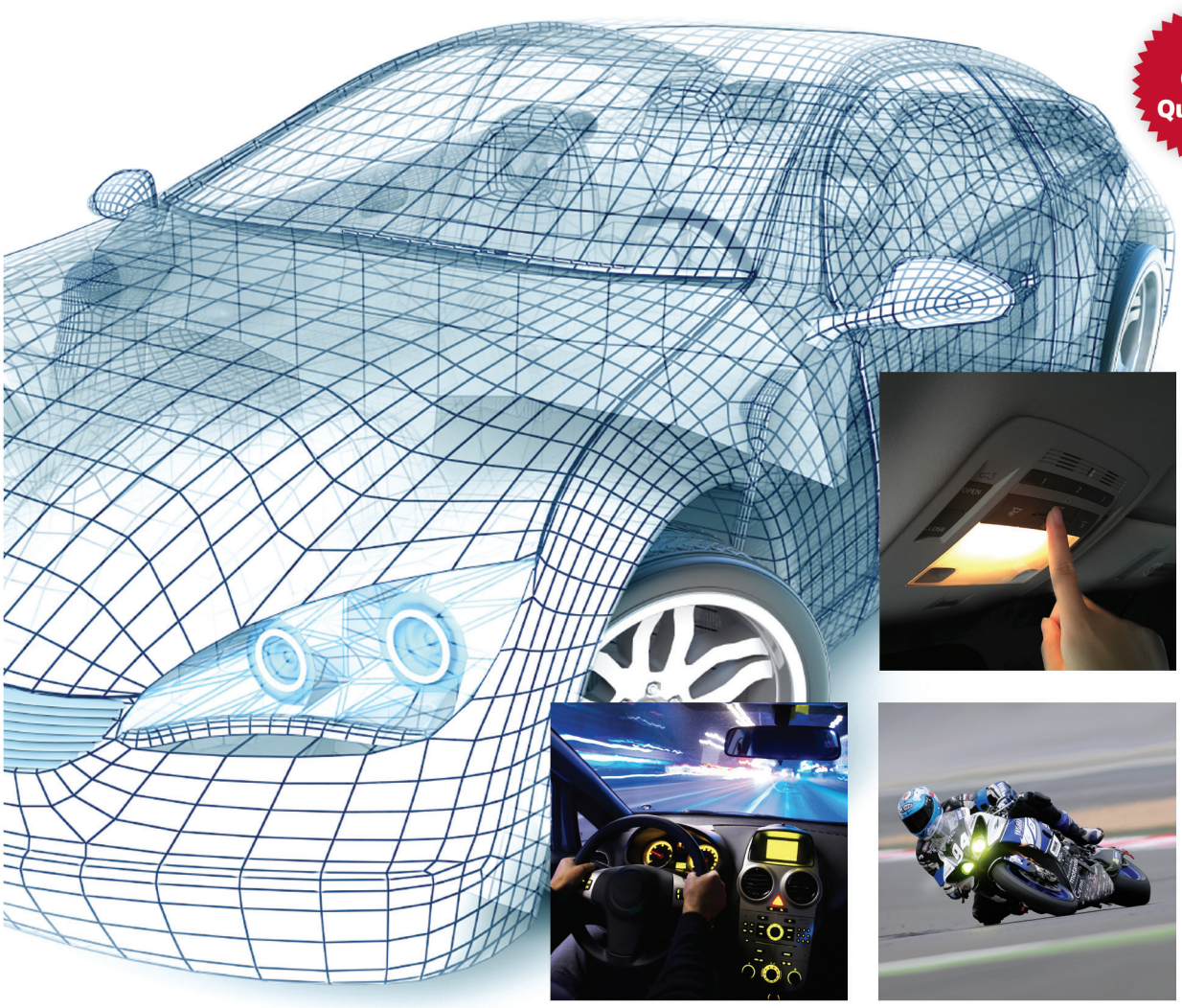
ISSI®

Long-term Support
World Class Quality

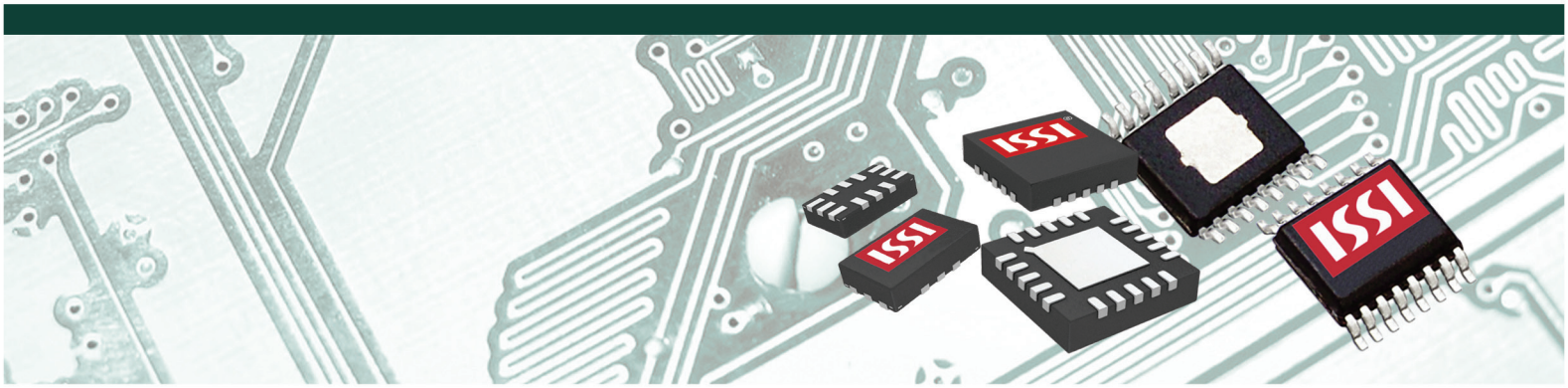
2017

FxLED, Audio, and HBLED

Automotive Product Selector Guide



AEC Q100 Qualified



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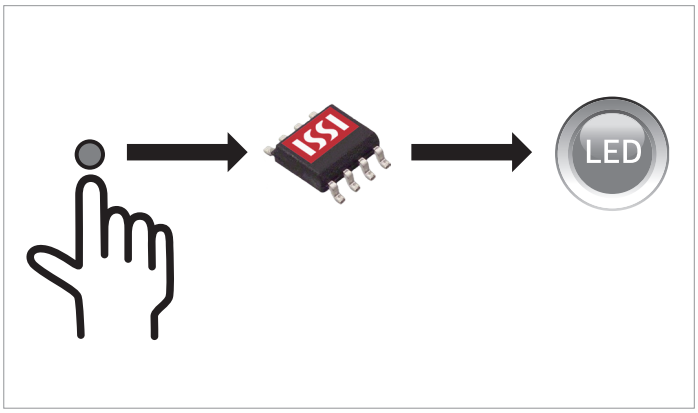
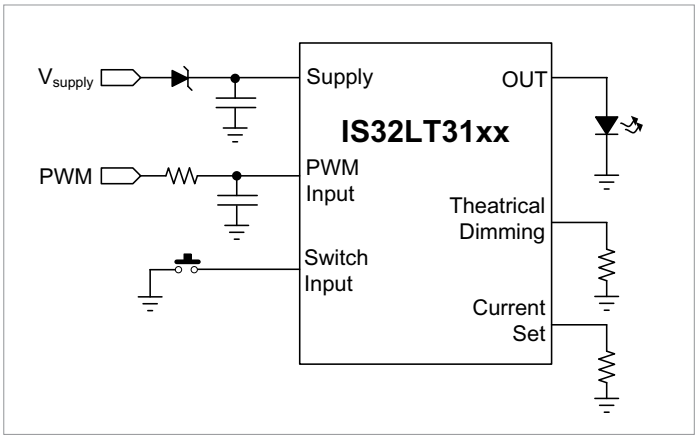
INTERIOR LIGHTING

