

HM3408 同步降压转换器/Synchronous Step-Down Converter

用途：用于恒定频率、电流脉冲宽度调制模式的降压转换器。

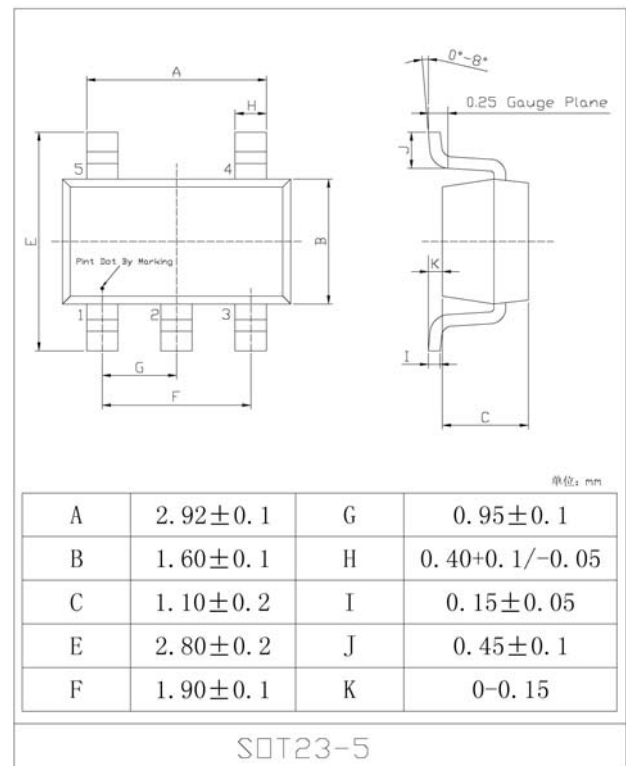
Purpose: For onstant frequency, current mode PWM step-down converter.

特点：1. 高效率高达96% 2. 1.5MHz恒频工作 3. 输出电流1.0A

Features: 1. High Efficiency: Up to 96% 2. 1.5MHz Constant Frequency Operation  
 3. 1.0A Output Current

极限参数/Absolute maximum ratings (Ta=25°C)

特性 Item	符号 Symbol	数值 Rating	单位 Unit
输入电源电压 Supply Input voltage	$V_{IN}$	-0.3 to +6	V
EN/VOOUT 端电压 EN/VOOUT Voltages	$V_{EN}$	0.6	V
LX 端电压 LX Voltage	$V_{LX}$	-0.3	V
LX 端和源极电流峰 值 Peak LX Sink and Source Current	$I_P$	2.5	A
结温 Junction Temperature	$T_J$	125	°C
焊接温度（焊接 10 秒）Lead Temperature (Soldering, 10s)	$T_L$	300	°C
工作温度 Operating Temperature	$T_{opr}$	-40 to +85	°C
储存温度 Storage Temperature	$T_{stg}$	-65 to +150	°C



电性能参数/Electrical Characteristics (Ta=25°C)

参数符号 Symbol	测试条件 Test condition	数值 Rating			单位 Unit
		最小值 Min	典型值 Typ	最大值 Max	
输入电压范围 Input Voltage Range		2.5		6.0	V
UVLO(欠压锁定) 阈值 UVLO Threshold		2.4	2.5	2.6	V
输入直流电源电流 Input DC Supply Current	Vout = 90%, Iload=0mA Vout = 105%, Iload=0mA V <sub>RUN</sub> = 0V, V <sub>IN</sub> =4.2V				
脉冲宽度调制模式 PWM Mode			140	300	μA
脉冲频率 调制模式 PFM Mode			20	35	μA
关机模式 Shutdown Mode			0.1	1.0	μA
反馈电压 Vfb 调整值 Regulated Feedback Voltage	T <sub>A</sub> = 25° C	0.588	0.600	0.612	V
	T <sub>A</sub> = 0° C ≤ T <sub>A</sub> ≤ 85° C	0.586	0.600	0.613	V
	T <sub>A</sub> = -40° C ≤ T <sub>A</sub> ≤ 85° C	0.585	0.600	0.615	V
参考电压调整率 Reference Voltage Line Regulation	V <sub>in</sub> =2.5V to 6.0V		0.04	0.40	%/V
输出电压调整率 Output Voltage Line Regulation	V <sub>in</sub> =2.5V to 6.0V		0.04	0.4	%
负载电压调整率 Output Voltage Load Regulation			0.5		%
振荡频率 Oscillation Frequency	Vout=100%		1.5		MHz
	Vout=0V		300		KHz
PMOS 导通电阻 On Resistance of PMOS	I <sub>LX</sub> =100mA		0.25	0.35	Ω
NMOS 导通电阻 ON Resistance of NMOS	I <sub>LX</sub> =-100mA		0.15	0.20	Ω
峰值电流限制 Peak Current Limit	V <sub>IN</sub> = 3V, Vout=90%		2.5		A
运行阈值 RUN Threshold		0.30	1.0	1.50	V
运行漏电流 Iq RUN Leakage Current			±0.01	±1.0	μA
LX 漏电流 Isd LX Leakage Current	V <sub>RUN</sub> =0V, V <sub>IN</sub> =VLX=5V		±0.01	±1.0	μA

