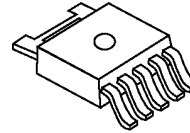


Constant Current LED Driver with PWM Control

■ GENERAL DESCRIPTION

The NJW4617 is a constant current LED Driver with PWM control. 45V resisting constant current control and PWM control circuit can be offered with small package. It can achieve luminance control multiple white or blue and red LEDs. It can contribute to the reliability improvement of the system because it has an overcurrent protection and thermal shutdown circuit.

■ PACKAGE OUTLINE

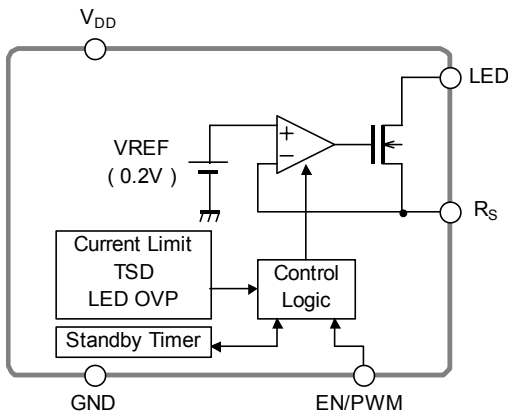


NJW4617DL3
(TO-252-5)

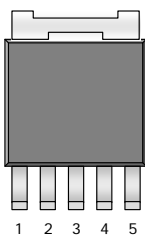
■ FEATURES

- Operating Voltage Range 2.5V to 40V
- Recommended LED Drive Voltage $V_{LED}=40V(max.)$
- LED Output Current $I_{LED}=500mA(max.)$
- Output Current Accuracy $\pm 2.0\%$
- To 11 of White LED can be operated. (at LED $V_f=3.4V$)
- Current Consumption $450\mu A$ typ.
- With PWM Luminance Control and ON/OFF Control
- Internal Over Current Protection Circuit
- Internal Thermal Shutdown Circuit
- Package TO-252-5

■ BLOCK DIAGRAM



■ PIN CONFIGURATION



- 1: V_{DD}
- 2: EN/PWM
- 3: GND
- 4: R_s
- 5: LED

* Please note that this device is still under the development and therefore the specifications are subject to change.

Advance Information

NJW4617

■ ABSOLUTE MAXIMUM RATINGS

(Ta=25°C)

PARAMETERS	SYMBOL	RATINGS	UNIT
VDD Power Supply	V _{DD}	-0.3 to +45	V
Output voltage	V _{LED}	-0.3 to +45	V
EN/PWM Pin Voltage	V _{ENPWM}	-0.3 to +45	V
Power Consumption	P _D	1190 (*1) 3125 (*2)	mW
Junction Temperature	T _j	-40 to +150	°C
Operating Temperature	Topr	-40 to +105	°C
Storage Temperature	Tstg	-40 to +150	°C

(*1): Mounted on glass epoxy board. (76.2×114.3×1.6mm:based on EIA/JDEC standard, 2Layers)

(*2): Mounted on glass epoxy board. (76.2×114.3×1.6mm:based on EIA/JDEC standard, 4Layers),

Internal Cu area: 74.2×74.2mm

■ RECOMMENDED OPERATING CONDITIONS

(Ta=25°C)

PARAMETERS	SYMBOL	CONDITIONS	MIN	TYP	MAX	Unit
Operating Voltage	V _{DD}		2.5	-	40	V
Output Current	I _{LED}		20	-	500	mA
Output Voltage	V _{LED}		-	-	40	V