Map/Dome Light Linear Driver

- Operating voltage 5V to 42V
- Single or dual channel current source
  - Programmable current via single external resistor
- Gamma corrected Fade In/Out algorithm
  - Resistors set independent fade IN/OUT ramp time
- Momentary contact button EN input
  - Input is debounced and latched
- PWM input pin directly drives the current source
- Fault Protection:
  - OUTx pin shorted to GND
  - ISET pin short to GND
  - Over temperature
- SOP-8-EP package
- Automotive Grade – AEC-Q100
- Operating temperature from -40°C ~ +125°C

Note: Reference device datasheet for specific features





Description

LEDs continue to gain popularity in automotive applications; ISSI's family of map/dome light LED drivers offer a unique cost effective solutions with advanced functionality. They integrate functions which normally require a microcontroller and several discrete components. Individual resistors are all that is required to adjust the LED current as well as the theatrical fade up/down ramp speed; there is no software programming required.

The map/dome light LED drivers can be controlled by either a momentary contact switch or a courtesy signal input. An integrated debounce and latch circuit conditions the switch input so a single press of the mechanical switch does not appear like multiple presses. The device's state machine logic manages the operating states of either the momentary contact switch or the PWM input.

Part Number	# Channels	PWM Input	Theatrical Dimming	Current / Channel
IS32LT3120	2	NO	YES	200mA
IS32LT3174	1	NO	YES	200mA
IS32LT3175P	1	YES	YES	150mA
IS32LT3175N	1	YES	YES	150mA

- Linear LED Driver: Low-noise, low-EMI, adjustable linear current source.
- Switch Input: Integrates switch debounce and latching logic.
- Reduced BOM: LED driver with theatrical dimming resulting in 65% less components, small PCB area.
- No Microcontroller: Advanced LED performance can be adjusted with only simple resistors.
- AEC-Q100: Meets automotive stress testing specifications from –40°C to +125°C.

Application

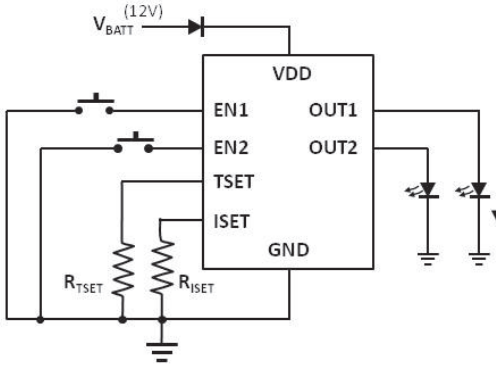
- **Automotive Interior:**
  - Map/Dome light
  - Vanity mirror
  - Puddle lamp in doors
  - Glove box

IS32LT3120

Dual Channel CCR with Fade IN/OUT

Features

- Input voltage range: 5V to 45V
- Dual output channels can source up to 200mA
- Independent ON/OFF button control for each channel - debounced inputs
- Programmable functions with external resistor
  - Set gamma corrected fade IN/OUT speed
  - Set channel current
- Protections for LED string short to GND, over temperature
- AEC-Q100 Qualified



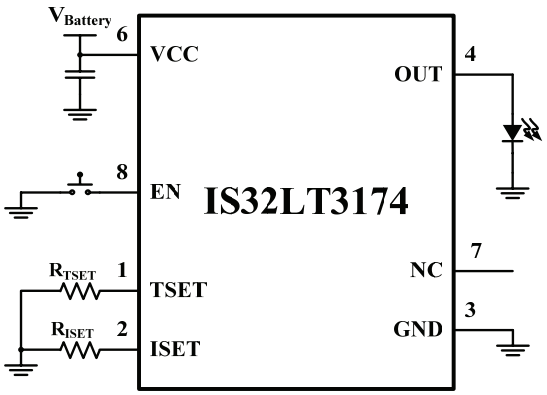
SOP 8EP

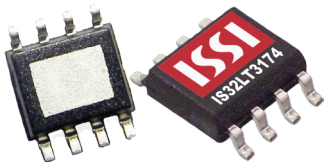
IS32LT3174

Single Channel, Linear LED Driver with Fade IN/OUT

Features

- Output current can source up to 200mA
- On/off control for channel
  -Input is debounced
- Programmable current via a single external resistor
- Programmable fade in, fade out via external resistor
  - Pull down resistor value sets fade speed
  - Gamma corrected fade in/out algorithm
- Fault Protection:
  - LED string shorted to GND
  - ISET pin short to GND
  - Over temperature
- Grade - AEC-Q100





SOP-8EP

Application

- **Automotive Interior:**
  - Map/Dome light
  - Vanity mirror
  - Puddle lamp in doors
  - Glove box

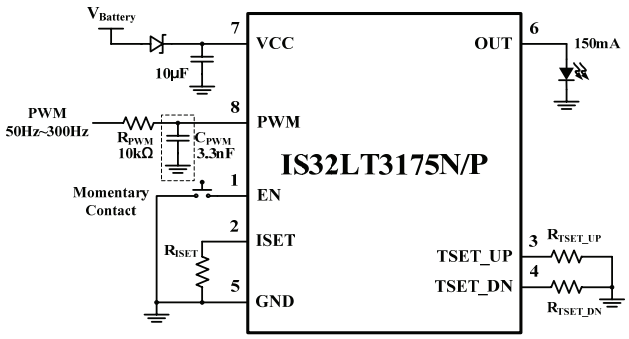
Dome/Map Light with PWM

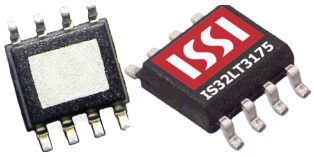
IS32LT3175

20-to-150mA CCR

Features

- Operating voltage 5V to 42V
- Single channel current source
  - Programmable current via a single external resistor
  - Configurable from 20mA to 150mA
- Momentary contact button EN input
  - Input is debounced and latched
  - Higher priority than PWM input
  - Gamma corrected Fade In/Out algorithm
  - Pull down resistors set independent fade IN and OUT ramp time
- PWM input pin driven by external PWM source
  - PWM directly drives the current source
  - IS32LT3175P – Positive polarity
  - IS32LT3175N – Negative polarity
- Fault Protection:
  - OUT pin shorted to GND
  - ISET pin shorted to GND
  - Over temperature
- Automotive Grade:
  - IS32LT3175P – AEC-Q100
  - IS32LT3175N – AEC-Q100
- Operating temperature range from -40°C ~ +125°C



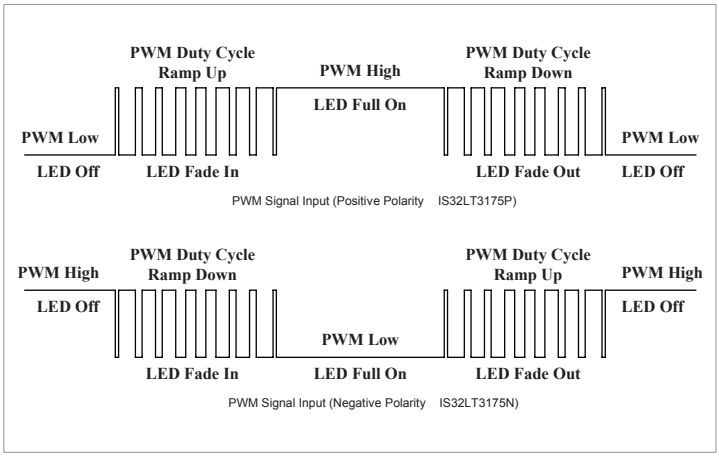


SOP 8EP

Application

Automotive Interior:

