191	
	≤1A	AIC6193	

LED Lighting

PN	Description	Input Voltage Range (V)	Output Voltage (V)	Output Current (mA)	Package	Comment
AIC6607	Constant Current Regulator	AC110/AC220	600(VBD)	Adjustable: 15 to 50	SOP-8	
AIC6609	Constant Current Regulator	AC110/AC220	600(VBD)	Adjustable: 50 to 100	SOP-8	
AIC6622	Adaptive Conduction Linear Driver	AC110/AC220	600(VBD)	Adjustable: 15 to 50	SOP-8	
AIC6624	Adaptive Conduction Linear Driver	AC110/AC220	600(VBD)	Adjustable: 50 to 100	SOP-8	
AIC6625	Adaptive Conduction Linear Driver	AC110/AC220	600(VBD)	Adjustable: 50 to 100	SOP-8	
AIC6608	TRIAC Dimmable Constant Current Regulator	AC110/AC220	600(VBD)	Adjustable: 50 to 100	SOP-8	
AIC6632	TRIAC Dimmable Adaptive Conduction Linear Driver	AC110/AC220	600(VBD)	Adjustable: 15 to 50	SOP-16, TSSOP-16	
AIC6634	TRIAC Dimmable Adaptive Conduction Linear Driver	AC110/AC220	600(VBD)	Adjustable: 50 to 100	SOP-16, TSSOP-16	

Key Cross Reference



Product Line	AIC Part Number	Competitor	Applications	Remark
LV Buck SOT23-8	AIC2259	MP2158/59	Wire less/ Network Cars. Portable. Battery power. LV IO System	AOT Io=1A
	AIC2271	MP2158/59		AOT, 3MHz, Io=1A
	AIC2253	MP2158/59		AOT, Low Iq 8uA, Io=1A
	AIC2262	MP2161/62		AOT, F/C, Io=2A
HV Buck	AIC2832	MP1470/RT6212	TV Power/ Network/ STB/ Surveillance	SOT23-6 Io=2A
	AIC2842TB	TPS562201		SOT23-6 Io=2A
	AIC2843TB	TPS563201		TSOT23-6 Io=3A
	AIC2864	TPS54428	Networking/T V/STB	COT, PSOP8
	AIC2865	TPS54528/ RT7240/RT6206		COT, PSOP8
	AIC2873B	TLV62130	Portable/ Gaming	AOT, 100% Duty Cycle, Low IQ:40uA

Key Cross Reference



Product Line	AIC Part Number	Competitor	Applications	Remark
HV Buck (PSOP8)	AIC2857F	MP1482	TV Power/ Network/ STB/ Surveillance	Io=2A Vref=0.925V (FPWM)
	AIC2858F	MP1484		Io=3A Vref=0.925V (FPWM)
	AIC2862	MP1482		Io=2A Vref=0.925V (PSM/PWM)
	AIC2863	MP1484		Io=3A Vref=0.925V (PSM/PWM)

Key Cross Reference



Product Line	AIC Part Number	Competitors	Applications	Remark
LV Boost	AIC3411	TPS61220	Wireless Mouse/ Toy Smart Medical	SC-70
	AIC3412	TLV61070		SOT 23-6
Buck-Boost	AIC2341	TPS63000/ MP2155 RT6150A	POS/HDMI Dongle	Io=1A DFN-10
USB Power Switch	AIC6152	TPS2553 BD2222/42/43 NCP380/ RT9728	TV/POS/ STB/ NB	Fast Res. Time 1.3uS/ SOT23-6
	AIC6170	MP65150/51		SOT23-6
	AIC6163B	TPS2065D/ MP62055/ RT9715/ RT9742/		SOT23-5
	AIC6165B	JW7115/ G524/ RT9711/ FP6861C/ SY6288C		SOT23-5

