

Kinetic Technologies

PRODUCT  
GUIDE 2024 **Q4**  
REVISED



*Innovation in motion™*



## Table of Contents

<b>USB and USB-C Overvoltage and Surge Protection ICs .....</b>	<b>4</b>
Single-channel Load Switches with OVP .....	4
Current Limited Load Switch with Reverse Blocking Protection .....	4
Single-Channel Load Switches with OVP and Surge Protection.....	4
Single Input, Dual Output Load Switches with OVP and Surge Protection.....	4
USB-PD Protected Switch.....	4
Current Sink .....	4
Current Source.....	4
Current Source or Current Sink .....	4
<b>USB Data Line Protection ICs.....</b>	<b>6</b>
<b>Interface and Isolation ICs.....</b>	<b>6</b>
Single-channel, Slew-Rate Controlled Load Switches with Reverse Blocking.....	6
Load Switch Controller .....	6
General Purpose I/O Expanders.....	6
<b>Smart Push Button Reset ICs .....</b>	<b>6</b>
<b>LCD Backlight and Bias Power ICs .....</b>	<b>8</b>
Single-Channel Backlight LED Drivers .....	8
Multi-Channel Backlight LED Drivers .....	8
LCD Bias Power Supplies .....	8
<b>Camera LED Flash Driver ICs.....</b>	<b>8</b>
High Current LED Flash Drivers .....	8
<b>RGB LED Driver ICs.....</b>	<b>10</b>
Constant Current RGB LED Drivers .....	10
IR LED Drivers.....	10
<b>Wireless Power Receivers .....</b>	<b>10</b>
<b>Power Over Ethernet ICs.....</b>	<b>10</b>
<b>EMI/ESD Suppressors.....</b>	<b>10</b>
<b>DC-DC Converters .....</b>	<b>12</b>
Buck.....	12
Dual Buck + Quad LDO .....	12
Boost .....	12
Buck & Boost.....	12
Isolated DC-DC Converter/Controller .....	12
Non-Isolated DC-DC Converter/Controller .....	12
<b>Evaluation Kits.....</b>	<b>14</b>
<b>Notes .....</b>	<b>15</b>

## USB and USB-C Overvoltage and Surge Protection ICs

Single-channel Load Switches with OVP													
Device	VIN (V)	VIN MAX (V)	SURGE (V)	RON (mΩ)	IMAX (A)	RBP	RCP	OCP	CL	OTG	OVP Adj	Package	Package Size (L x W)
KTS1640/1 <sup>1</sup>	6.0 - 40	-30 & 42		41	6.0	✓						TDFN-12	4.0 x 4.0mm
KTS1642Q <sup>1</sup>	4.0 - 40	-30 & 42		41	6.0	✓						TDFN-12	4.0 x 4.0mm
KTS1662	2.5 - 40	42		26	4.5					✓	✓	WLCSP-12	1.28 x 1.94mm
KTS1670	2.7 - 30	30		60	3.0					✓	✓	WLCSP-6 UDFN-8	1.0 x 1.2mm 2.0 x 2.0mm
KTS1671	2.7 - 28	30		60	3.0					✓	✓	WLCSP-6	1.0 x 1.2mm

Current Limited Load Switch with Reverse Blocking Protection													
Device	VIN (V)	VIN MAX (V)	SURGE (V)	RON (mΩ)	IMAX (A)	RBP	RCP	OCP	CL	OTG	OVP Adj	Package	Package Size (L x W)
KTS1688	2.5 - 5.5	28 (V <sub>OUT</sub> )		68	2.5	✓			✓	✓		WLCSP-9	1.22 x 1.22mm
KTS1661	2.5 - 5.5	29 (V <sub>OUT</sub> )		53	2.5	✓	✓	✓	✓	✓		WLCSP-9	1.31 x 1.31mm
KTS1665 <sup>2</sup>	2.5 - 5.5	29 (V <sub>OUT</sub> )		53	3.3	✓	✓	✓	✓	✓		WLCSP-9	1.31 x 1.31mm

Single-Channel Load Switches with OVP and Surge Protection													
Device	VIN (V)	VIN MAX (V)	SURGE (V)	RON (mΩ)	IMAX (A)	RBP	RCP	OCP	CL	OTG	OVP Adj	Package	Package Size (L x W)
KTS1650B	2.3 - 28	29	±200	36	4.5					✓	✓	WLCSP-12	1.49 x 2.16mm
KTS1652	2.75 - 21.5	28	±200	9	6.0					✓		WLCSP-20	2.46 x 1.97mm
KTS1682	2.3 - 28	29	±100	38	4.0					✓	✓	WLCSP-12	1.29 x 1.99mm
KTS1668	2.3 - 30	30	±100	38	4.0					✓	✓	WLCSP-12	1.29 x 1.99mm
KTS1675	3.0 - 28	28	±100	20	5.0	✓				✓		WLCSP-20	2.22 x 1.82mm
KTS1675A	3.0 - 28	28	±100	25	5.0	✓				✓		WLCSP-20	2.22 x 1.82mm
KTS1676	3.0 - 28	28	±100	20	5.0	✓				✓		WLCSP-20	2.22 x 1.82mm
KTS1680A/C/D	2.3 - 28	29	±100	28	4.5					✓	✓	WLCSP-12	1.21 x 1.7mm
KTS1681A	2.3 - 28	29	±100	28	4.0					✓	✓	WLCSP-12	1.21 x 1.7mm
KTS1686	3.0 - 28	29	±100	65	4.5	✓				✓	✓	WLCSP-15	1.6 x 2.1mm
KTS1693 <sup>2</sup>	2.7 - 28	30	±110	9	6.0			✓		✓	✓	WLCSP-20	2.13 x 1.905mm

Single Input, Dual Output Load Switches with OVP and Surge Protection													
Device	VIN (V)	VIN MAX (V)	SURGE (V)	RON (mΩ)	IMAX (A)	RBP	RCP	OCP	CL	OTG	OVP Adj	Package	Package Size (L x W)
KTS1678B	2.7 - 13.5	-2 to 28	±100	23/30	3.5/6	✓				✓		WLCSP-28	1.67 x 2.96mm

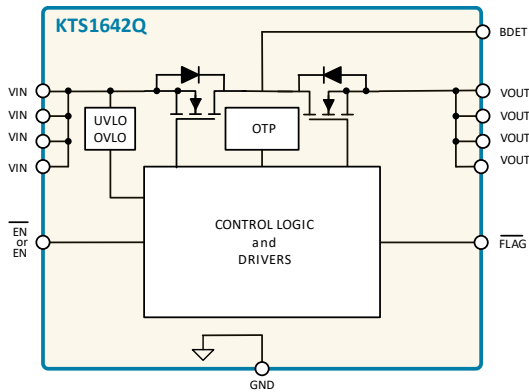
USB-PD Protected Switch													
Device	VIN (V)	VIN MAX (V)	SURGE (V)	RON (mΩ)	IMAX (A)	RBP	RCP	OCP	CL	OTG	OVP Adj	Package	Package Size (L x W)
<b>Current Sink</b>													
KTS1672	3.0 - 24	29	35	25	5.0	✓	✓	✓			✓	WLCSP-12	1.64 x 2.18mm
KTS1673	3.0 - 24	29	35	22	5.0	✓	✓	✓		✓	✓	WLCSP-12	1.64 x 2.18mm
KTS1677A	3.0 - 23	30	±90	30	5.0	✓		✓			✓	WLCSP-15	2.57 x 1.57mm
KTS1697A	3.0 - 23	29	±90	11	7.0	✓	✓	✓			✓	WLCSP-25	2.7 x 2.7mm
KTS1698	3.0 - 23	29	±90	25	5.0	✓	✓	✓			✓	WLCSP-15	2.62 x 1.64mm
KTS1898	3.0 - 33	35	±100	24	6.0	✓	✓	✓			✓	WLCSP-25	2.56 x 2.56mm
<b>Current Source</b>													
KTS1690A <sup>2</sup>	2.5 - 5.5	29 (V <sub>OUT</sub> )	±80	30	3.3	✓	✓	✓	✓	✓		WLCSP-16	1.98 x 1.98mm
KTS1890 <sup>2</sup>	2.5 - 5.5	35 (V <sub>OUT</sub> )	±130	27	4.0	✓	✓	✓	✓	✓		WLCSP-20	2.49 x 1.99mm
<b>Current Source or Current Sink</b>													
KTS1865 <sup>2</sup>	3.0 - 23	29	±100	20	6.5	✓	✓	✓	✓	✓	✓	WLCSP-20	2.71 x 2.16mm