- Map/Dome light
- Vanity mirror
- Puddle lamp in doors
- Glove box



INFOTAINMENT, CLUSTERS, AUDIO & BACKLIGHT

Infotainment and Clusters

LCD Backlight:

- 4.75-40V Supply
- 4 Channels @ 120mA/Ch
- Boost Converter with Integrated Switch
- 10,000:1 Contrast Ratio @ 120mA

Audio:

- 5-24V Supply
- Mono BTL Class-D
- 11W/CH into 4Ω Speaker
- Selectable Gain Settings

Matrix LED Driver:

- 2.7-5.5V Supply
- 6x8 (16RGB) or 3x4 (4 RGB)
- Individual LED Control
- 1MHz I2C-Compatible Bus

All Devices:

- Fault Reporting
- -40°C to +125°C Operating Temperature
- AEC-Q100 qualified (pending)

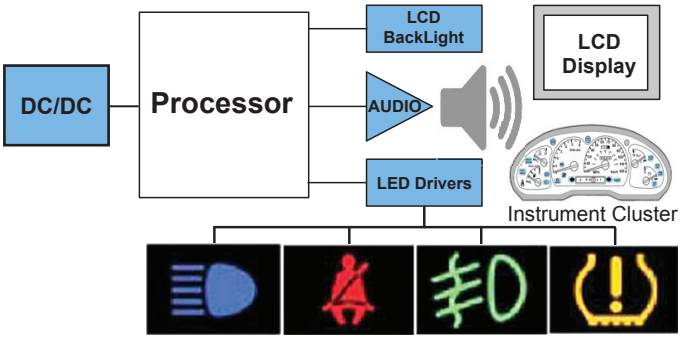
Note: Reference device datasheet for specific features

Description

Infotainment Systems and Instrument Clusters are transforming the driver and passenger experience inside the car, impacting a customer's buying decision. Infotainment systems are getting more sophisticated and clusters are displaying more information than ever before.

The audible chime is one part of an automotive cluster; it provides audio feedback during turn signal-flasher operation, seat belt warning, etc. Visual feedback to alert when something is wrong is in the form of LED backlight of various cluster warning lights or icons.

Modern infotainment systems and virtual instrument clusters employ an LCD display for outputting a wide range of information. The LCD display must be viewable under many lighting conditions; from a bright noon sun to a dark midnight. This requires a high contrast and adjustable backlight LED driver.

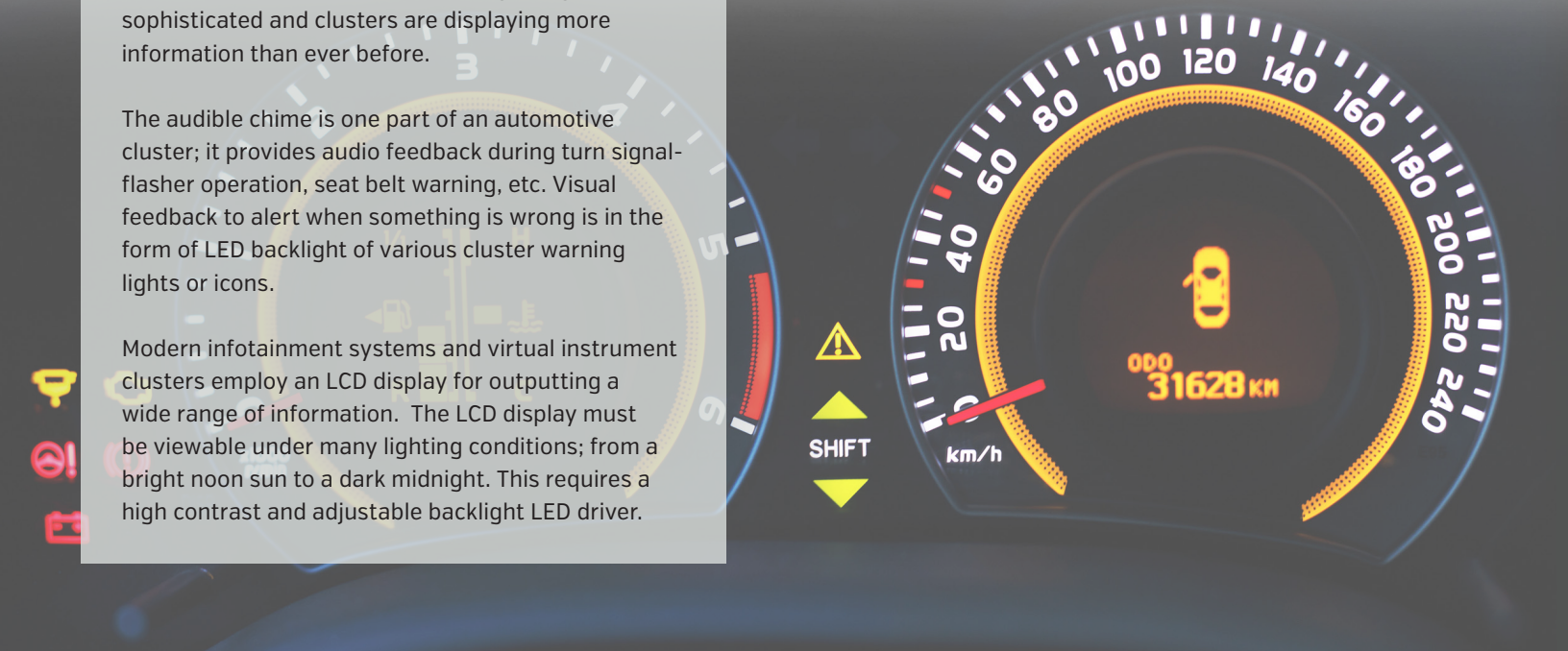


Application

- Infotainment LCD backlight
- Chime Alerts (Audio and Visual)
- Adjustable Backlight Icons and Buttons

Infotainment and Instrument Cluster Devices

Family	Device	Features	Package
Audio	IS32AP2120	10W Mono Class-D	eTSSOP-16
Backlight	IS32BL3556	4 Channels @ 120mA	eTSSOP-20
FxLED	IS32FL3738	6x8 Matrix LEDs	eTSSOP-28
FxLED	IS32FL3740	3x4 Matrix LEDs	eTSSOP-20
DC/DC	IS32PM3413	Buck 3A	eSOP-8
DC/DC	IS32PM3415	Buck 5A	eSOP-8

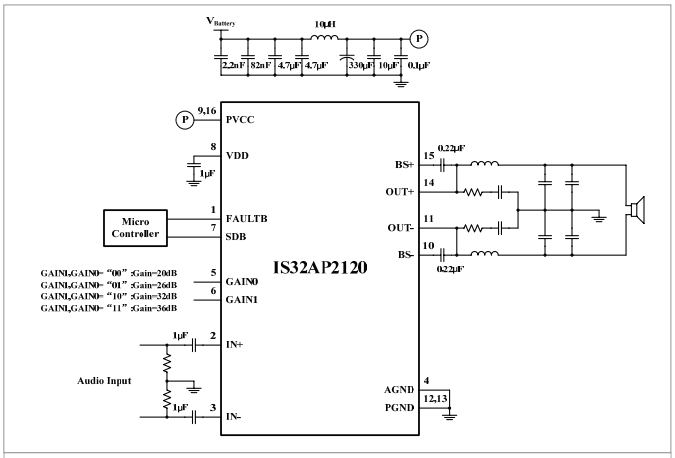


10W Class D Mono Audio Amplifier
Boost LED Driver - 4 Channel

IS32AP2120
Class D Audio Amplifier

Features

- 4.5V to 24V operating range
- Mono BTL digital power amplifier
- Loudspeaker power(with AGC) from 12V supply
  - 5.8W/CH in to 8Ω @1% THD+N
  - 7W/CH into 8Ω @10% THD+N
  - 9W/CH in to 4Ω @1% THD+N
  - 10.2W/CH into 4Ω @10% THD+N
- Up to 90% efficiency
- Differential analog input
- 70dB power supply rejection ratio (PSRR)
- Dynamic temperature control prevents chip from over heating
- AGC (Automatic Gain Control) control function
- Protection and monitoring functions:
  - Short-circuit protection
  - Output DC level detection while music is playing
  - Over temperature protection
  - Over and under voltage protection
- AEC-Q100 Qualified (pending)