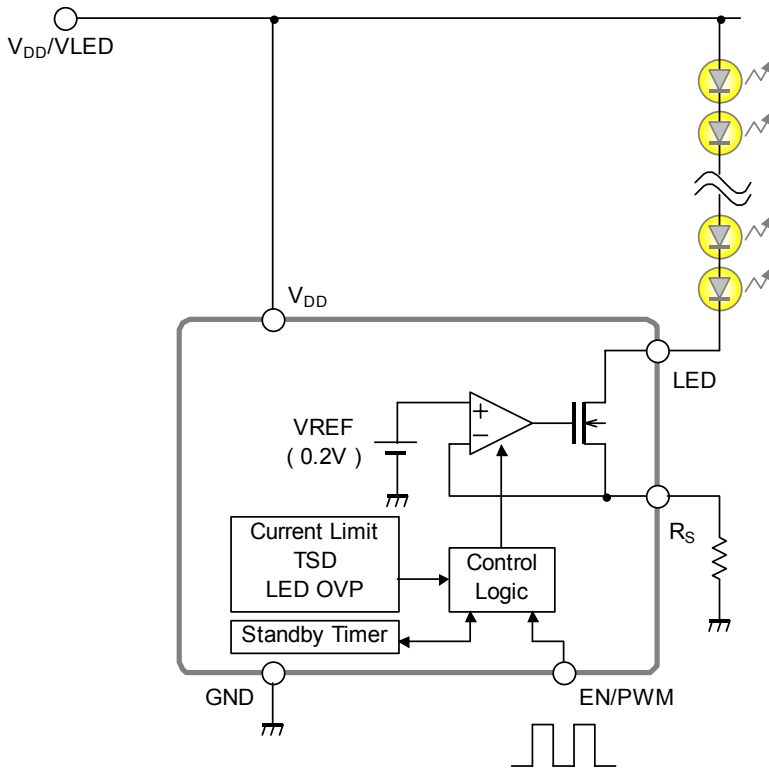
■ ELECTRICAL CHARACTERISTICS

(Unless otherwise noted, V_{DD}=12V, V_{LED}=1.0V, R_S=2Ω, V_{ENPWM}=V_{DD}, Ta=25°C)

PARAMETERS	SYMBOL	CONDITIONS	MIN	TYP	MAX	Unit
Quiescent Current	I _{DD}		-	340	550	μA
Quiescent Current at OFF State	I _{DD OFF}	V _{ENPWM} =GND	-	-	0.1	μA
Output Current Accuracy	ΔI _{LED}		-2	-	+2	%
Output Pin Leak Current	I _{LEAK}	V _{ENPWM} =GND, V _{DD} =40V, V _{LED} =40V	-	-	0.1	μA
OFF Delay Time	t _{D OFF}		10	25	50	ms
EN/PWM Pin ON Voltage1	V _{ENPWM_ON1}	V _{DD} <5V, I _{LED} =OFF ON	0.7V _{DD}	-	V _{DD}	V
EN/PWM Pin ON Voltage2	V _{ENPWM_ON2}	V _{DD} ≥5V, I _{LED} =OFF ON	3.5	-	V _{DD}	V
EN/PWM Pin OFF Voltage	V _{ENPWM_OFF}	I _{LED} =ON→OFF	0	-	0.5	V
EN/PWM Pin Input Current	I _{ENPWM}		-	7	-	μA
RS Pin Leak Current	I _{OUT RS}	LED=OPEN	-	4	-	μA
PWM Pin ON Delay Time	t _{PWM_ON}	V _{ENPWM} =L→H, I _{LED} =OFF→ON, R _S =0.4Ω	-	10	-	μs
PWM Pin OFF Delay Time	t _{PWM_OFF}	V _{ENPWM} =H→L, I _{LED} =ON→OFF, R _S =0.4Ω	-	1.2	-	μs
LED Short Protection Detect Voltage	V _{LED_SHORT}	R _S = 0Ω, I _{LED} = I _{LED MAX} → I _{LED MAX} × 0.5	-	22	-	V
Maximum Output Current	I _{LED MAX}	R _S = 0Ω	550	980	-	mA

* Please note that this device is still under the development and therefore the specifications are subject to change.

■ TYPICAL APPLICATION



The R_s Resistance Setting formula: $R_s(\Omega) = \frac{0.2(V)}{I_{LED}(A)}$

* Please note that this device is still under the development and therefore the specifications are subject to change.

Advance Information

MEMO

Advance Information

[CAUTION]

The specifications on this databook are only given for information, without any guarantee as regards either mistakes or omissions. The application circuits in this databook are described only to show representative usages of the product and not intended for the guarantee or permission of any right including the industrial rights.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[NJR:](#)

[NJW4617DL3-TE1](#)

Данный компонент на территории Российской Федерации

Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: info@moschip.ru

Skype отдела продаж:

moschip.ru

moschip.ru_4

moschip.ru_6

moschip.ru_9