

High performance Off-line PWM Switching Power Controller—CSC7222

DESCRIPTION

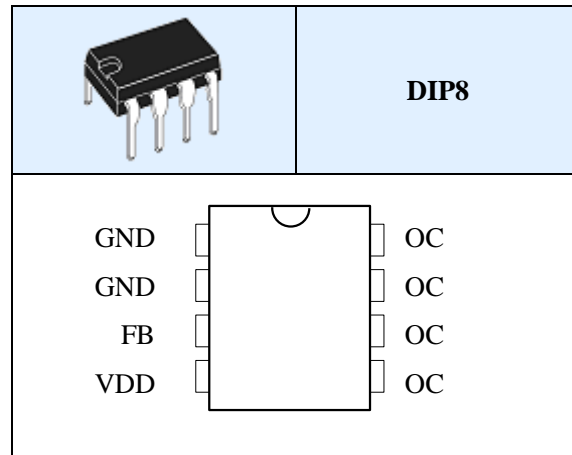
The CSC7222 is a high performance current mode Pulse Width Modulated (PWM) switching power converter, which meets the Green Environmental standards. It is widely used in economical switching power supply, such as Set-top Box, DVD, printer and LCD display, etc.

Available in DIP-8 Package.

FEATURES

- Very low external component required.
- Built-in 700V BJT.
- Built-in self-powered, without auxilliary winding.
- Output power 12W in input voltage 85V~265Vac .
- Built-in OVP, OCP, OTP.
- Frequency shuttling for EMI.
- No-load Power Consumption < 0.3W and When VIN = 220VAC, Power Consumption < 0.2W.

PIN CONFIGURATION




TYPICAL APPLICATION

- Intelligent mobile phone and small size table computer power supplies
- DVD and Set-top boxes power supplies
- Power adapters

PIN DESCRIPTION

PIN	SYMBOL	DESCRIPTION	PIN	SYMBOL	DESCRIPTION
1	GND	Ground	5	OC	The collector of internal power BJT
2			6		
3	COMP	Output Feedback	7		
4	VDD	Power Supply	8		

ORDERING INFORMATION

DEVICE	PACKAGE	MARKING	PACKING	
CSC7222	DIP8		Tube	20K/Small Box

BLOCK DIAGRAM

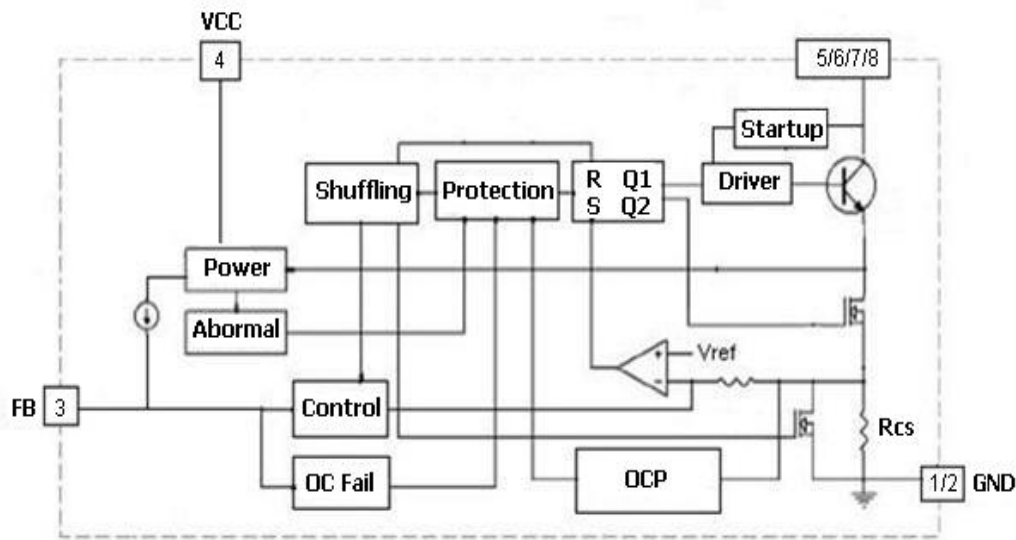


Figure.1 Functional block diagram of CSC7222

ABSOLUTE MAXIMUM RATINGS (TA=25°C)

PARAMETER	SYMBOL	VALUE	UNIT
VCC Pin Voltage	V_{cc}	-0.3~8.0	V
FB terminal voltage	V_{FB}	-0.3~8.0	V
OC terminal voltage	V_{OC}	-0.3~700	V
PN junction to ambient thermal resistance	θ_{JA}	95	°C/W
Operating Temperature	T_J	0 ~150	°C
Storage Temperature	T_{STG}	-55~150	°C
ESD(Human Body Model)	—	2	KV

Note: Instant maximum ratings specified will not cause permanent damage to the product, while long maximum ratings specified applied will do and may affect product reliability.