**NEW**  
**NEW**

Definitions	
OVP - Overvoltage protection	OCP - Overcurrent protection
RBP - Reverse blocking protection	RCP - Reverse current protection
CL - Current limit	OTG - USB On-the-Go

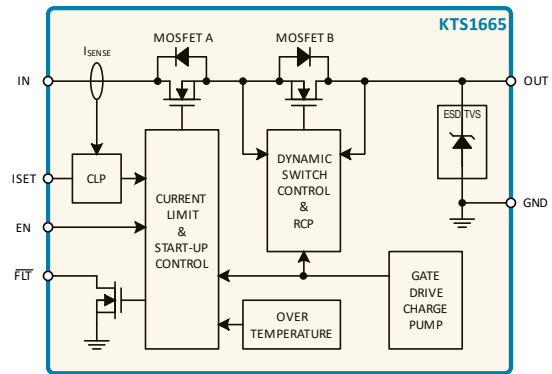
1. AEC-Q100 Automotive qualified parts available. Please contact your local sales representative.  
2. Safety approvals: UL 2367 and IEC 62368-1.

## Automotive Single-channel Load Switch with OVP



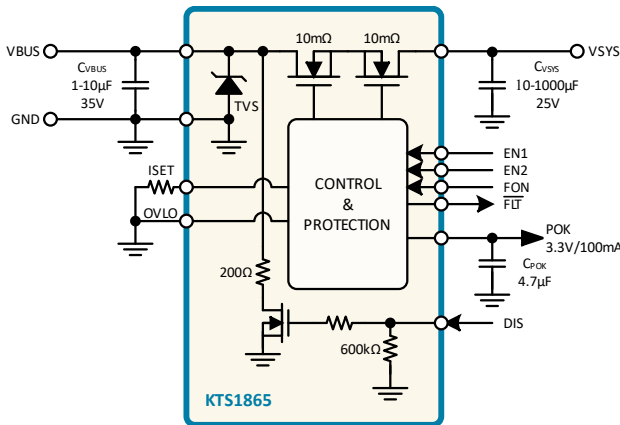
**6.0A, Fixed OVP with -28V Reverse Input Voltage Protection and RBP**

## Current Limited Load Switch with Reverse Blocking Protection



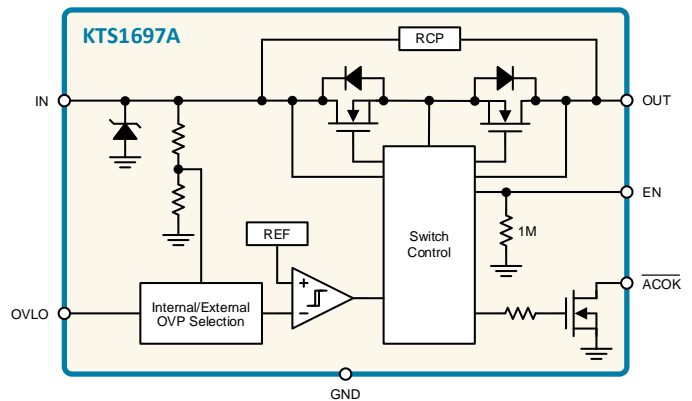
**3.3A, 5V Adjustable Current Limit Load Switch with RBP, RCP and SCP on V<sub>OUT</sub>**

## USB-PD Protected Switch – Current Source / Sink



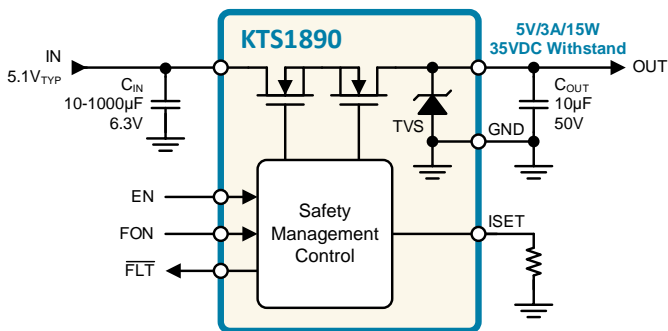
**6.5A, ±100V Surge, Bi-Directional Load Switch with OVP, OCP, RBP, RCP, CL, SCP and POK Safe LDO**

## USB-PD Protected Switch – Current Sink



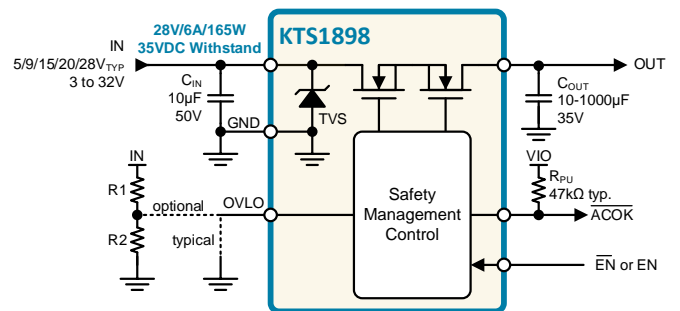
**20V/7A/140W, ±90V Surge, 23V Fixed or Adjustable OVP with RCB, RCP, OCP**

