

PWM Controller



Description

The CD5021 off-line Pulse-width Modulation (PWM) controller contains all of the features needed to implement highly efficient off-line single-ended flyback and forward power converters using current-mode control.

The CD5021 features include an ultra-low start-up current, which minimizes power losses in the high voltage start-up network. A skip cycle mode reduces power consumption with light loads for energy conserving applications. Additional features include under-voltage lockout, cycle-by-cycle current limit, hiccup mode overload protection, slope compensation, soft-start and oscillator synchronization capability. CD5021 has total propagation delays less than 100 ns and a 1MHz capable oscillator that is programmed with a single resistor.

Absolute Maximum Ratings

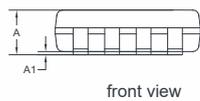
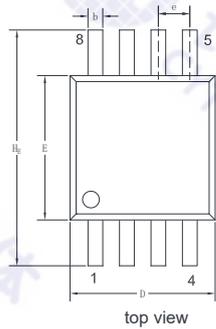
VIN to GND	-0.3V to 30V
VCC to GND	-0.3V to 10V
CS1, CS2 to GND	-0.3V to 1.25V
RT to GND	-0.3V to 5.5V
All other inputs to GND	-0.3V to 7V
Junction Temperature	150°C
Storage Temperature Range	-65°C to 150°C

Recommended Operating Conditions

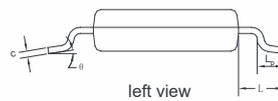
VIN Voltage ^a	8V to 30V
VCC Voltage	8V to 10V
Operating Junction Temperature	-40°C to 125°C

^a When the VIN is greater than or equal to 20V at the first startup, it can work normally.

Package Diagram



Size					
Symbol	Min.	Typ.	Max.	Unit	
A	--	--	1.10	mm	
A1	0.05	--	0.15		
b	0.28	--	0.36		
c	0.15	--	0.19		
D'	2.90	3.00	3.10		
E*	2.90	3.00	3.10		
e	--	0.65	--		
H _E	4.70	4.90	5.10		
L _p	0.40	--	0.70		
L	--	0.95	--		
θ	0	--	8		°



VSSOP8

Typical Application Circuit