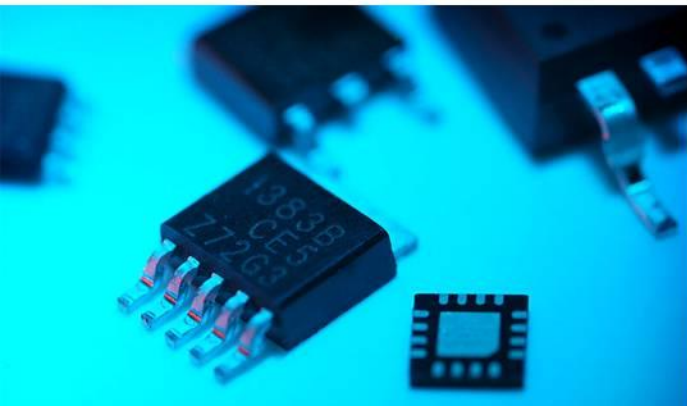
Key Cross Reference



Product Line	AIC Part Number	Competitor	Applications	Remark
LV Buck SOT23-5	AIC2354B	SY8008A/B · TLV62568/ RT8059/ ETA3486	General Purpose/ STB/ Network/ Wireless/ SSD	Io=1A
	AIC2385	SY8009/ TLV62565/ RT5796A/ JW5231		Io=1.5A
	AIC2386B	SY8009 · SY8089 · TLV62569/ RT8097A · FP6378A · FR6361 · ZTP7108T		Io=2A



Preliminary New Product Information



2024 Q2

LDO

PN	Description	Vin Min (V)	Vin Max (V)	Fixed Vout Option (V)	Dropout (V/A)	Iq (uA)	Package	Comment
AIC1702B	300mA LDO	1.2	5.5	0.8V, 0.9V, 1.2V, 1.5V, 1.8V, 2.5V, 2.8V, 3.0V, 3.3V	160m/ 300m	1	SOT23-3/5, DFN-4 1x1, DFN-6 2x2	Vout fixed/ Adj. MLCC Compatible Enable; High PSRR; Low Noise

LDO

PN	Description	Vin Min (V)	Vin Max (V)	Fixed Vout Option (V)	Dropout (V/A)	Iq (uA)	Package	Comment
AIC1724B	500mA LDO	2	24	1.8V, 3.3V, 5V	350m/ 100m	1.5	SOT23-3/5, SOT89-3	Vout fixed/ Adj. MLCC Compatible Enable
AIC1751B	200mA LDO	2	30	1.8V, 3.3V, 5V, 9V, 12V	150m/ 100m	2.2	SOT23-5	Vout fixed/ Adj. MLCC Compatible Enable
AIC1752B	400mA LDO	2	30	1.8V, 3.3V, 5V, 9V, 12V	150m/ 100m	2.2	SOT23-5	Vout fixed/ Adj. MLCC Compatible Enable
AIC1759B	200mA LDO	3.3	30	1.8V, 3.3V, 5V, 9V, 12V	150m/ 100m	2.2	SOT23-3	Vout fixed MLCC Compatible UVLO
AIC1760B	400mA LDO	3.3	30	1.8V, 3.3V, 5V, 9V, 12V	150m/ 100m	2.2	SOT23-3	Vout fixed MLCC Compatible UVLO
AIC1769B	200mA LDO	3.6	55	1.8V, 3.3V, 5V, 9V, 12V	650m/ 100m	3.5	SOT23-3	Vout fixed MLCC Compatible UVLO
AIC1777B	80mA LDO	3.0	110	1.8V, 3.3V, 5V, 9V, 12V	500m/ 50m	3.0	SOT23-5, SOT89-3, MSOP-8E, SOP-8E	Vout fixed/ Adj. MLCC Compatible Enable

BUCK CONVERTER

PN	Descriptions	Architect.	Vin Min (V)	Vin Max (V)	Vo Min (V)	Vo Max (V)	Vfb (V)	Fsw (Hz)	Iq (uA)	Package	Comment
AIC2140B	I _o =750mA, I _q =0.12uA Sync.	Sync.	2.5	5.5	1.8	3.3		1800k	0.12	SON-8, HVSSOP-8	PFM/PWM or FPWM
AIC2386D	I _o =2A, 180m/130m Sync.	Sync.	2.6	5.5	0.6	Vin	0.6	2000k	80	SOT23-5	PSM/PWM SY8808/89
AIC2852B	18V/ 2A Sync. Buck	Sync.	4.4	18	0.6	5	0.6	500k	130	SOT23-6	PSM/ PWM SM8102
AIC2853B	18V/ 3A Sync. Buck	Sync.	4.5	18	0.6	5	0.6	500k	120	SOT23-6	PSM/ PWM SY8113B
AIC29310B	36V/ 1A Sync. Buck	Sync.	4.5	30	0.90	12	0.9	150k	1000	SOP-8	PSM/ PWM CC/CV
AIC29312B	36V/ 1.2A Sync. Buck	Sync.	4.5	30	0.90	12	0.9	300k	1000	SOT23-6	PSM/ PWM CC/CV
AIC2943B	40V/ 3.5A Non-Sync. Buck	Non-Sync.	4.0	40				200k-2500k	40	SOP-8E	LMR14030
AIC2944B	40V/3.5A Sync. Buck	Sync.	4.5	40				Up to 2100k	40	SOP-8E	LMR33630
AIC2946B	40V/6A Sync. Buck	Sync.	4.5	40				Up to 2200k	20	SOP-8E	LM61460(功能兼容)
AIC29501B	55V/0.6A Sync. Buck	Sync.	4.5	55			0.8	150k	250	SOT23-6, SOP-8	MP2451/MP2459/LV3842
AIC29504B	55V/0.6A Sync. Buck	Sync.	4.5	55			0.8	1200k	250	SOT23-6	MP2451/MP2459/LV3842

