

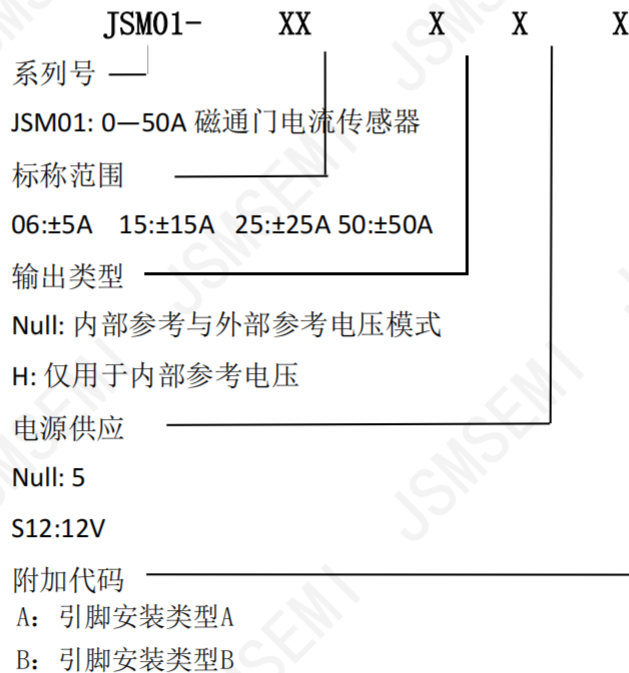
JSM01-XX系列磁通门电流传感器集成了动态磁通门探测技术。其设计简洁实用，具备抑制高温漂移的能力。磁通门技术利用磁芯饱和现象来调节被测磁场，将其转化为电场，从而完成磁场测量过程。



## 最大额定参数

符号	参数	最小值	最大值	单位
Vdd max.	最大供电电压（非破坏性）		7	V
I <sub>pc</sub>	原边导体温度		110	°C
T <sub>a</sub>	工作环境温度	-40	105	°C
T <sub>s</sub>	存储环境温度	-40	105	°C
Vesd-hbm	ESD 等级（人体模型）		4	KV

## 命名规则



**电气规格** Ta=25°C, Vdd=5.0V

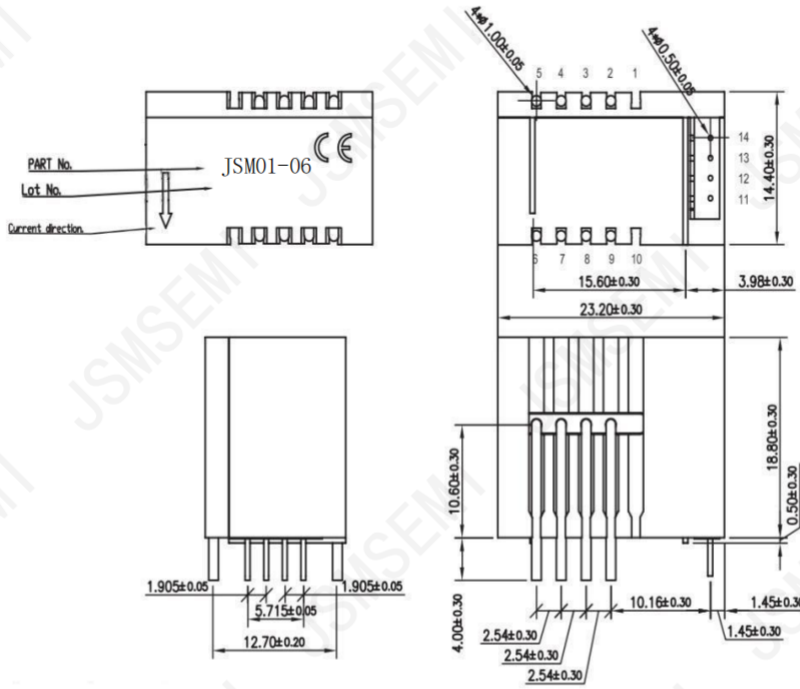
参数	符号	JSM01-06	JSM01-15	JSM01-25	JSM01-50
供电电压	Vdd	5.0±0.25 V			
工作电流	Ic	25mA (typ.) (Ip=0A without load)	30mA (typ.) (Ip=0A without load)	35mA (typ.) (Ip=0A without load)	55mA (typ.) (Ip=0A without load)
电流标称测量范围	Ipn	≥20A	≥51A	≥85A	≥150A
原边标称电流	Ip	±6A	±15A	±25A	±50A
初级绕组的圈数	Np	1, 2, 3, 4			
初级绕组的圈数	Ns	1,816	1,737	1,764	1,600
内部参考电压	Vref1	2.5±0.005V			
外部参考电压	Vref2	0~4.0V			
外部参考电压	Vout	0.375~4.625V			
输出电压范围 (当 I=Ip 时, 输出为 Vref1)	Vo	Vref1 or Vref2			
零点失调电压	Vo	≤±5.3mv	≤±2.21mv	≤±1.35mv	≤±0.725mv
指涉主电路的偏移电流 无磁滞现象	loe	≤±51mA	≤±53mA	≤±54mA	≤±58mA
Vref1 的温度系数	Tcvref1	±5.0 ppm/°C(Typ. ), ≤±50.0 ppm/°C			
Vo 的温度系数 @Ip=0A TA=-40°C ...105°C, V0=2.5V	Tcvo	±6.0 ppm/°C Typ.	±2.3 ppm/°C Typ.	±1.4 ppm/°C Typ.	±0.7 ppm/°C Typ.
标称灵敏度(625mV / Ip)	G	104.2mv/A @Ip	41.67 mv/A@Ip	25 mv/A @Ip	12.5 mv/A @Ip
灵敏度误差	Eg	≤± 0.7%/Ip			
G 的温度系数	Tcg	≤± 40 ppm/°C (Ta= -40°C .. 105°C, Except Tcvoe)			
非线性误差	El	≤±0.1% (at Ip , without offset)			
磁偏移电流 (在过载量达到10*Ip后)	Iom	≤±0.1A			
峰-峰输出噪声 RL = 1kΩ	Vnp-p	40mv (typ.) , Max. 160mv	15mv (typ.) , Max. 60mv	10mv (typ.) , Max. 40mv	5mv (typ.) , Max.20mv
对 10% IP 的响应速度	Tra	0.3 us Typ. , ≤1 us (Design target)			
对 90% IP 的响应速度	Tr	0.5 us Typ. , ≤1 us (Design target)			
频率带宽 (-1dB)	Bw	200KHZ (Min.)			
频率带宽 (-3dB)	Bw	300KHZ (Min.)			

**电气规格** Ta=25°C, Vdd=5.0V

参数	符号	JSM01-06	JSM01-15	JSM01-25	JSM01-50
隔离用绝缘电压, 50 Hz, 1分钟	Vd	≥4,300 V , (50HZ, 1 min.)			
隔离用绝缘电压, 50 Hz, 1分钟	Riso	≥500 MΩ (@ 500VDC)			
隔离电阻 @直流 500V	D-CLE	>8.3mm			
爬电距离	D-CRD	>8.3mm			



尺寸 (mm)



引脚	符号
1	—
2	Input
3	Input
4	Input
5	Input
6	Output
7	Output
8	Output
9	Output
10	—
11	Vref
12	Vo
13	Gnd
14	Vdd

## Revision History

Rev.	Change	Date
V1.0	Initial version	2/23/2024

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