

A6217 and A6217-1: Automotive-Grade, Constant-Current PWM Dimmable Buck Regulator LED Driver

The A6217 is a single IC switching regulator that provides constant-current output to drive high-power LEDs. It integrates a high-side N-channel DMOS switch for DC-to-DC step-down (buck) conversion. A true average current is output using a cycle-by-cycle, controlled on-time method.

Output current is user-selectable by an external current sense resistor. Output voltage is automatically adjusted to drive various numbers of LEDs in a single string. This ensures the optimal system efficiency.

LED dimming is accomplished by a direct logic input pulsewidth-modulation (PWM) signal at the enable pin.

The device is provided in a 3 mm × 3 mm wettable flank 10-pin DFN (suffix EJ) or an 8-pin narrow SOIC (suffix LJ), both with exposed pad for enhanced thermal dissipation. Both packages are lead (Pb) free, with 100% matte-tin leadframe plating.

APPLICATIONS:

Automotive lighting

- Daytime running lights
- Front and rear fog lights
- Turn/stop lights
- Map light
- Dimmable interior lights

DATASHEETS

[A6217 Datasheet](#)

SAMPLE & BUY

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FEATURES & BENEFITS

PACKAGING

TECHNICAL DOCS

NEWS

- AEC-Q100 qualified
- 6 to 48 V supply voltage
- True average output current control
- 3 A maximum output over operating temperature range (1.5 A for A6217-1)
- Cycle-by-cycle current limit
- Integrated MOSFET switch
- Enable / PWM dimming via direct logic input or power supply voltage
- Internal control loop compensation
- Undervoltage lockout (UVLO) and thermal shutdown protection
- Low power shutdown (1 μA typical)
- Robust protection against:
 - Adjacent pin-to-pin short
 - Pin-to-GND short
 - Component open/short faults
- Enhancements over A6213:
 - Dithering of switching frequency to reduce EMI
 - Able to drive single white LED from 18 V supply at 2.2 MHz
 - Smaller package option

A6217 Product Image



Click the image to view larger



Part Number Specifications and Availability

Part Number	Package Type	Temperature	RoHS Compliant	Part Composition / RoHS Data	Comments	Samples	Check Distributor Stock
A6217KEJTR-1-J	n/a	-20°C to 85°C	Yes	View Data		Contact your local sales rep	Check Stock
A6217KEJTR-J	n/a	-20°C to 85°C	Yes	View Data		Contact your local sales rep	Check Stock
APEK6217KEJ-01-MH-0	DEMO BOARD	-20°C to 85°C	No	--		Contact your local sales rep	Check Stock
APEK6217KEJ-01-MH-01	DEMO BOARD	-20°C to 85°C	No	--		Contact your local sales rep	Check Stock

Part Number Specifications and Availability

Part Number	Package Type	Temperature	RoHS Compliant	Part Composition / RoHS Data	Comments	Samples	Check Distributor Stock
APEK6217KLJ-01-MH	DEMO BOARD	-20°C to 85°C	No	--		Contact your local sales rep	Check Stock
APEK6217KLJ-01-MH-01	DEMO BOARD	-20°C to 85°C	No	--		Contact your local sales rep	Check Stock
A6217KLJTR-1-T	8-lead SOIC	-40°C to 125°C	Yes	View Data		Contact your local sales rep	Check Stock
A6217KLJTR-T	8-lead SOIC	-40°C to 125°C	Yes	View Data		Contact your local sales rep	Check Stock

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