## USB-PD 28V EPR Protected Switch – Current Source



**4.0A, ±130V Surge, 5V Adjustable Current Limit Load Switch with RBP, RCP and SCP on V<sub>OUT</sub>**

## USB-PD 28V EPR Protected Switch – Current Sink



**6A, ±100V Surge, 35V OVP Switch with RBP, RCP and SCP**

## USB Data Line Protection ICs

Device	VIN (V)	Protects			Protection			Switches		Package	Package Size (L x W)
		D+/D-	CC1/2	SBU1/2	OVP	Surge	ESD	r <sub>DS</sub>	Cap		
KTU1001A	2.7 - 5.5	✓ <sup>3</sup>		✓ <sup>3</sup>	+24V in 100ns	+25V		6Ω	4.0pF	WLCSP-12	1.17 x 1.57mm
KTU1101	2.5 - 5.5		✓	✓	+24V in < 15ns	CC1/2 = ±80V SBU1/2 = ±35V	Air: ±15kV Contact: ±8kV	CC = 0.3Ω SBU = 4Ω	CC = 370pF SBU = 27pF	WLCSP-20	1.7 x 2.1mm
KTU1108	2.5 - 5.5		✓		+24V in < 15ns	CC1/2 = ±80V	Air: ±15kV Contact: ±8kV	0.24Ω	370pF	WLCSP-12	1.29 x 1.69mm
KTU1120	2.5 - 5.5		✓	✓ OVP=3.83V	+24V in < 15ns	CC1/2 = ±40V SBU1/2 = ±30V	Air: ±15kV Contact: ±8kV	CC = 0.27Ω SBU = 3Ω	CC = 40pF SBU = 11pF	WLCSP-16 TQFN33-20	1.7 x 1.7mm 3.0 x 3.0mm
KTU1121	2.5 - 5.5		✓	✓ OVP=4.8V	+24V in < 15ns	CC1/2 = ±40V SBU1/2 = ±30V	Air: ±15kV Contact: ±8kV	CC = 0.27Ω SBU = 3Ω	CC = 40pF SBU = 11pF	WLCSP-16 TQFN33-20	1.7 x 1.7mm 3.0 x 3.0mm
KTU1121A <sup>4</sup>	2.5 - 5.5		✓	✓ OVP=4.8V	+24V in < 70ns	CC1/2 = ±40V SBU1/2 = ±30V	Air: ±15kV Contact: ±8kV	CC = 0.27Ω SBU = 3Ω	CC = 40pF SBU = 11pF	WLCSP-16 TQFN33-20	1.7 x 1.7mm 3.0 x 3.0mm
KTU1128 <sup>4</sup>	2.5 - 5.5		✓	✓ OVP=4.8V	+32V in < 30ns	CC1/2 = ±60V SBU1/2 = ±40V	Air: ±25kV Contact: ±10kV	CC = 0.27Ω SBU = 3Ω	CC = 33pF SBU = 11pF	WLCSP-16 WQFN33-20	1.694 x 1.694mm 3.0 x 3.0mm
KTU1131 <sup>4</sup>	2.5 - 5.5	✓	✓	✓	+22V in < 15ns		Air: ±10kV Contact: ±5kV	CC = 0.27Ω SBU = 3Ω	CC = 15pF SBU = 6pF	UQFN33-20	3.0 x 3.0mm

## Interface and Isolation ICs

### Single-channel, Slew-Rate Controlled Load Switches with Reverse Blocking

Device	VIN (V)	RON (mΩ)	IMAX (A)	RBP	Package	Package Size (L x W)
KTS1601	1.5 - 5.5	24.0 @3.3V <sub>IN</sub>	2.0	✓	WLCSP-4	1.0 x 1.0mm
KTS1605	1.5 - 5.5	13.4 @3.3V <sub>IN</sub>	5.0	✓	WLCSP-6	1.0 x 1.5mm

### Load Switch Controller

Device	VIN (V)	Reverse Voltage Rating	Gate Peak Sink Current(A)	Regulated Source to Drain Voltage(mV)	Package	Package Size (L x W)
KTS1900 (Q)	4.0 - 60	-65V	1.5	40	SOT23-6	2.9 x 1.6mm

### General Purpose I/O Expanders

Device	VIN (V)	Max. Driver Current per Channel (mA)	# of I/Os	Interrupt Out	Addresses	Package	Package Size (L x W)
KTS1620	1.65 - 5.5	25	24	✓	4	FO-WLP66-36 TQFN55-32L	2.6 x 2.6mm 5.0 x 5.0mm
KTS1622	1.65 - 5.5	25	16	✓	4	FO-WLP55-25 TQFN44-24L	2.0 x 2.0mm 4.0 x 4.0mm

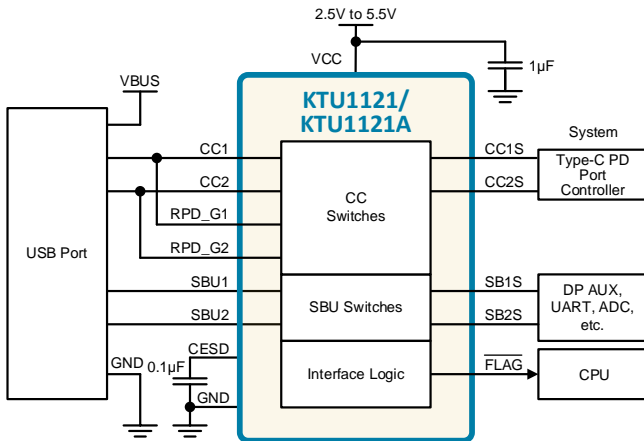
## Smart Push Button Reset ICs

Part Number	VIN (V)	Quiescent Current (μA)	Ship Mode Current (μA)	Reset Request Time (s)	Discharge Paths	Discharge Time (ms)	Discharge Current (mA)	Package	Package Size
KTS1612	2.2 - 5.5	<1	<1	10	2	400	52	UQFN2.0x1.5-10	2.0 x 1.5mm
KTS1613	1.6 - 5.5	<1	<1	10		400		UQFN2.0x1.5-10	2.0 x 1.5mm

3. KTU1001A can protect D+/D- or SBU1/2.

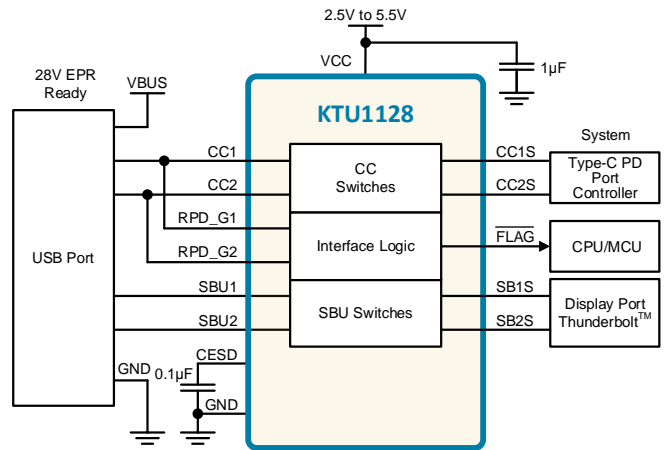
4. Thunderbolt™ Compatible.

**USB Type-C Port Protector**



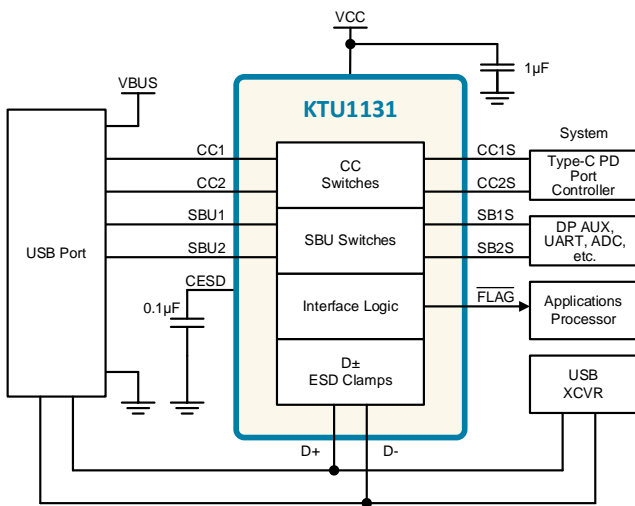
**USB Type-C Port Protector (Thunderbolt™ compatible) for CC and SBU Pins**