BUCK-BOOST CONTROLLER

PN	Descriptions	Architect.	Vin Min (V)	Vin Max (V)	Vo Min (V)	Vo Max (V)	Vfb (V)	Fsw (Hz)	Iq (uA)	Package	Comment
AIC5500B	Bidirectional Buck-Boost Controller	Sync.	3.6	32	2	32	2	150k/300k/600k/1200k	1000	QFN-32 4x4	
AIC5501B	Buck-Boost Controller	Sync.	3.6	32	2	32	2	150k/300k/600k/1200k	1000	QFN-32 4x4	
AIC5600B	Buck-Boost Controller	Sync.	3.6	32	2	32	2	150k/300k/600k/1200k	1000	QFN-32 5x5	PFM/PWM

Charger IC

PN	Description	Architect.	Vin Min (V)	Vin Max (V)	V _{O(REG)} (V)	I _o (A)	Fsw (Hz)	Package	Comment
AIC1791	1 cell Li-ion Battery Charger	Linear	4.5	5.5	4.2/4.35	0.2~1		DFN-8 2x2	Battery Recharge/ Safety Timer Cutoff/ Battery Temp. Protection
AIC6510	2A/ 1 cell Li-ion Battery Charger	Switch	4.5	6	4.2/4.35	~2	1500	DFN-12 3x3	Battery Recharge/ Safety Timer Cutoff/ Battery temp. Protection
AIC6551B	1 cell Li-ion Battery Charger	Linear	4.5	24	4.2/4.35	0.05~1		SOT23-6, SOP-8E, DFN-10 2x2, DFN-10 2x3, DFN-10 3x3	Input OVP/ Battery Recharge/ Battery Temp. Sense function

Li-Ion & Li-Pol Battery Protection IC

PN	Description	Vin Max (V)	Rds-on (mΩ)	No. of Battery Cell	V _{OC} (V)	V _{OD} (V)	I _{OC} (A)	I _{OC} (A)	I _{OP} (uA)	Package	Comment
AIC6091B	1 Cell Li-Ion & Li-Pol Battery Protection IC	5.5	35	1	4.25/4.3/ 4.4/4.45	2.5/2.8	0.35	0.4	1	DFN-4 1x1	

Over Voltage and Over Current Protection IC

PN	Description	Vin Max (V)	Rds-on (mΩ)	V _{OVP} (V)	Over-Voltage Protection Response (uS)	I _{OCP} (A)	OC Blanking Time (mS)	Package	Comment
AIC6101B	Over Voltage and Over Current Protection IC	6	100	6.0	0.2	2.5/3.5	8	SOT23-3/6, SOT89-3	With output discharge function

BOOST CONVERTER

PN	Description	Architect.	Vin Min (V)	Vin Max (V)	Vo Min (V)	Vo Max (V)	I _{sw} (A)	Vfb (V)	Fsw (Hz)	Iq (uA)	Package	Comment
AIC3654B	28Vo/ Non-Sync. Boost	Non-Sync.	2.5	5.5	Vin	28	1.2	1.24	1200k	150	SOT23-5	Vo Adj.
AIC3655B	28Vo/ Non-Sync. Boost	Non-Sync.	2.6	20	3	28	3	0.6	1200k	100	SOT23-6	Vo Adj.
AIC3662B	38Vo/ Non-Sync. Boost	Non-Sync.	3.5	28	Vin	38	3	1.0	800k	400	SOP-8E	Vo Adj. Adj SS time
AIC3810B	18Vo/ Sync. Boost	Sync.	2.7	18	4.5	18	Adj.	1.2	up to 2200k	23	QFN-13 3x3.5 (FC)	Vo Adj. OVP TPS61178

