

NACA.40E-P6/VN 电流传感器 Current Transducer

版本: A1

产品说明

Applications

NACA.40E-P6/VN 电流传感器适用于对交流、直流、脉冲电流的隔离精确测量，测量时一次侧与二次侧间完全绝缘。

For the electronic measurement of currents: AC, DC, pulsed ..., with galvanic separation between the primary circuits and the secondary circuits.



产品优点 Advantages	产品应用领域 Applications	参照标准 Standards
体积小 Small size and space savings	新能源 New energy	EN50178:2017
优秀线性度 Very good linearity	光伏逆变器 Solar inverter	IEC61010-1:2010
		IEC62109-1:2010

极限参数 maximum ratings		
供电电压 (不损坏)	Power supply (not destructive)	7.5V
供电电压 (不进入非标模式)	Power supply (not entering non standard mode)	6.5V
原边导体最高温度	Primary conductor max temperature	110°C
人体模式 ESD	HMB ESD	2KV

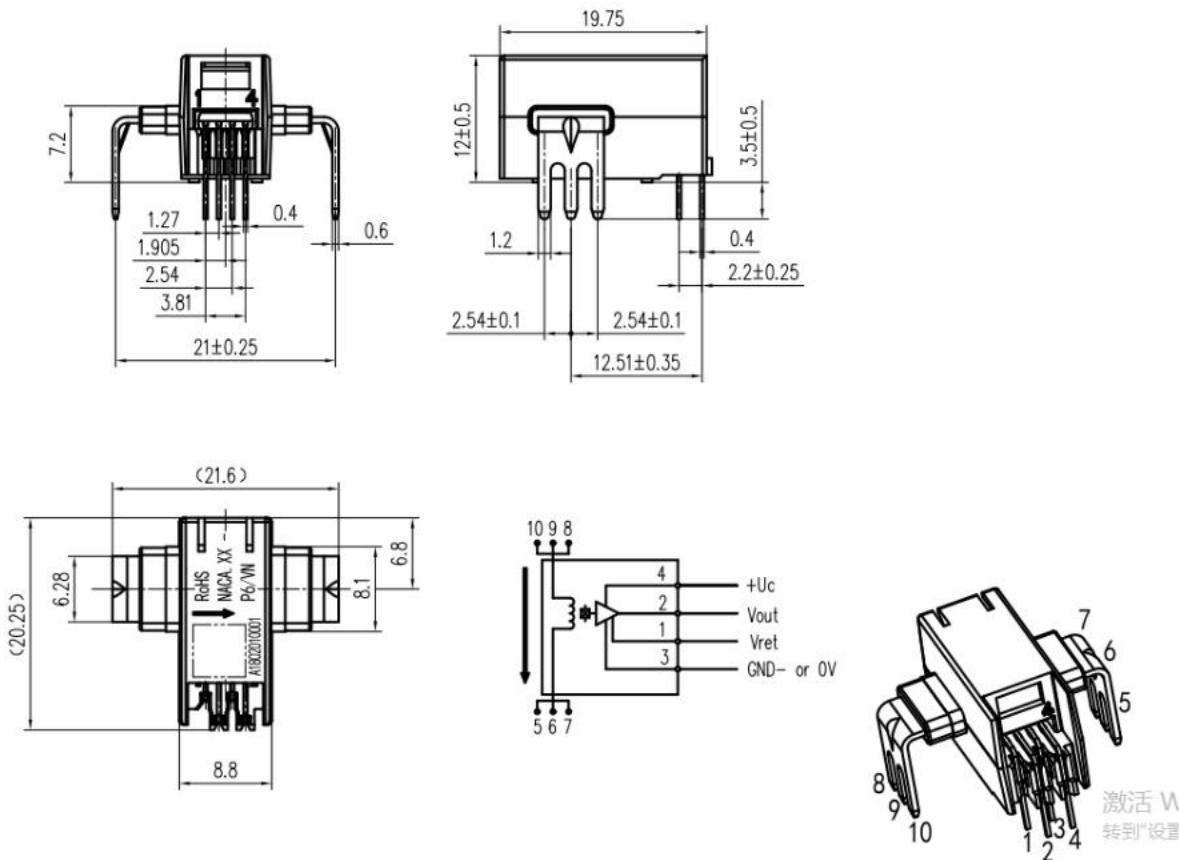
主要电气参数 Main electrical data (@ $\pm I_{PN}$, $T_A = 25^\circ C$)		
额定测量电流 I_{PN}	Primary nominal current	40A
测量范围 I_{PM}	Primary current measuring range	$\pm 100A$
电源电压 V_C	Supply voltage	+ 5 (1±5%)V
灵敏度 G	Sensitivity	20mV/A
电流消耗 I_C	Current consumption	$\leq 25mA$
额定测量输出 V_{OUT}	Output voltage	2.5V±0.8V
内置参考电压范围 V_{REF}	V_{REF} internal range	2.5V±0.02V
外接参考电压范围 V_{REF}	V_{REF} external range	1V—2.65V (Input)
输出内阻 R_{OUT}	Output internal resistance	$\leq 10 \Omega$
原边导体电阻 R_P	Primary conductor resistance	0.3m Ω
电容负载 C_L	Allowed capacitive load	0~6nf

精度 - 动态参数 Accuracy - Dynamic performance data		
灵敏度误差 δ (@IPN, $T_A = 25^\circ C$)	Sensitivity error (@IPN, $T_A = 25^\circ C$)	$\leq \pm 0.8\%$
总精度 δ_{tot} (@IPN, $T_A = -40 \sim 105^\circ C$)	Accuracy (@IPN)	$\leq \pm 2.5\% @ 85^\circ C$ $\leq \pm 3.4\% @ 105^\circ C$