**USB Type-C Port Protector**



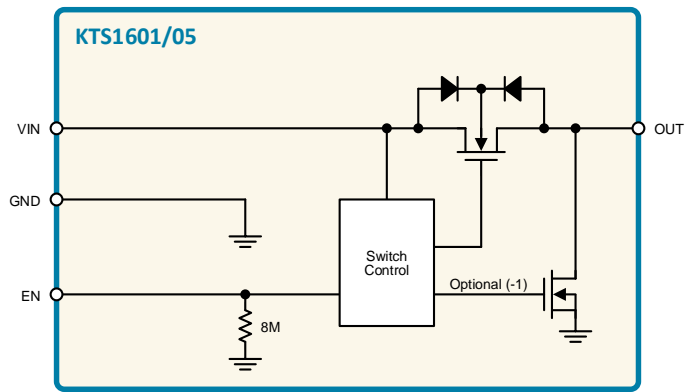
**USB Type-C 28V EPR Port Protector (Thunderbolt™ compatible) for CC and SBU Pins**

**USB Type-C Port Protector**



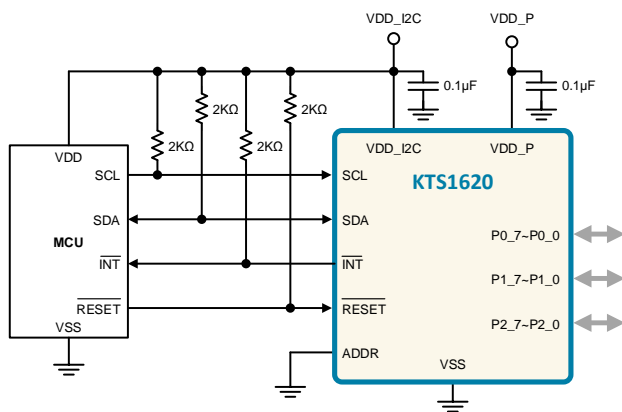
**USB Type-C Port Protector for CC, SBU, and D+/D- Pins**

**Load Switch IC**



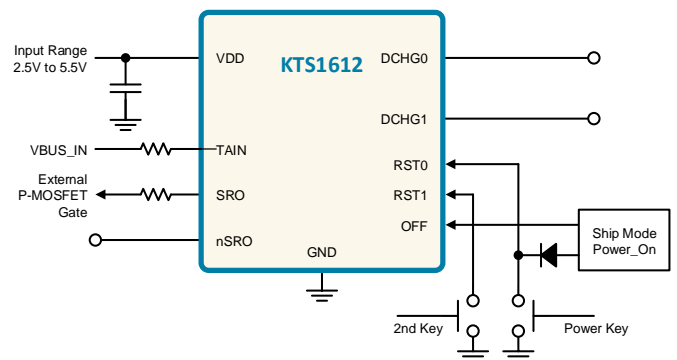
**2A/5A Slew Rate Controlled Load Switch with RBP**

**General Purpose I/O Expander IC**



**Low Voltage 24-bit I<sup>2</sup>C I/O Expander**

**Dual-Input Smart Push Button Reset IC**



**Dual-Input Push Button Reset IC with Two Discharge Paths**

## LCD Backlight and Bias Power ICs

Single-Channel Backlight LED Drivers										
Device	VIN (V)	# LED Channels	LEDs/CH	Total LEDs	Switch Current (A)	I <sup>2</sup> C	Single Wire	PWM	OVP (V)	Package
KTD2801B	2.7 - 5.5	1	6	6	0.52		✓	✓	24	TDFN22-6
KTD2801A	2.7 - 5.5	1	8	8	0.52		✓	✓	30	TSOT23-6/TDFN22-6
KTD2801	2.7 - 5.5	1	10	10	0.52		✓	✓	36	TSOT23-6/TDFN22-6
KTD2500	2.7 - 5.5	1	10	10	0.75		✓	✓	38	TDFN22-6
KTD2505R	2.7 - 5.5	1	10	10	1.2		✓	✓	38	TDFN22-6
KTZ8850 <sup>5</sup>	3.0 - 5.5	1	10	10	1.3	✓		✓	Adj < 36	WLCSP-18

Multi-Channel Backlight LED Drivers										
Device	VIN (V)	# LED Channels	LEDs/CH	Total LEDs	Switch Current (A)	I <sup>2</sup> C	Single Wire	PWM	OVP (V)	Package
KTD3112	2.7 - 5.5	2	6	12	1.5			✓	25	WLCSP-9
KTD3133	2.7 - 5.5	2	8	16	1.8	✓		✓	25.9/32	WLCSP-12
KTD3134	2.7 - 5.5	2	8	16	2.6	✓		✓	25.9/32	WLCSP-12
KTD3113	2.7 - 5.5	3	6	18	1.8			✓	25	WLCSP-9
KTD3136	2.7 - 5.5	3	8	24	2.6	✓		✓	25.9/32	WLCSP-12
KTD3137	2.7 - 5.5	3	8	24	2.6	✓		✓	25.9/32	WLCSP-12
KTZ8863A <sup>5</sup>	2.9 - 5.5	3	8	24	2.1	✓		✓	Adj < 32	WLCSP-24
KTZ8864A <sup>5</sup>	2.7 - 5.5	4	8	32	2.1	✓		✓	Adj < 32	WLCSP-24
KTD3156B	2.7 - 5.5	6	10	60	2.5			✓	Adj < 40	TQFN33-16
KTZ8866 <sup>5</sup>	2.7 - 5.5	6	10	60	2.5	✓		✓	Adj < 40	WLCSP-28
KTZ8868 <sup>5</sup>	2.7 - 5.5	8	10	80	2.5	✓		✓	Adj < 40	WQFN55-32

LCD Bias Power Supplies							
Device	VIN (V)	Control	Max. Current per Output (mA)	VOUT (V)	Accuracy (%)	IQ Shutdown (SDA=SCL=1.8V) (μA)	Package
KTD2151	2.7 - 5.5	I <sup>2</sup> C	80	4.0~5.2V, -4.0~-5.2V, 100mV Steps	1.5	6	WLCSP-15
KTZ8850 <sup>5</sup>	3.0 - 5.5	I <sup>2</sup> C	80	4.0~6.3V, -4.0~-6.3V, 12.5mV Steps	2.0	1	WLCSP-18
KTZ8863A <sup>5</sup>	2.9 - 5.5	I <sup>2</sup> C	150	4.0~6.3V, -4.0~-6.3V, 50mV Steps	1.5	1	WLCSP-24
KTZ8864A <sup>5</sup>	2.7 - 5.5	I <sup>2</sup> C	150	4.0~6.3V, -4.0~-6.3V, 50mV Steps	1.5	1	WLCSP-24
KTZ8866 <sup>5</sup>	2.7 - 5.5	I <sup>2</sup> C	200	4.0~6.3V, -4.0~-6.3V, 50mV Steps	1.5	1	WLCSP-28
KTZ8868 <sup>5</sup>	2.7 - 5.5	I <sup>2</sup> C	250	4.0~6.3V, -4.0~-6.3V, 50mV Steps	1.5	1	WQFN55-32