LED DRIVER

PN	Description	Architect.	Vin Min (V)	Vin Max (V)	Vo Min (V)	Vo Max (V)	I _{SW} (A)	Vfb (V)	Fsw (Hz)	Iq (uA)	Package	Comment
AIC3644B	1x5 LEDs Driver	Non-Sync.	2.0	6.0	Vin	24	1.6	0.2		93	SOT23-6	Vo Adj. Built-in OVP
AIC3651B	1x8 LEDs Driver	Non-Sync.	2.5	5.5	Vin	27	1.4	0.2	1000k	200	SOT23-6, TSOT23-6	Vo Adj. Built-in OVP
AIC3652B	1x8 LEDs Driver	Non-Sync.	2.5	5.5	Vin	27	1.4	0.25	1000k	200	SOT23-6, TSOT23-6	Vo Adj. Built-in OVP
AIC3661B	1x10LEDs Driver	Non-Sync.	3.5	28	Vin	38	3.0	0.2	600k	600	SOP-8E	Vo Adj. Adj OVP Adj SS time
AIC3671B	1x10LEDs Driver	Non-Sync.	2.0	6.0	Vin	40	1.2	0.2	1000k	1000	SOT23-6, DFN-8 2x2	Vo Adj. Built-in OVP
AIC3761B	1x10LEDs Driver	Non-Sync. Controller	3.5	28	Vin	38	Adj.	0.2	600k	600	SOP-8, SOT23-6	Vo Adj. Adj OVP(SOP-8) Adj SS time

Reset IC

PN	Description	I _{out} (mA)	V _{in} Min (V)	V _{in} Max (V)	Det. Volt. Accuracy (%)	Timeout (mS)	V _{TH} (V)	I _q (uA)	Package	Comment
AIC706B	Push-Pull Active Low	20	1	5.5		200	2.63~4.63	80	SOP-8	Manual Reset Watchdog Power Fail Monitoring
AIC708B	Push-Pull Active Low / Push-Pull Active High	20	1	5.5		200	2.63~4.63	80	SOP-8	Manual Reset Power Fail Monitoring
AIC813B	Push-Pull Active High	20	1	5.5		200	2.63~4.63	80	SOP-8	Manual Reset Watchdog Power Fail Monitoring
AIC807B	Open-Drain Active Low	20	1	5.5		240	2.32~4.63	2	SOT143	Manual Reset Long Delay Button
AIC821B	Push-Pull Active Low	20	1	5.5		240	2.32~4.63	2	SOT143	Manual Reset Long Delay Button
AIC822B	Push-Pull Active High	20	1	5.5		240	2.32~4.63	2	SOT143	Manual Reset Long Delay Button
AIC823B	Push-Pull Active Low	20	1	5.5		200	2.19~4.63	3~4	SOT23-5, SOT353	Manual Reset Watchdog
AIC824B	Push-Pull Active Low / Push-Pull Active High	20	1	5.5		200	2.19~4.63	3~4	SOT23-5, SOT353	Watchdog
AIC825B	Push-Pull Active Low / Push-Pull Active High	20	1	5.5		200	2.19~4.63	3~4	SOT23-5, SOT353	Manual Reset

Reset IC

PN	Description	Iout (mA)	Vin Min (V)	Vin Max (V)	Det. Volt. Accuracy (%)	Timeout (mS)	V _{TH} (V)	Iq (uA)	Package	Comment
AIC809B	Open-Drain Active Low Push-Pull Active Low		1	5.5	+/- 1.5	210	2.63~4.63	1.5~2	SOT23-3, SOT23P-3	
AIC810B	Open-Drain Active High Push-Pull Active High		1	5.5	+/- 1.5	210	2.63~4.63	1.5~2	SOT23-3, SOT23P-3	
AIC811B	Open-Drain Active Low Push-Pull Active Low		1	5.5	+/- 1.5	210	2.63~4.63	1.5~2	SOT143	Manual Reset
AIC812B	Open-Drain Active High Push-Pull Active High		1	5.5	+/- 1.5	210	2.63~4.63	1.5~2	SOT143	Manual Reset

Mastering the POWER

SA: vincent_Wang@analog.com.tw

