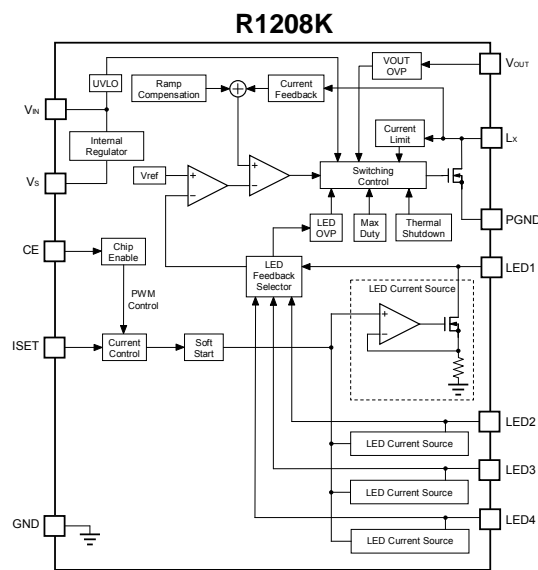


The R1208K Series are PWM step-up DC/DC converters for white LEDs. The R1208K includes an under voltage lockout circuit (UVLO), an overvoltage protection circuit (OVP), a thermal shutdown protection circuit, and current drivers for four white LED channels. By simply using an inductor, a resistor, capacitors and a diode, white LEDs can be driven with constant current and high efficiency. The LED current can be determined by the value of current setting resistor. The brightness of the LEDs can be adjusted quickly by applying a PWM signal (200 Hz to 300 kHz) to the CE pin. A 2.7-mm × 3.0-mm square compact DFN(PLP)2730-12 package is available.

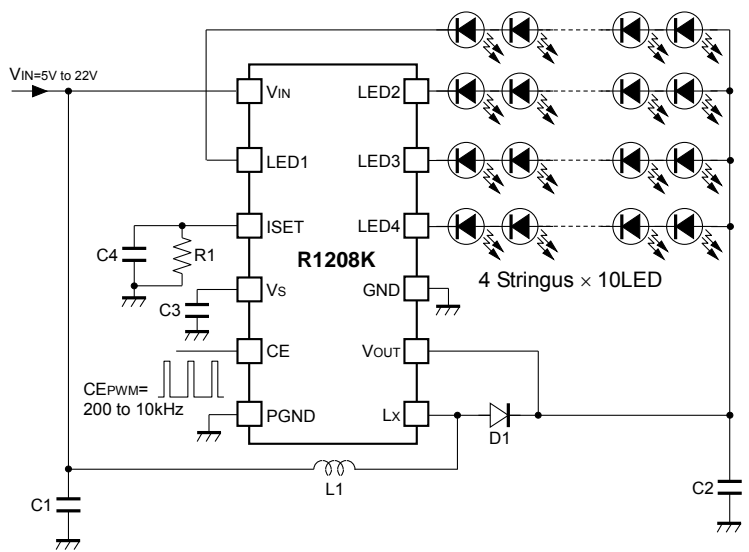
FEATURES

- Supply Current (I_{DD}) Typ. 600 μ A (No switching)
 - Standby Current ($I_{standby}$) Typ. 1.5 μ A (CE="L")
 - Input Voltage Range (V_{IN}) 2.7V to 22V (Absolute maximum rating: 24V)
 - Oscillator Frequency (f_{osc}) Typ. 750kHz/450kHz
 - Oscillator Maximum Duty Cycle (Maxduty) Min. 92%,
 - UVLO Detect Voltage (V_{UVLO}) Typ. 2.4V
 - Coil-current Limit Circuit Current Limit Typ. 2A
 - Over Voltage Protection Circuit (OVP) Typ. 23V/33V/43.5V
 - Soft Start Time (t_{ss}) Typ. 15ms
 - Thermal Shutdown Circuit Stops at 150°C.
 - LED High-speed Dimming Control
 - Package DFN(PLP)2730-12
- (The above shows specification at $T_a=25^\circ\text{C}$. Design assurance value at $-40^\circ\text{C} \leq T_a \leq 85^\circ\text{C}$ is also available. For details, please refer to the datasheet.)

BLOCK DIAGRAM



TYPICAL APPLICATION



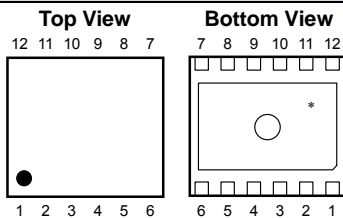
SELECTION GUIDE

Halogen Free	Package	Q'ty per Reel	Part No.
H/F	DFN(PLP)2730-12	5,000 pcs	R1208Kx12*-TR

- x : Specify the OVP threshold voltage
(1) 23V, (2) 33V (3) 43.5V
- * : Specify the oscillator frequency
(A): 750 kHz, (B): 450kHz

PACKAGE

DFN(PLP)2730-12

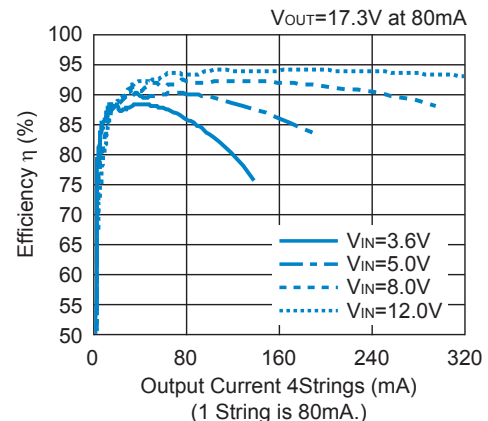


Pin	Function	Pin	Function
1	VIN	7	Lx
2	LED1	8	VOUT
3	ISET	9	GND
4	Vs	10	LED4
5	CE	11	LED3
6	PGND	12	LED2

*) The tab is substrate level (GND).

TYPICAL CHARACTERISTIC

R1208K Efficiency vs. Output Current R1208x312B VLF504012MT-220M / 6LED × 4 Strings



APPLICATION

- LED backlight driver for LCD displays for portable equipment
- LED backlight driver for LCD displays for Tablets and Note PCs.



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