## Camera LED Flash Driver ICs

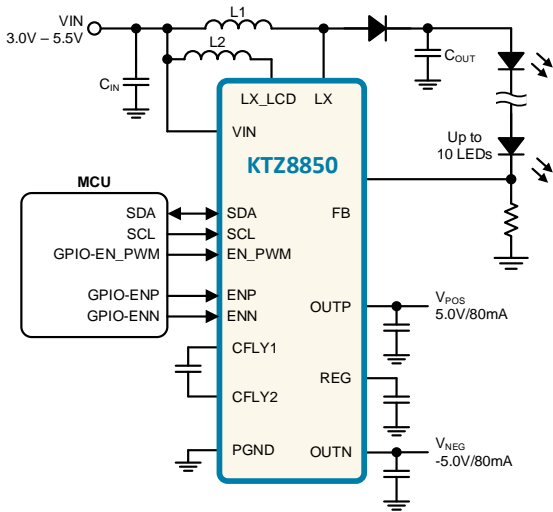
High Current LED Flash Drivers							
Device	VIN (V)	# LED Channels	IMAX (A)	Interface	Type	Package	Package Size (L x W)
KTD2681	2.7 - 5.5	1	1.5	I <sup>2</sup> C	BOOST	WLCSP-12	1.3 x 1.57mm
KTD2688A	2.7 - 5.5	2	1.5/1.5	I <sup>2</sup> C	BOOST	WLCSP-12	1.3 x 1.57mm
KTD2686	2.7 - 5.5	3	1.5/1.0/0.5	I <sup>2</sup> C	BOOST	WLCSP-12	1.42 x 1.66mm
KTD2690	2.7 - 5.5	1	1.5	I <sup>2</sup> C	BOOST	WLCSP-8/ UDFN-10 <sup>6</sup>	1.519 x 0.808mm / 2mm x 2mm
KTD2691	2.7 - 5.5	1	1.5	I <sup>2</sup> C	LINEAR	WLCSP-8	1.519 x 0.808mm

5. Integrated LED Driver IC and LCD Bias IC.

6. Please contact Kinetic Technologies Sales for availability.

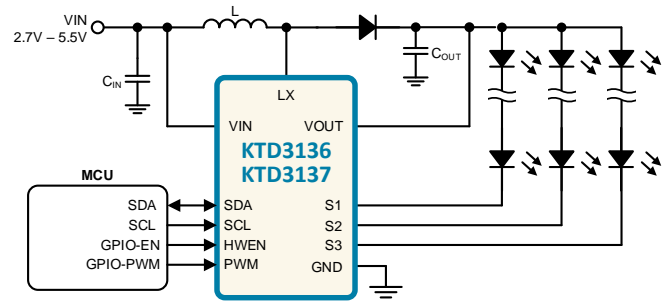


Single-Channel LED Backlight Driver IC with LCD Bias



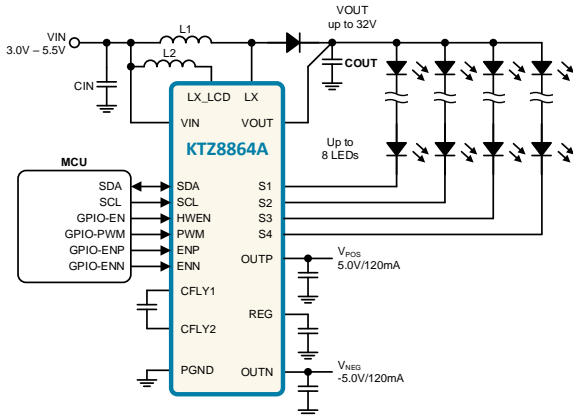
Complete LCD Backlight and Bias Power

Multi-Channel LED Backlight Driver IC



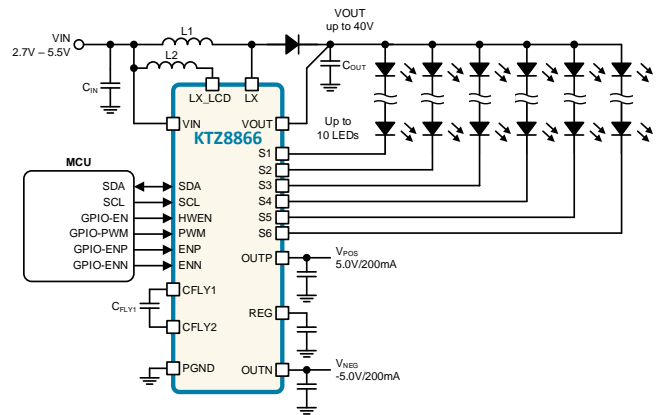
3-Channel, 2.6A/32V Integrated Switch (KTD3136) with Panel Flash (KTD3137)

Multi-Channel LED Backlight Driver IC with LCD Bias



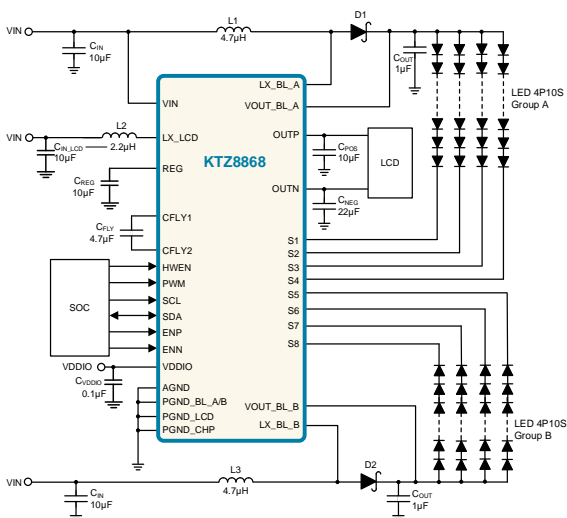
4-Channel, Complete LCD Backlight and Bias Power

Multi-Channel LED Backlight Driver IC with LCD Bias



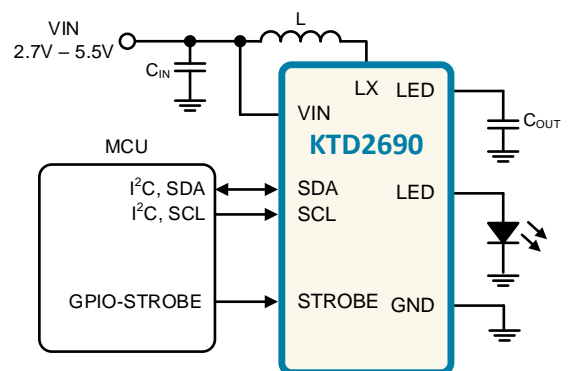
6-Channel, Complete LCD Backlight and Bias Power

Multi-Channel LED Backlight Driver IC with LCD Bias



8-Channel, Complete LCD Backlight and Bias Power

Flash LED Driver IC



1-Channel, 1.5A Flash/Torch/IR Mode LED Driver

## RGB LED Driver ICs

Constant Current RGB LED Drivers								
Device	VIN (V)	# LED Channels	IMAX (mA)	Levels	Interface	AECQ100 Approved	Package	Package Size (L x W)
KTD2026	2.7 - 5.5	3	24	192	I <sup>2</sup> C		UTDFN-8	1.5 x 1.5mm
KTD2027	2.7 - 5.5	4	24	192	I <sup>2</sup> C		UTDFN-8	1.5 x 1.5mm
KTD2037	2.7 - 5.5	3	24	191	I <sup>2</sup> C		UTDFN-8	1.5 x 1.5mm
KTD2052A/C <sup>7</sup>	2.5 - 5.5	12	24	192	I <sup>2</sup> C		UDFN-8	2.0 x 2.0mm
KTD2052B/D <sup>7</sup>	2.5 - 5.5	12	24	192	I <sup>2</sup> C		UDFN-8	2.0 x 2.0mm
KTD2058 (Q) <sup>8</sup>	2.5 - 5.5	36	24	192	I <sup>2</sup> C	✓	UQFN-20	3.0 x 3.0mm
KTD2059 (Q) <sup>8</sup>	2.5 - 5.5	36	24	192	I <sup>2</sup> C	✓	UQFN-20	3.0 x 3.0mm
KTD2060 (Q) <sup>8</sup>	2.5 - 5.5	36	24	192	I <sup>2</sup> C	✓	UQFN-20	3.0 x 3.0mm
KTD2061 (Q)	2.5 - 5.5	36	24	192	I <sup>2</sup> C	✓	UQFN-20	3.0 x 3.0mm
KTD2064A	2.5 - 5.5	24	24	192	I <sup>2</sup> C		UQFN-20	3.0 x 3.0mm
KTD2064B <sup>9</sup>	2.5 - 5.5	24	24	192	I <sup>2</sup> C		UQFN-20	3.0 x 3.0mm