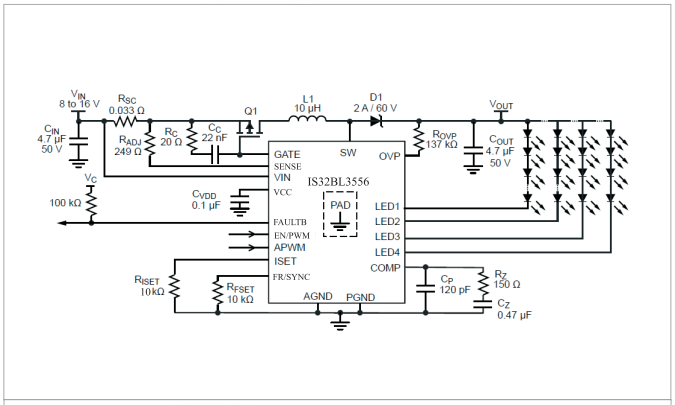
eTSSOP-16

ECall

IS32BL3556
Four Channel Boost

Features

- 4 current sinks adjustable up to 120mA
  - -String-to-string current matching of 1%
  - -High contrast ratio
  - -External PWM dimming
- Input voltage range: 4.75V to 40V
- Integrated Power MOSFET
- Operating frequency up to 2.3MHz
  -Synchronize capable
- External diode open protection: OCP, OTP, UVLO, LED open/short, programmable OVP
- Provide driver for external PMOS input disconnect switch
- AEC-Q100 Qualified (Pending)

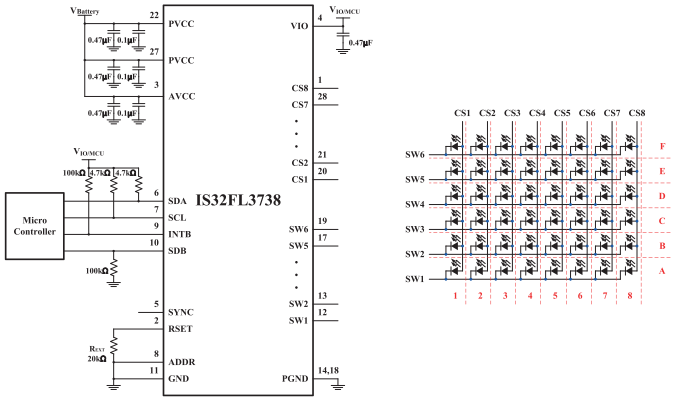


eTSSOP-24

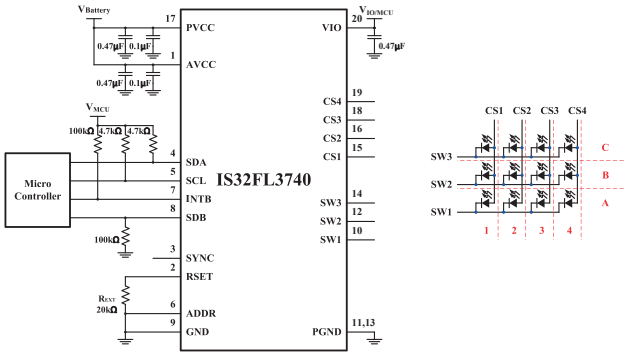
IS32FL3738 - 6×8 Dots Matrix Led Driver
IS32FL3740 - 3x4 Dots Matrix Led Driver

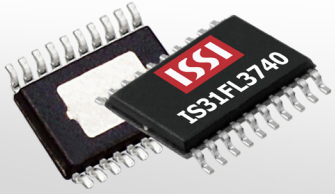
Features

- Supply voltage range: 2.7V to 5.5V
- Programmable matrix with de-ghost function
- 1MHz I2C-compatible interface
- Selectable 3 Auto Breath Modes for each dot
- Auto Breath Loop Features interrupt pin inform
- MCU Auto Breath Loop completed
- Auto Breath offers 128 steps gamma current, interrupt and state look up registers
- 256 steps Global Current Setting
- Individual on/off control
- Individual 1024 PWM control steps
- Individual Auto Breath Mode select
- Individual open and short error detect function
- Cascade for synchronization of chips
- AEC-Q100 (pending)



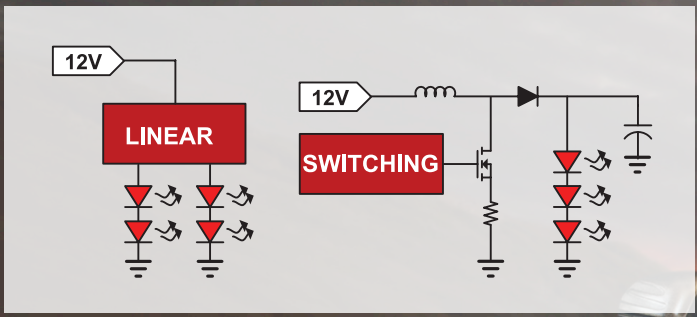
eTSSOP-28





eTSSOP-20

EXTERIOR LIGHTING



Linear and Switching LED Drivers

Linear Drivers:

- Single and Multi-channel
- 5~42V with Load Dump Protection
- Single Resistor Sets the Current, 10~250mA
- PWM Dimming, Logic or Supply Level
- Fault Reporting

Switching Drivers:

- Buck (Step Down) or Boost (Step Up)
- Voltage Input up to 75V
- Logic PWM Dimming
- Integrated Switch
- Fault Protection and Reporting

AEC Q100 Qualified

Note: Reference device datasheet for specific features

Description

Automotive LEDs, are developing rapidly and replacing traditional incandescent light bulbs with LED light sources. Not only do LEDs provide higher reliability and longer life, they also increase fuel efficiency. For example, a typical car using traditional bulbs could consume up to 14.5A during night driving. Replacing those bulbs with LEDs will bring down the required current to about 2.0A. In horsepower terms, LEDs lower the horsepower requirement from 0.25HP (14.5A) to less than 0.03HP (2.0A), which translates to a reduction in fuel consumption.

ISSI's automotive LED driver portfolio consists of innovative and reliable linear or switching topologies for rear stop, turn, daytime running and backup lighting. Linear LED drivers are used when the LED forward voltage is less than the battery voltage and low-EMI is required. Switching DC/DC drivers are used when the LED forward voltage is greater than the input battery voltage; the DC/DC will boost the input supply to meet the higher LED voltage. Both topologies offer full diagnostic support for LED open/short with thermal monitoring and reporting.