ELECTRICAL CHARACTERISTICS (TA=25°C)

PARAMETER	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
VCC Voltage Section						
Supply voltage	V _{cc}	—	4.0	5.0	6.0	V
Start-up voltage	V _{start}	—	4.8	5.0	5.2	V
Shutdown voltage	V _{sd}	—	3.6	4.0	4.2	V
Supply current	I _{cc}	V _{cc} =5V FB=2.2V	10.0	20.0	30.0	mA
Start-up time	T _{start}	—	—	—	500	mS
OSCILLATOR Section						
Frequency	f _{osc}	V _{cc} =5V FB=1.6~2.8V	50	61	70	kHz
Current detection Section						
Output Limiting Current	I _s	—	600	680	760	mA
FB Sense Section						
Feedback voltage	V _{FB}	—	1.6	—	3.6	V
PWM duty		V _{cc} =5V FB=1.6~2.8V	5	—	50	%
Temperature protection Sense Section						
Thermal protection temperature	T _{SD}	—	—	140	—	°C
Power BJT Section						
Collector Voltage	V _{OP}	I _{OC} =10mA	700	—	—	V
Switching Saturation Voltage	V _{sat}	I _{OC} =600mA	—	—	1	V

APPLICATION CIRCUIT

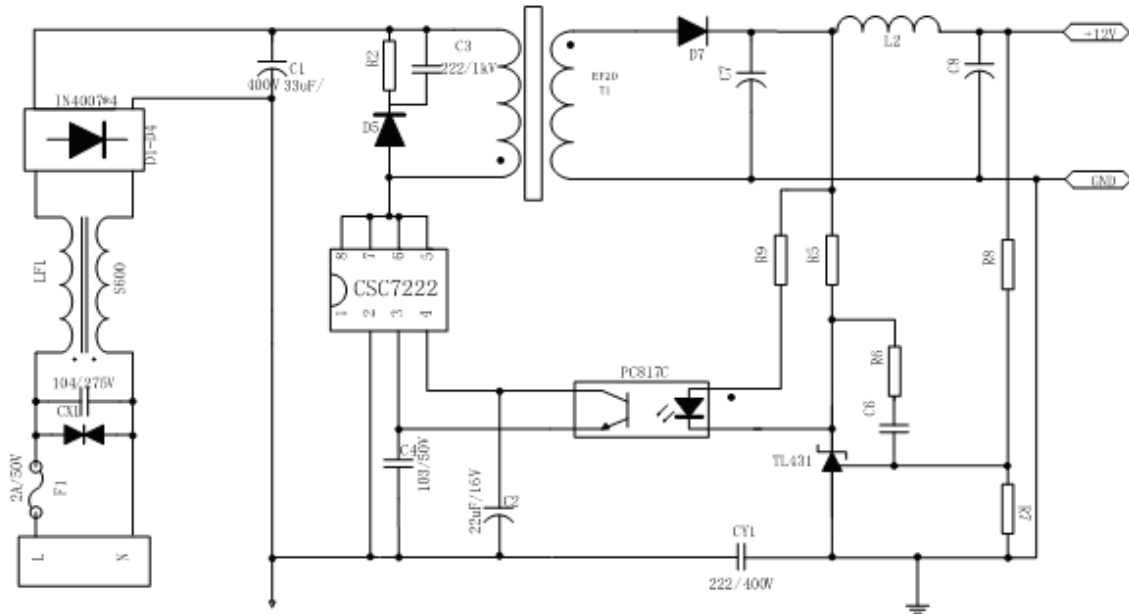
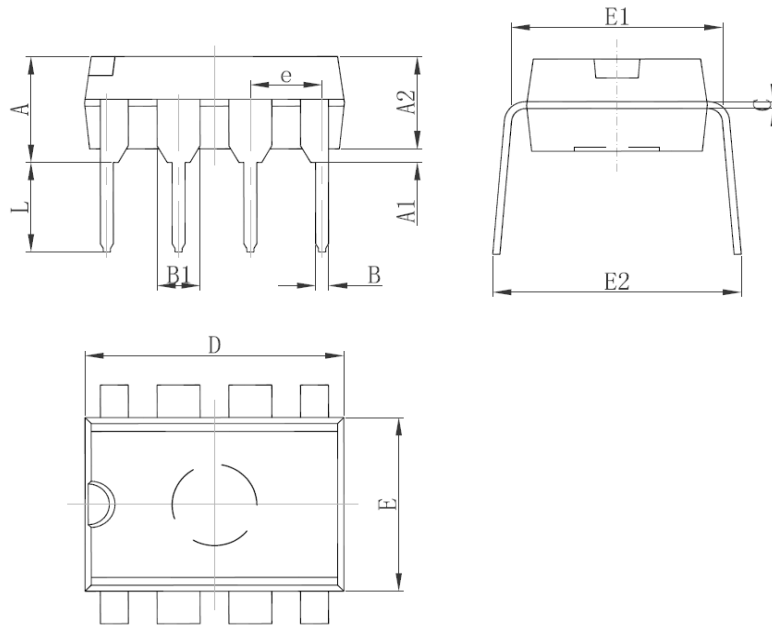


Figure.2 typical application diagram

OUTLINE DRAWING

DIP8



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	3.710	4.310	0.146	0.170
A1	0.510		0.020	
A2	3.200	3.600	0.126	0.142
B	0.380	0.570	0.015	0.022
B1	1.524(BSC)		0.060(BSC)	
C	0.204	0.360	0.008	0.014
D	9.000	9.400	0.354	0.370
E	6.200	6.600	0.244	0.260
E1	7.320	7.920	0.288	0.312
e	2.540(BSC)		0.100(BSC)	
L	3.000	3.600	0.118	0.142
E2	7.620	9.000	0.300	0.354