IR LED Drivers								
KTD2041	2.7 - 5.5	9	32	64	I <sup>2</sup> C		UQFN-20	3.0 x 3.0mm

## Wireless Power Receivers

Device	Function	Wireless Power Standard	Recommended Operating Range (V)	Output Voltage (V)	Output Power Max (W)	Maximum Output Current (A)	Package	Package Size (L x W)
KTE7000	Power Receiver	WPC/Qi 1.3 BPP	4.0 to 18.0	5.0	5	1.5	WLCSP-52	2.66 x 3.90mm
KTE7001	Power Receiver	WPC/Qi 1.3 EPP	4.0 to 18.0	5.0 in BPP Mode 9/12 in EPP Mode	15	1.5	WLCSP-52	2.66 x 3.90mm
KTE7200	Power Receiver	WPC/Qi 1.3 BPP	3.6 to 10 V	5.1	5	1	TQFN-24	5 x 5mm

## Power Over Ethernet ICs

Device	VIN (V)	Power (W)	802.3af/at/bt Power Level				Key Description	Power Supply Configuration				Package
			Type 1	Type 2	Type 3	Type 4		Flyback	Forward	PSR	Buck	
KTA1136	37 - 57	13	✓				PD, DC-DC and FET	✓		✓	✓	QFN44-16
KTA1137A	9.5 - 57	30	✓	✓			PD and DC-DC	✓		✓	✓	QFN55-20
KTB1095	5 - 80	70	✓	✓	✓	✓	Synchronous Flyback <sup>10</sup>	✓				SOP-16
KTA1140	9.5 - 57	71	✓	✓	✓	✓	PD only	✓	✓	✓	✓	WQFN55-20
<b>NEW</b> KTA1170	2.7 - 75	71	✓	✓	✓	✓	Dual MOSFET Bridge Rectifier					WDFN44-8
KTB2140	8 - 80	200	✓	✓	✓	✓	DC-DC	✓	✓	✓	✓	WQFN33-16

## EMI/ESD Suppressors

Device	VIN (V)	# of Channels	CISPR22 and FCC Part 15	IEC 61000-4-2 ESD (Air Discharge)	IEC 61000-4-2 ESD (Contact Discharge)	Cable Discharge Event (CDE)	Package
KTA1550	2.17 - 3.47	2	Class B, for Radiated and Conducted Emissions	±25kV	±25kV	±25kV	QSOP-16L TDFN-4 x 2.5 - 16L
KTA1552	2.17 - 3.47	4					DFN94-36L

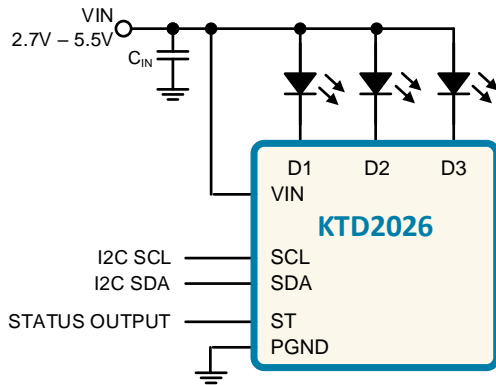
7. KTD2052A/C = defaults disabled at initial power-up; KTD2052B/D = execute AutoBreathe™ pattern by default at initial power-up or at reset

8. Alternate I2C Address to KTD2061.

9. Alternate I2C Address to KTD2064A.

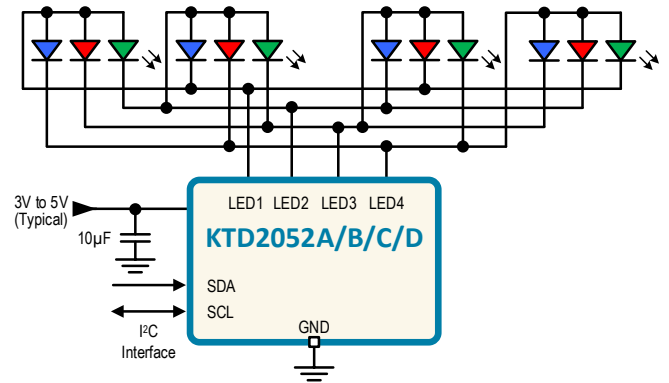
10. With integrated feedback and digital isolator.

**Constant Current RGB LED Driver IC**



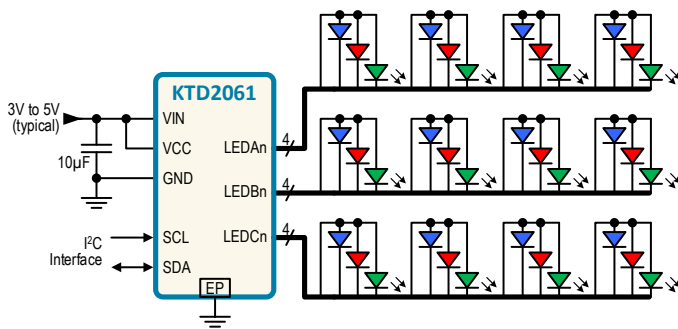
**3-Channel RGB LED Driver with I<sup>2</sup>C Dimming**

**Constant Current RGB LED Driver IC**



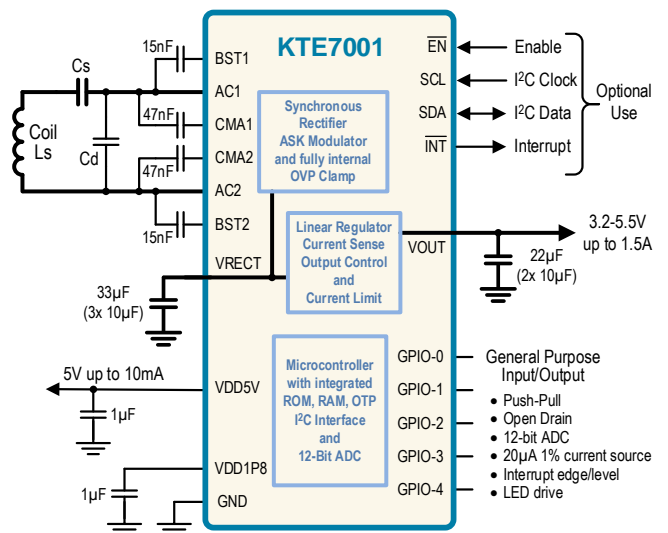
**12-Channel RGB LED Driver with I<sup>2</sup>C Control**