Application

Automotive Exterior Lighting:

- Tail Stop, Brake and Turn Signal
- Daytime Running Lights
- CHMSL (Center High Mount Stop Lamp)
- Side Turn Signal

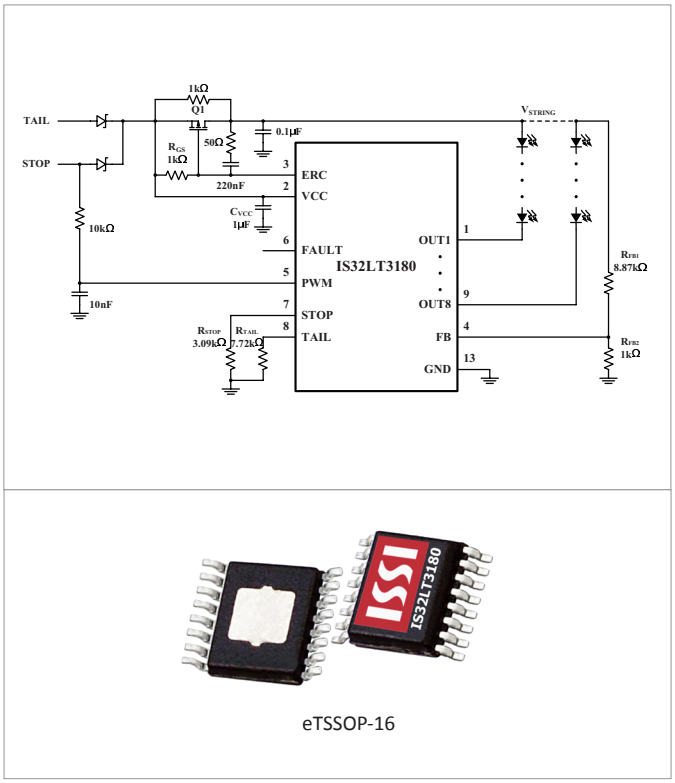
Tail Stop Lamp

IS32LT3180

RCL dual intensity, eight channel LED driver with fault detection

Features

- Output current programmable from 10mA to 75mA
- Tail duty cycle programmable from 1% to 95%
- Linear voltage regulator to minimize consumption in the device
- Low dropout voltage of 0.8V@35mA
- Slew rate control on each output for better EMI performance
- PWM logic level input selects between full brightness and PWM dimming levels
- FAULT reporting
- LED open/short circuit detection
- Input overvoltage protection
- STOP pin overcurrent protection
- Thermal rollback of output current
- Withstand 50V load dump
- AEC-Q100 qualification



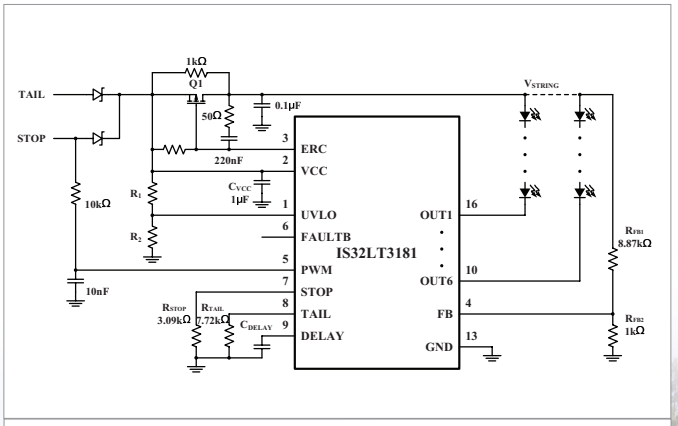
eTSSOP-16

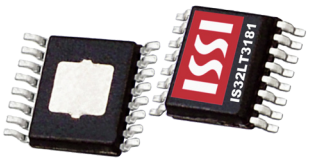
IS32LT3181

RCL dual intensity, six channel led driver with fault detection

Features

- Operating voltage from 6V to 42VDC
  - Withstand 50V load dump
- 6 constant-current channel sinks
  - Adjustable from 10mA to 75mA per channel
  - Channel paralleling for higher current
  - Low dropout voltage of 0.8V@35mA
  - Slew rate control on each output for better EMI performance
- Integrated PWM dimming engine provides two
- LED brightness levels without external logic
  - Tail duty cycle programmable from 1% to 95%
  - PWM logic level input selects between full brightness and PWM dimming levels
- Support for optional FET to minimize device power consumption
- Open Drain FAULTB reporting pin
  - Programmable FAULTB delay time
  - Programmable UVLO threshold
  - LED open circuit detection
  - STOP pin over current protection
  - Over temperature protection
- Device disable upon fault detection
  - Parallel connection to other devices
- AEC-Q100 qualification (pending)





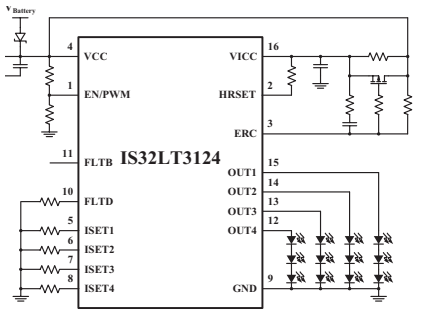
eTSSOP-16

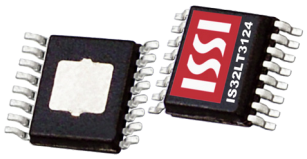
IS32LT3124

Quad channel, linear led driver with fault reporting and headroom control

Features

- 5.0V to 42V input supply voltage range
- Four output channels can source up to 150mA each
  - Four current set resistors
  - ±4% output current accuracy
  - Low dropout voltage of 1V (Max.) at 100mA
  - Combined for higher current capability with same current accuracy
- PWM dimming and shutdown control input
  - 100Hz~1kHz EN/PWM dimming or 0~300Hz power supply modulation(PSM)
- Dynamic headroom control with an optional external P-FET to minimize IC thermal
- 42V load dump protection
- Fault protection and reporting
  - Programmable fault flag delay (deglitch timer)
  - Fault disables output currents
  - Parallel Fault connection (up to 15 devices)
  - LED string open/short to GND
  - Single LED short
  - Over temperature
  - Less than 1.1mA current under fault (VCC=12V)
- AEC-Q100 (pending)
- Operating temperature range (-40°C ~ +125°C)





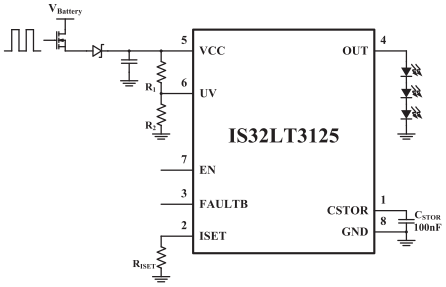
eTSSOP-16

IS32LT3125

Single Channel

Features

- Single channel, sources up to 250mA
- Programmable current for via external resistor
- Programmable VCC under voltage lockout to match the LED stack for High Side PWM operation
- Capable of multiple IC parallel operation with fault flag linkage
- Fault protection with flag output:
  - LED string open/short
  - ICC set to 30mA for single or multiple IC operation
  - OUT pin short to VCC
  - ISET pin open/short
  - Over temperature
- SOP-8-EP package
- AEC-Q100 (pending)
- Operating temperature range from -40°C ~ +125°C



