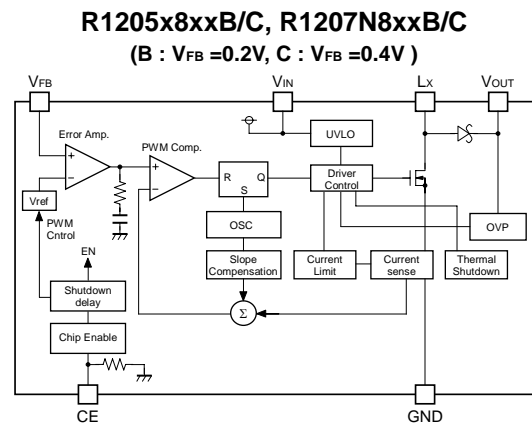
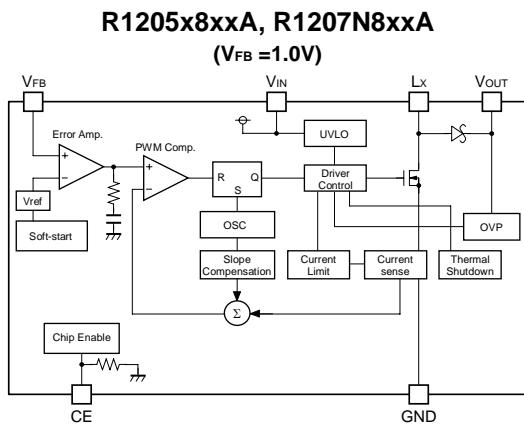


The R1205x/R1207N Series are CMOS-based PWM step-up DC/DC converters, which are optimized to drive white LEDs and PMOLED with constant current. There are two types. The A version is optimized for the general use or the drive of PMOLED, and the B/C version is optimized for the serial drive of white LED with constant current. The R1205x/R1207N includes a diode, an under-voltage lockout circuit (UVLO), a soft-start circuit, and an over-voltage protection circuit (OVP), a thermal shutdown circuit. By simply using an inductor, resistors, and capacitors as external components, white LEDs can be driven with high efficiency. The B/C version can set the LED current with feedback resistor (R1). The brightness of the LEDs and the soft-start time can be adjusted by applying a PWM signal (200Hz to 300kHz) to the CE pin. Two different pin layout of TSOT-23-6 package as R1205N and R1207N are available.

FEATURES

- Supply Current (I_{DD}) Typ. 800 μ A (No switching)
- Standby Current ($I_{standby}$) Typ. 1 μ A (CE="L")
- Input Voltage Range (V_{IN}) 2.3V to 5.5V (A Version, Absolute maximum rating : 6.5V)
1.8V to 5.5V (B/C Version, Absolute maximum rating : 6.5V)
- Feedback Voltage (V_{FB}) 1.0V (A Version), 0.2V (B Version),
0.4V (C Version)
- Feedback Voltage Accuracy ± 15 mV (A Version), ± 10 mV (B/C Version)
- Oscillator Frequency (f_{osc}) 1.2MHz
- Oscillator Maximum Duty Cycle (Maxduty) .. Min. 86%, Typ. 91%
- UVLO Detect Voltage (V_{UVLO}) Typ. 2.0V (A Version), Typ. 1.6V (B/C Version)
- Coil-current Limit Circuit Current Limit Typ. 350mA / Typ. 700mA selectable
- Over Voltage Protection Circuit (OVP) .. Typ. 25V
- Soft Start Time (t_{start}) Typ. 2ms (A Version)
Controllable by PWM signal to the CE pin (B/C Version)
- Thermal Shutdown Circuit Stops at 150°C
- LED High-speed Dimming Control B/C Version
- Packages R1205x Series
DFN1616-6B, TSOT-23-6
R1207N Series
TSOT-23-6

BLOCK DIAGRAMS

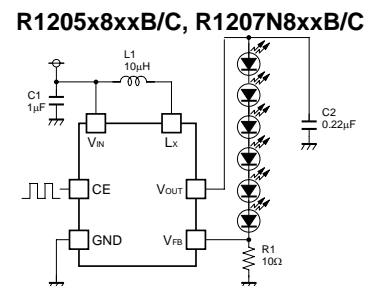
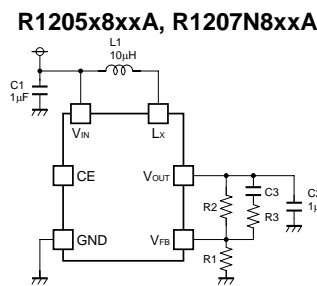


SELECTION GUIDES

Halogen Free	Package	Q'ty per Reel	Part No.
H/F	DFN1616-6B	5,000 pcs	R1205L8x1*-TR
H/F	TSOT-23-6	3,000 pcs	R1205N8x3*-TR-FE
			R1207N8x3*-TR-FE

- X : Specify the Coil Current limit.
(1) Typ. 350mA, (2) Typ. 700mA
- * : Specify the feedback voltage.
(A) 1.0V, (B) 0.2V, (C) 0.4V

TYPICAL APPLICATIONS

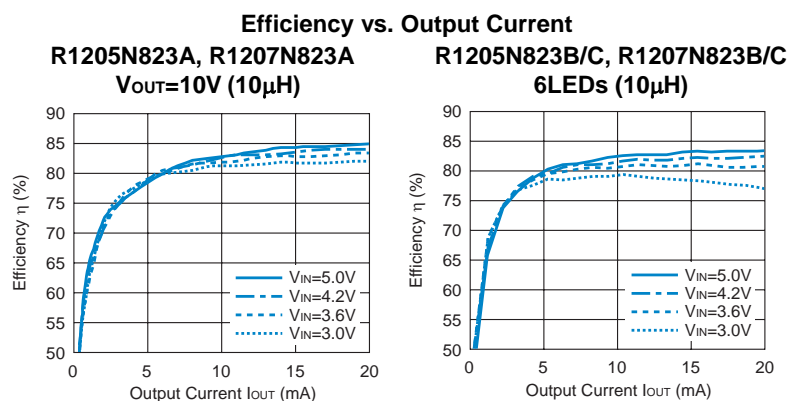


PACKAGES (Top View)

DFN1616-6B		TSOT-23-6	
		R1205N	R1207N
1	CE	1	CE
2	VFB	2	VOUT
3	Lx	3	VIN
4	GND	4	Lx
5	VIN	5	GND
6	VOUT	6	VFB

*) The tab is substrate level (GND).

TYPICAL CHARACTERISTICS



APPLICATIONS

- PMOLED power supply for hand-held equipment
- White LED backlight for hand-held equipment



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