**Constant Current RGB LED Driver IC**



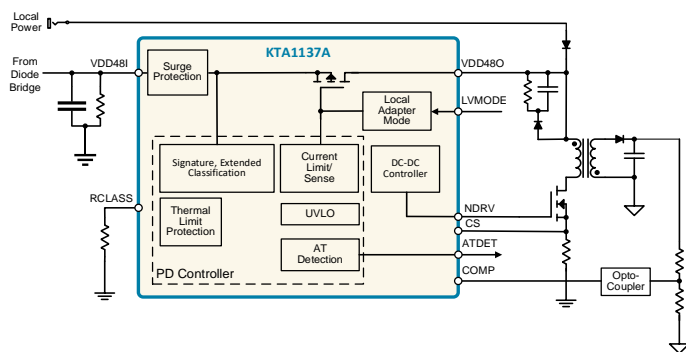
**36-Channel RGB LED Driver with I<sup>2</sup>C Control**

**Wireless Power Receiver**



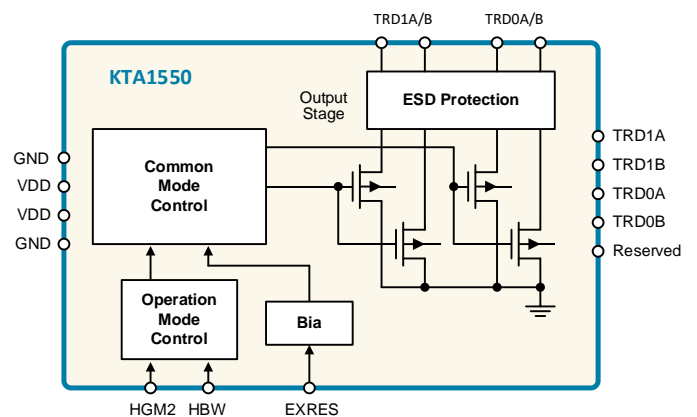
**15W Wireless Power Receiver for WPC/Qi BPP/EPP**

**PoE PD and DC-DC Controller/Regulator**



**13W/30W PoE PD and DC-DC Controller**

**EMI/ESD Suppression IC**



**Dual Channel Active EMI & ESD Suppressor**

## DC-DC Converters

Buck									
Device	VIN (V)	VOUT (V)	IMAX Current (mA)	IQ (µA)	Interface	Output Auto-Discharge	OptiComp™	Package	Package Size (L x W)
KTB8331 <sup>11</sup>	2.5 - 5.5	0.6 - 3.345	3000	48	I <sup>2</sup> C/EN	Yes		WLCSP-15	1.31 x 2.015mm
KTB8399 <sup>11</sup>	2.5 - 5.5	0.6 - 3.345	3000	46	I <sup>2</sup> C/EN	Yes		WLCSP-15	1.34 x 2.045mm
KTB8370A <sup>11</sup>	4.7 - 17	5.0V	5000	50	EN/PG	Yes		WLCSP-20	1.7 x 2.0mm
KTB8370B <sup>11</sup>	4.7 - 17	3.3V	5000	50	EN/PG	Yes		WLCSP-20	1.7 x 2.0mm
KTB8370C <sup>11</sup>	4.7 - 17	1.8V	5000	50	EN/PG	Yes		WLCSP-20	1.7 x 2.0mm
KTB8371 <sup>11</sup>	4.7 - 17	0.8 to 5.5	5000	50	I <sup>2</sup> C	Yes		WLCSP-20	1.7 x 2.0mm
KTB8372 <sup>11</sup>	4.7 - 18	0.8 to - 18	5000	50	EN/PG	Yes		FCQFN-11	2.5 x 2.2mm
KTB8400 <sup>11</sup>	2.5 - 5.5	0.6 - 3.345	3000	46	I <sup>2</sup> C/EN	Yes	✓	WLCSP-15	1.34 x 2.045mm

Dual Buck + Quad LDO									
Device	VIN (V)	VOUT (V)	IMAX Current (mA)	IQ (µA)	Interface	Output Auto-Discharge	Package	Package Size (L x W)	
KTZ8701 <sup>12</sup>	2.7 - 5.5	Bucks: 0.6 - 3.3, 12mV Steps LDOs: 1.2 - 3.5, 25mV Steps	Bucks: 1200 LDOs: 300	140	I <sup>2</sup> C	Yes	WLCSP-25	2.42 x 2.35mm	

Boost									
Device	VIN (V)	VOUT (V)	IMAX Current (mA)	IQ (µA)	Interface	Output Auto-Discharge	Package	Package Size (L x W)	
KTC2110	2.5 - 5.5	5	1000	60	EN/PT	-	WLCSP-9	1.38 x 1.38mm	
KTC2110A	2.5 - 5.5	5.4	1000	60	EN		WLCSP-9	1.38 x 1.38mm	
KTC2115	2.5 - 5.5	5	1500	56	EN/PT		WLCSP-9	1.27 x 1.30mm	

Buck & Boost									
Device	VIN (V)	VOUT (V)	IMAX Current (mA)	IQ (µA)	Interface	Output Auto-Discharge	Package	Package Size (L x W)	
KTZ8812	2.5 - 5.5	+4.0 - 5.2, 100mV Steps -4.0 to -5.2, 100mV Steps	150	-	I <sup>2</sup> C/ENP/ENN	Yes	WLCSP-15 TDFN3x2.5-14	2.2 x 1.45mm 3.0 x 2.5mm	

Isolated DC-DC Converter/Controller									
Device	VIN (V)	VOUT (V)	Output Power (W)	IQ (mA)	Integrated Isolated Feedback	Isolation Voltage	DC-DC Topology	Package	Package Size (L x W)
KTB1095 <sup>13</sup>	5 - 80	3.3 - 24	70	5	✓	3kV	Synchronous Flyback	SOP-16	10.3mm x 7.5mm
KTB1100 <sup>13</sup>	7 - 80	3.3 - 48	15	2.5	✓	3kV	Flyback with FET	SOP-16	10.3mm x 7.5mm
KTB2140	8 - 80	3.3 - 48	200	1	-	external	Flyback or Forward, Active Clamp	WQFN-16	3mm x 3mm

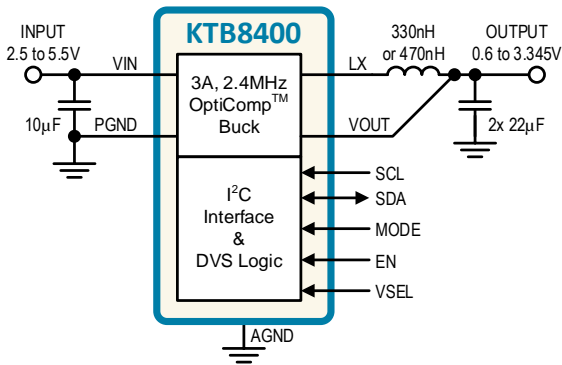
Non-Isolated DC-DC Converter/Controller									
Device	VIN (V)	VOUT (V)	Output Power (W)	IQ (mA)	Interface	DC-DC Topology	Package	Package Size (L x W)	
KTC3500	3.5 - 60	3.3 - 48	100	0.5	EN	Boost, Flyback, SEPIC	DFN33-10	3mm x 3mm	

11. Default output voltage & mode options available. Please contact Kinetic Sales for detailed ordering information.

12. Please contact Kinetic Technologies Sales for availability.

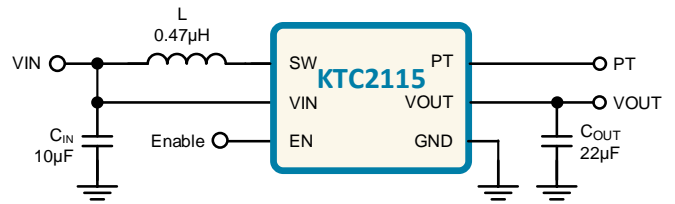
13. Safety approval: UL1577.