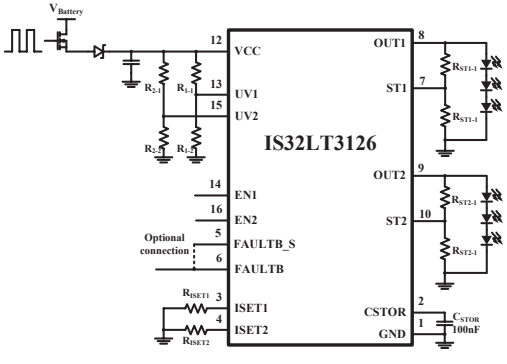
SOP-8EP

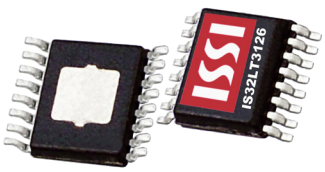
IS32LT3126

150ma dual channel led driver with fault detection

Features

- Dual channels: each channel can source up to 150mA and the two channels combined to source up to 300mA
- Individually programmable current via external resistor
- Individually programmable VCC under voltage lockout to match the LED stack for HS PWM operation
- Individual DPWM control
- Capable of multiple IC parallel operation with faultflag linkage
- Fault protection with flag output:
  - Single LED short (optional to turn off all LEDs)
  - LED string open/short
  - ICC set to 2mA (max) when fault flag is set
  - OUTx pin(s) short to VCC
  - ISETx pin open/short
  - Over temperature
- eTSSOP-16 packages
- AEC-Q100 (pending)
- Operating temperature range from -40°C ~ +125°C





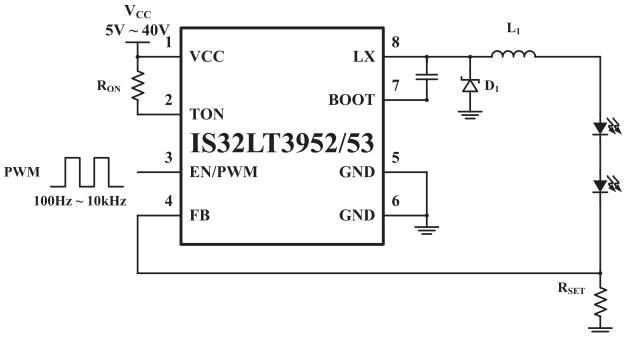
eTSSOP-16

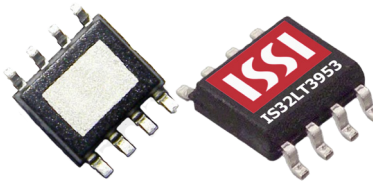
IS32LT3952/53

Buck w/ Integrated Switch

Features

- IS32LT3952: Up to 1.5A output current
  IS32LT3953: Up to 3A output current
- Cycle-by-cycle current limit
- Single pin ON/OFF and brightness control using Linear or PWM
- Robust protection against:
  - Adjacent pin-to-pin short
  - Pin-to-GND short
  - Component open/short faults
- Low power shutdown (1 mA typical)
- AEC-Q100 (Pending)



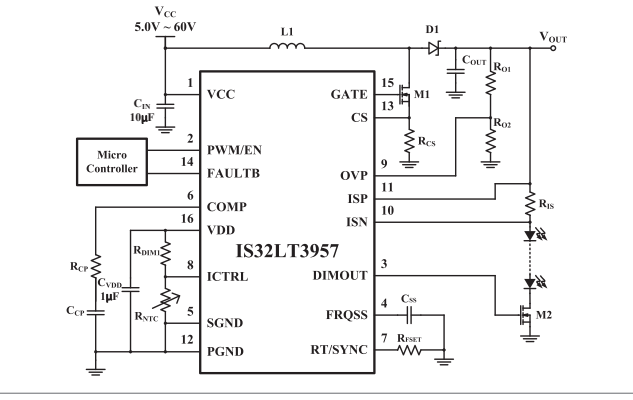


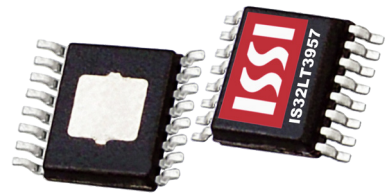
SOP-8EP

IS32LT3957

Features

- Wide voltage: VIN up to 75V
- Boost or buck-boost operation
- Easy dimming: Analog or PWM
- Output over voltage protection (OVP)
- Internal soft start to avoid inrush current
- Current mode PWM with an external sync feature
- Output short circuit protection
- VIN under voltage lock out
- Over temperature protection (OTP)
- AEC-Q100 (Pending)





eTSSOP-16

Daytime Running Lights

LINEAR CURRENT REGULATOR

Single Constant Current Regulator

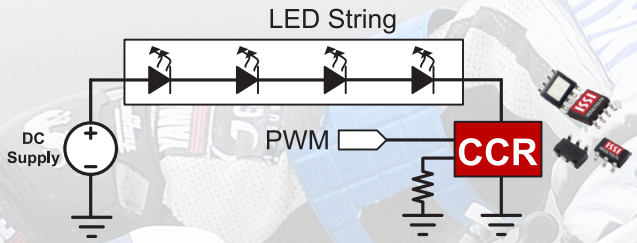
Adjustable Low Side Current Sink

- 10~200mA with External Resistor
- 1V (min) Operating Voltage

PWM Dimming Control

- Logic Level or Power Supply Level
- Up to 10kHz Frequency
- Automotive AEC-Q100 Qualified

Note: Reference device datasheet for specific features



Device	PWM Level	Voltage	Current	Package
IS32LT3170	Voltage Supply	5~42V	10~150mA	SOT23-6
IS32LT3171	Digital Logic	2.8~42V	10~200mA	SOT23-6
IS32LT3172	Voltage Supply	5~42V	10~150mA	SOP-8EP
IS32LT3173	Digital Logic	2.8~42V	10~200mA	SOP-8EP

Description

A constant current is a must for driving LEDs because their brightness output is proportional to their forward current. LEDs are very sensitive to changes in voltage; a small voltage change results in a large change in forward current/brightness level.

Therefore it makes sense to regulate the LED current with a constant-current source to eliminate changes in current/brightness due to variations in forward voltage.

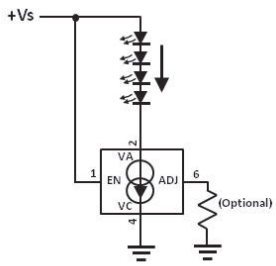
To control the LED brightness level, the best approach is to apply pulse width modulation (PWM) of the constant current driver. PWM dimming is achieved by setting the LED driver to supply the LED's optimum current and then turn it ON/OFF at various duty cycles. For example for 50% brightness the optimum current is supplied for 50% of the time and it is OFF for the remaining 50%. For 10% brightness the optimum current is on for only 10% of the time and OFF for most of the time (90%).

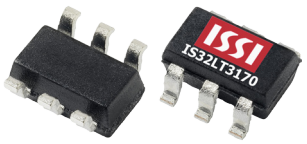
Application

Automotive and Avionic

- Interior Lighting
  - Interior cabin lighting
  - Instrument cluster
  - Footwell
- Exterior Lighting
  - License Plate
  - CHMSL - Center High Mount Stop Light
  - Side Marker Lights

Single Constant Current Regulator





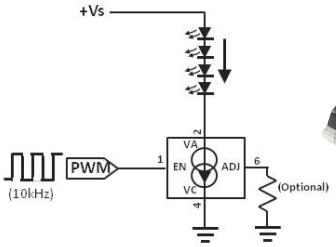
SOT23-6

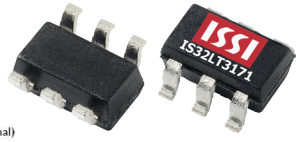
IS32LT3170

10-to-150mA CCR

Features

- Adjustable continuous output current up to 150 mA with an external resistor on ADJ pin
- LED drive current preset to 10 mA
- 5.0V to 42V
- Low or high side current control
- Negative thermal coefficient of -0.2%/K reduces output current at higher temperatures
- SOT23-6 package
- AEC-Q100 (Pending)