**Buck Converter**



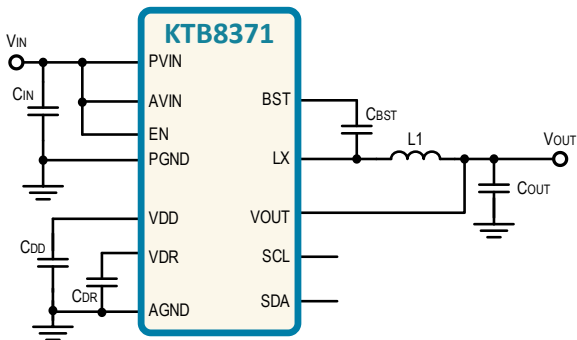
**3A Synchronous AOT Buck with OptiComp™**

**Boost Converter**



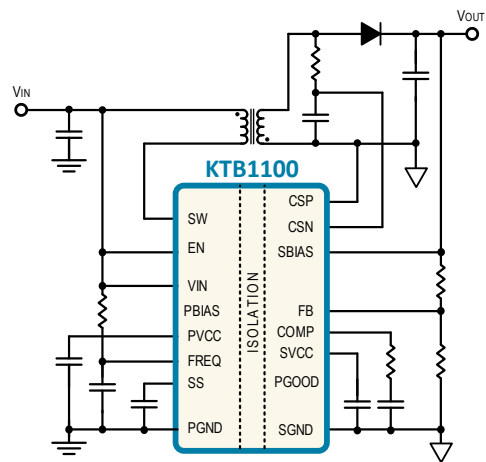
**1.5A, Low IQ, Synchronous Boost**

**Buck Converter**



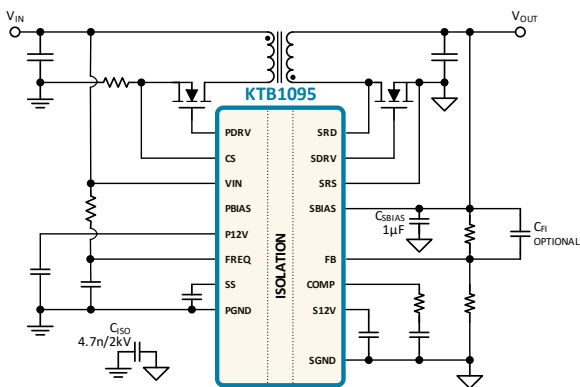
**4.7V to 17V Input, 5A Synchronous Buck Regulator with I²C Interface**

**Isolated Flyback Converter**



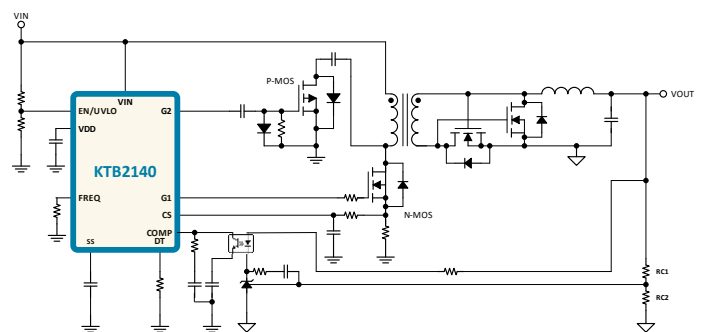
**Isolated Flyback Regulator with Integrated Feedback and Digital Isolator**

**Isolated Flyback Converter**



**Isolated Flyback Regulator with Integrated Feedback and Digital Isolator**

**Isolated Flyback Converter**



**Active Clamp Current-Mode PWM Controller**

## Evaluation Kits

Part Number	Evaluation Kit Number	Description
KTA1137A	KTA1137AEUAB-MMEV02	IEEE 802.3at PoE PD with Integrated DC-DC Controller (updated EVB)
KTA1140	KTA1140EUUAJ-MMEV01	IEEE 802.3af/at/bt PoE PD and Flyback Controller
KTB1100	KTB1100EYAA-MMEV01	15W Flyback Regulator with Digital Isolator Integrated Feedback
KTB8331	KTB8331DEDAA-MMEV02	3A, 2.4MHZ, Low-Voltage, I <sup>2</sup> C Programmable Buck Regulator
KTB8400	KTB8400AEDAA-MMEV01	Low Voltage Buck with Accurate F <sub>SW</sub> and Fast Transient Response
KTC2110	KTC2110ECAA-MMEV01	3.0MHz High Efficiency Low I <sub>Q</sub> Boost Regulator
KTC3500	KTC3500EVAC-MMEV01	3.5V to 60V Input Boost/SEPIC/Flyback DC-DC Controller
KTD2026	KTD2026EWE-MMEV01	Constant Current RGB LED Driver with I <sup>2</sup> C Control
KTD2027	KTD2027EWE-MMEV01	Constant Current RGB/White LED Driver with I <sup>2</sup> C Control
KTD2052	KTD2052AEVAA-MMEV01	12-Channel RGB LED Drivers with I <sup>2</sup> C Control
KTD2061	KTD2061EUAC-MMEV02	36-Channel RGB LED Drivers with I <sup>2</sup> C Control
KTD2690	KTD2690ERAA-MMEV01	Single Flash LED Driver with Programmable 1.5A Current Source
KTS1601	KTS1601EUM-1-MMEV01	2.0A Slew Rate Controlled Load Switch with Reverse Blocking
KTS1622	KTS1622EUAA-MMEV01	Low Voltage 16-Bit I <sup>2</sup> C-bus I/O Expander
KTS1640	KTS1640EDV-MMEV01	Load Switch with OVP and Reverse Polarity Protection
KTS1677A	KTS1677AEVH-MMEV01	5A <sub>RMS</sub> VBUS Current-Sink Protection Load Switch
KTS1688	KTS1688EUH-MMEV01	Low Resistance Load Switch with Current Limit Control & Over-Voltage Reverse Blocking Protection
KTS1690A	KTS1690AEGAA-MMEV01	USB VBUS I <sub>SOURCE</sub> Load Switch with Current Limit Control
KTS1693	KTS1693EVB-MMEV01	Surge Protected Load Switch with OVP and OCP
KTS1697A	KTS1697AEOAB-MMEV01	7A <sub>RMS</sub> VBUS Current-Sink Protection Load Switch
KTS1698	KTS1698AEDAB-MMEV01	5A <sub>RMS</sub> VBUS Current-Sink Protection Load Switch
KTS1898A	KTS1898AEOAE-MMEV01	6A <sub>RMS</sub> VBUS I <sub>SINK</sub> Load Switch for 28V EPR Systems
KTU1108	KTU1108EFAA-MMEV01	USB Type-C Protector for CC Pins
KTU1128	KTU1128EUUAJ-MMEV01	USB Type-C 28V EPR Port Protector for CC and SBU Pins
KTU1121A	KTU1121AEUAJ-MMEV01	USB Type-C Protector for CC and SBU Pins
KTZ8868	KTZ8868EUAD-MMEV01	High Efficiency 8-CH LED Backlight Driver with Dual LCD Bias Power



Notes



**Kinetic Technologies**

6399 San Ignacio Ave, Suite 250  
San Jose, CA 95119, USA  
Tel: +1 (408) 746-9000  
[www.kinet-ic.com](http://www.kinet-ic.com)