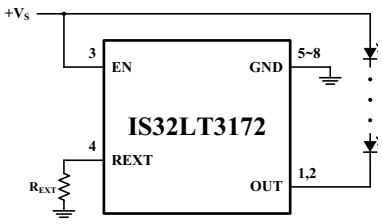
SOT23-6

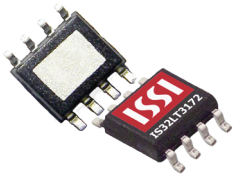
IS32LT3171

10-to-150mA CCR with PWM

Features

- EN pin for up to 10kHz PWM
- Adjustable continuous output current up to 150 mA with an external resistor on ADJ pin
- 2.5V to 42V
- Low or high side current control
- Negative thermal coefficient of -0.2 %/K reduces output current at higher temperatures
- SOT23-6 package
- AEC-Q100 (Pending)





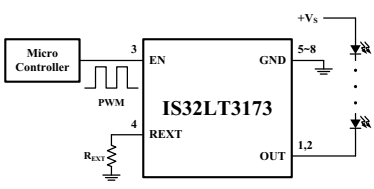
SOP-8EP

IS32LT3172

10-to-200mA CCR

Features

- Low-side current sink -Current preset to 10mA
- Adjustable from 10mA to 200mA with external resistor selection
- Wide input voltage range from
- 5V to 42V
- Protection features:
- 0.2%/K negative temperature coefficient for thermal protection -Open circuit and over voltage protection
- SOP-8EP package
- AECQ-100



SOP-8EP

IS32LT3173

10-to-200mA CCR with PWM

Features

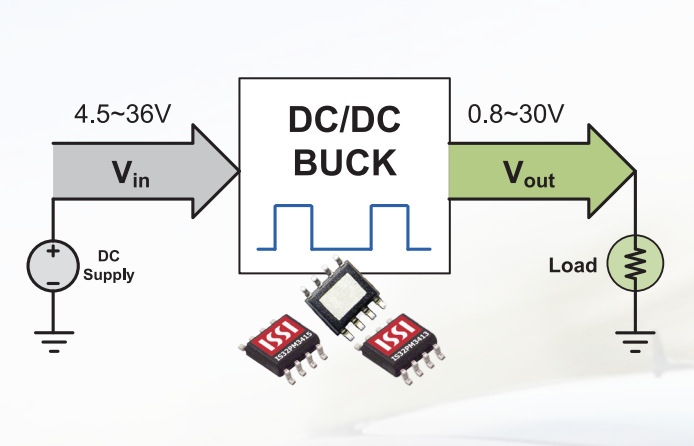
- Low-side current sink -Current preset to 10mA - Adjustable from 10mA to 200mA with external resistor selection
- Wide input voltage range from
- 2.5V to 42V
- Up to 10kHz PWM input
- Protection features: -0.2%/K negative temperature coefficient for thermal protection -Open circuit and over voltage protection
- SOP-8EP package
- AECQ-100 (pending)

DC/DC

DC/DC Step Down Converter

- Operating voltage 4.5V to 36V
- Adjustable operating parameters
  -Output current up to 5A
  -Output voltage down to 0.8V
  -Switching frequency up to 1.5MHz
- Integrated 65mΩ switching FET
  -2msec internal soft start
- Protection Features
  -Cycle-by-cycle current limit
  -Frequency fold back
  -Thermal shutdown
- Thermally Enhanced eSOP-8 package
- Automotive AEC-Q100 Qualified (pending)

Note: Reference device datasheet for specific features



Description

A DC-to-DC buck converter steps down voltage (while stepping up current) from its input (DC supply) to its output (Load). They consist of a switching regulator IC, inductor, diode and filter capacitor. They are more complex but also more efficient than linear regulators, which are simpler circuits that lower voltages by dissipating power as heat, but do not step up output current.

Switching regulators offer three main advantages compared to linear regulators. First, their efficiency is much better. Second, because less energy is lost in the transfer, smaller components and less thermal management are required. Third, the energy stored by an inductor in a switching regulator can be transformed to lower output voltages at higher currents. This conforms to the equation Pin = Efficiency x Pout, where P = Voltage x Current.

Application

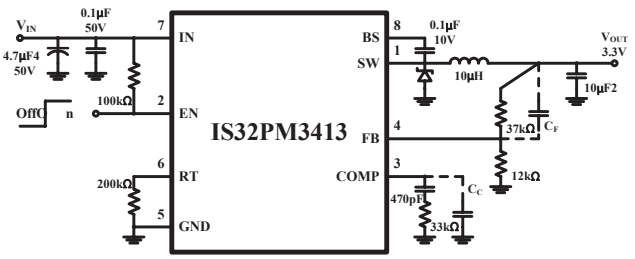
- Automotive Systems
  - Provide 3.3~5V power rail
- Industrial Power Systems

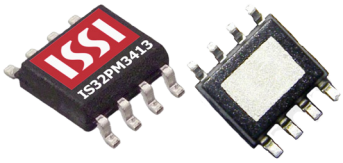
IS32PM3413

3A, 36V, 1.5Mhz Non-Synchronous Step-Down Converter

Features

- 4.5V to 36V Input Voltage Range
- 3A Continuous Output Current
- 65mΩ Internal Power MOSFET Switch
- Output Adjustable from 0.808V
- Up to 1.5MHz Adjustable Switching Frequency
- Cycle-by-Cycle Current Limit, Frequency Fold
- Back and thermal shutdown
- Stable with Low ESR Output Ceramic
- Capacitors
- 2ms Internal Soft-Start
- Thermally Enhanced E-SOP-8L Package
- AEC-Q100 Grade 2 (pending)





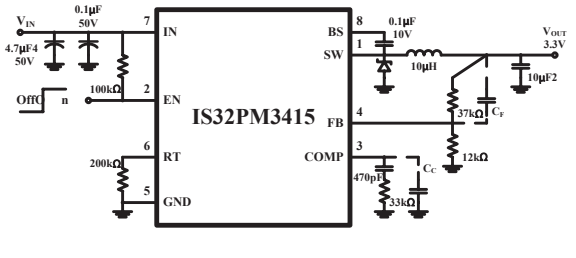
E-SOP-8L

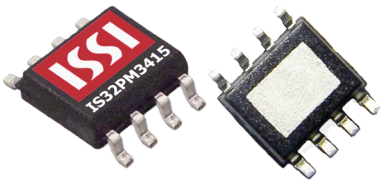
IS32PM3415

5A, 36V, 1.5Mhz Non-Synchronous Step-Down Converter

Features

- 4.5V to 36V Input Voltage Range
- 5A Continuous Output Current
- 65mΩ Internal Power MOSFET Switch
- Output Adjustable from 0.808V
- Up to 1.5MHz Adjustable Switching Frequency
- Cycle-by-Cycle Current Limit, Frequency Fold
- Back and thermal shutdown
- Stable with Low ESR Output Ceramic
- Capacitors
- 2ms Internal Soft-Start
- Thermally Enhanced E-SOP-8L Package
- AEC-Q100 Grade 2 (pending)





E-SOP-8L

Ordering Information

Automotive Audio

Part No.	NO. of output	Power (W)	THD+N	PSRR	VDD (V)	IDD (mA)	Package	Key Feature	Status
IS32AP2120	1	7	0.15%	70	4.5V-24V	16	eTSSOP-16	Mono Class-D Audio Amplifier for auto. , telematics, instrument cluster, and infotainment applications	S=Q1/17

Automotive DC/DC Converters

Part No.	Driver	VIN (V)	IOUT (A)	Eff	Power transistor	IDD (mA)	Package	Key Feature	Status
IS32PM3413	Buck	4.5-36	3	92%	Built-in	0.6	SOP-8-EP	Non-synchronous, frequency adjustable, 3A, current-mode step-down converter with an integrated high-side switch	S=Q4/16
IS32PM3415	Buck	4.5-36	5	93%	Built-in	0.6	SOP-8-EP	Non-synchronous, frequency adjustable, 5A, current-mode step-down converter with an integrated high-side switch	S=Q4/16

Automotive Backlight LED Drivers

Part No.	Driver	VIN (V)	IOUT Accuracy	Power Transistor	Typical Applications	Package	Key Feature	Status
IS32BL3556	DC/DC Boost	5 - 40V	±1.0%	Built-in	Automotive lighting, LCD monitor backlight	eTSSOP-20	Four 120mA channel current sinks. String-to-string accuracy 1%	S=Q4/16

Automotive HBLED - Linear

Part No.	No. of Channels	IOUT (mA)	VIN (V)	Dimming	Protection	Fault report	Package	Key Feature	Status
IS32LT3120	2	200*2	6-45	Momentary button to fade in/out	LED Short, ISET pin short, over temp, thermal rolloff	No	SOP-8-EP	Dual Channel, Linear LED Driver with fade in/fade out	Prod
IS32LT3124	4	150*4	5-42	PWM & BCM	LED open/Short, signal LED short, ISET pin open/ short, over temp	Yes	eTSSOP-16	Quad Channel, Linear LED driver with fault reporting and dynamic headroom control	S=Q4/16
IS32LT3125	1	250	5-42	PWM & BCM	LED Open/Short, ISET pin open/ short, OUT short to VCC, over temp, thermal rolloff	Yes	SOP-8-EP	250mA Single Channel linear programmable current regulator with 30mA ICC current fault reporting	S=Q4/16
IS32LT3126	2	150*2	5-42	PWM & BCM	LED Open/Short, signal LED short, ISET pin open/ short, OUT short to VCC, over temp, thermal rolloff	Yes	eTSSOP-16	150mA Dual Channel LED Driver with fault reporting	S=Q4/16
IS32LT3170	1	150	5-42	BCM	Negative temp coefficient	No	SOT23-6	Adjustable linear current regulator with excellent temp. stability	Prod
IS32LT3171	1	150	2.5-42	PWM	Negative temp coefficient	No	SOT23-6	Adjustable linear current regulator with excellent temp. stability	Prod
IS32LT3172	1	200	5-42	BCM	Negative temp coefficient	No	SOP-8-EP	Adjustable linear current regulator with excellent temp. stability	Prod
IS32LT3173	1	200	2.5-42	PWM	Negative temp coefficient	No	SOP-8-EP	Adjustable linear current regulator with excellent temp. stability	Prod

Ordering Information

Automotive HBLED - Linear

Part No.	No. of Channels	IOUT (mA)	VIN (V)	Dimming	Protection	Fault report	Package	Key Feature	Status
IS32LT3174	1	200	6-45	Momentory button to fade in/out	LED Short, ISET pin short, over temp, thermal rolloff	No	SOP-8-EP	Single Channel, Linear LED Driver with fade in/fade out	Prod
IS32LT3175P/N	1	150	5-42	Momentory button to fade in/out & BCM	LED Short, ISET pin short, over temp, thermal rolloff	No	SOP-8-EP	Single Channel, Linear LED Driver with fade in/fade out and BCM PWM Input	Prod
IS32LT3180	8	75*8	6-16	Internal PWM dimming	LED open/Short, ISET pin short, OVP, over temp, thermal rolloff	Yes	eTSSOP-16	Settable dual intensity linear driver for RCL	Prod
IS32LT3181	6	75*6	6-42	Internal PWM dim-ming	LED open, ISET pin short, over temp	Yes	eTSSOP-16	Settable dual intensity linear driver for RCL	S=Q4/16

Automotive HBLED - Switching

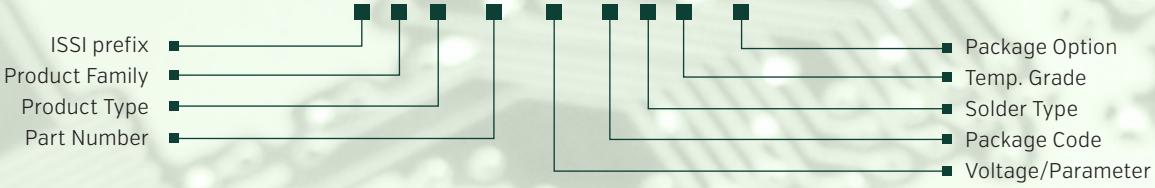
Part No.	Driver	VIN (V)	IOUT Accuracy	Dimming	Efficiency	Power transistor	Package	Key Feature	Status
IS32LT3952	Buck	5-40	±5%	PMW	93%	Built-in	SOP-8-EP	1.5-Ampere PWM dimmable constant-current buck LED driver	S=Q2/17
IS32LT3953	Buck	5-40	±5%	PMW	93%	Built-in	SOP-8-EP	3-Ampere PWM dimmable constant-current buck LED driver	S=Q2/17
IS32LT3954	Buck	5-40	±5%	PWM	93%	Built-in	SOP-8-EP	3-Ampere PWM dimmable constant-current buck LED driver with robust protection and fault reporting	S=Q2/17
IS32LT3957	Buck, boost, buck-boost	5-75	±5%	PWM, Analog	93%	External	eTSSOP-16	High voltage LED lighting driver for buck-boost, boost topology	S=Q4/16

Automotive FxLED

Part No.	No. of output	No. RGB group	Gamma correction	Control interface	Auto dimming	VDD (V)	Package	Key Feature	Status
IS32FL3738	Matrix 48	16	Built-in	I2C	Yes	2.7-5.5	eTSSOP-28	6 switch sinks/8 current source outputs. 6*8 array. 3 selectable Auto Breathing Modes. 256 steps Global Current Setting. Open/short detect for each dots. De-ghost function	S=Q4/16
IS32FL3740	Matrix 12	4	Built-in	I2C	Yes	2.7-5.5	eTSSOP-20	3 switch sinks/4 current source outputs. 3*4 array. 3 selectable Auto Breathing Modes. 256 steps Global Current Setting. Open/short detect for each dots. De-ghost function	S=Q4/16

Analog Part Decoder

IS 31 LT 3135 V1 - GR L S2 - TR



Analog Product Family
- 31 = Commercial/Industrial Analog
- 32 = Automotive Analog and Mixed Signal

Product Type
- AP = Audio Power Amplifier
- BL = White LED Driver for LCD Backlight
- FL = FxLED Driver
- LT = Lighting LED Driver
- SE = Sensor

Temperature Grade
- S1 = Commercial (0°C to 70°C)
- S2 = Industrial temp. (-40°C to 85°C)
- S3 = Industrial temp. (-40°C to 105°C)
- S4 = Industrial temp. (-40°C to 125°C)
- A1 = Automotive Grade (-40°C to +85°C)
- A2 = Automotive Grade (-40°C to +105°C)
- A3 = Automotive temp. (-40 to 125°C)

Solder Type
- Blank = Sn/Pb
- L = Lead-free (RoHS Compliant)

Package Type
- C = WCSP
- D = DFN
- GR = SOP
- QF = QFN
- S = MSOP
- SD = SOT89
- ST = SOT23
- TT = TSOT23
- UT = UTQFN
- Z = TSSOP

Voltage Range / Parameters

Sense Voltage Range
- V1 = 91mV to 101mV
- V2 = 99mV to 110mV

Under-Voltage Range
- V1 = 1.13V to 1.21V
- V2 = 1.19V to 1.26V

Package Option
- Blank = Tray or Tube
- TR = Tape & Reel

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