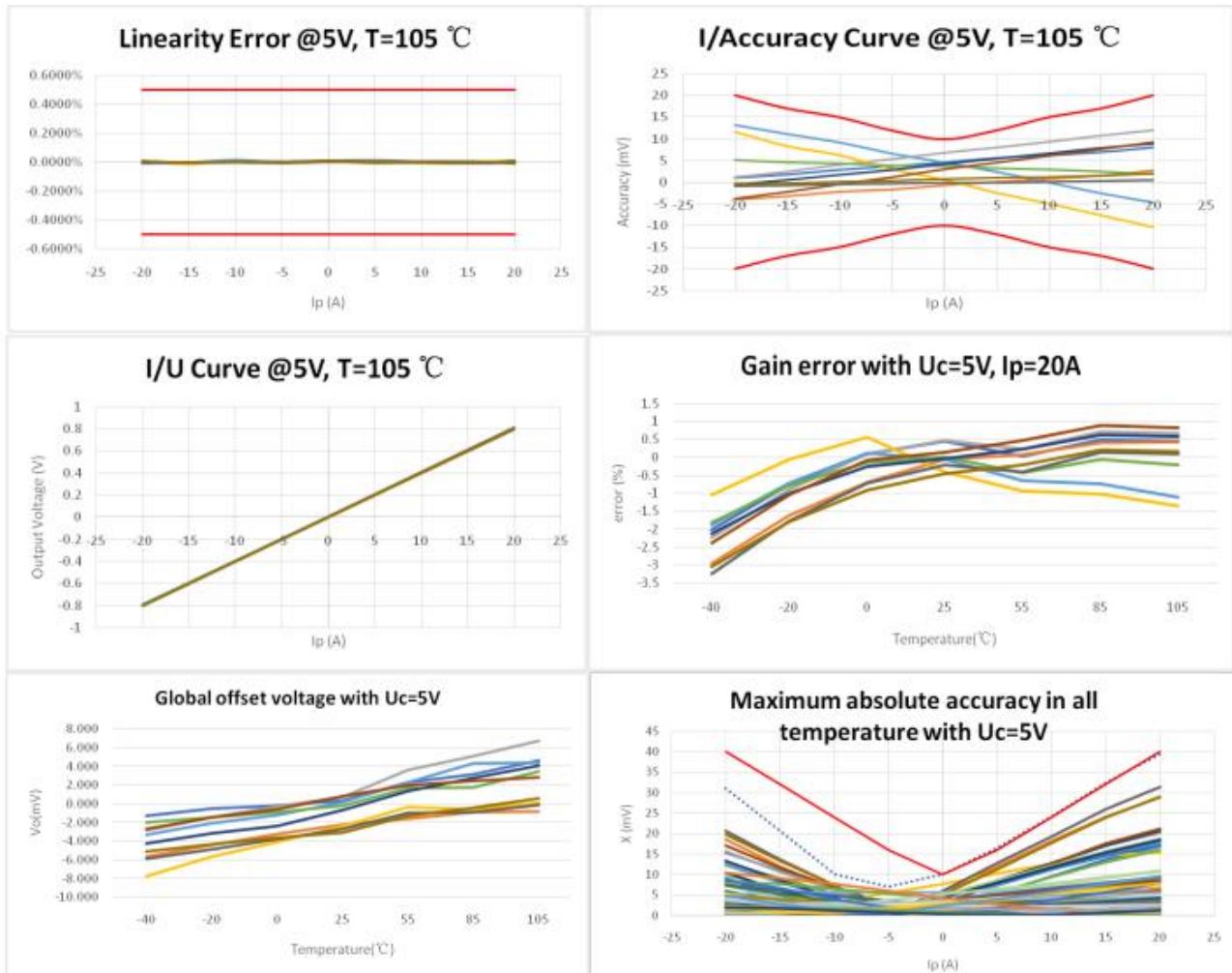
		$\leq \pm 3.9\% @ -40^\circ C$
线性度误差 $\delta_L(0 \dots \pm I_{PN}, T_A = 25^\circ C)$	Linearity error	$\leq 0.5\%$
零点输出误差 $V_{out} - V_{ref}(T_A = 25^\circ C)$	Electrical offset voltage	$\leq \pm 12mV$
磁偏移电流 ($10^* I_{pn}$) $I_{om}(A)$	Magnetic offset current $I_{om}(A)$	$\leq \pm 0.4A$
零点温度漂移 $V_{out-ref}$ ($T_A = -40^\circ C \sim +105^\circ C, V_c = 5V$)	Temperature coefficient of V_{oe}	$\leq \pm 0.075mv/^\circ C$
增益温度漂移 ($T_A = -40^\circ C \sim +105^\circ C, V_c = 5V$)	Temperature coefficient of G	$\leq \pm 250PPM/^\circ C (-40^\circ C \sim 105^\circ C)$ $\leq \pm 200PPM/^\circ C (-20^\circ C \sim 105^\circ C)$
基准温度漂移 ($T_A = -40^\circ C \sim +105^\circ C, V_c = 5V$)	Temperature coefficient of V_{ref}	$\leq \pm 170ppm/^\circ C$
响应时间 T_r $T_r(90\% of I_{PN} & di/dt > 50 A/\mu s)$	Step response time to 90 % of I_{PN}	$\leq 2\mu s$
带宽(-3dB)BW	Frequency bandwidth (-3dB)	240kHz
一般数据 General data		
工作温度 T_a	Ambient operating temperature	-40~+105°C
储存温度 T_s	Ambient storage temperature	-40~+125°C
重量 m	Mass	5g

绝缘 Isolation		
隔离耐压 (primary- secondary)	Isolation test: Between the primary circuit to the secondary circuit	4.3kVrms/50Hz/1min
电气间隙	Clearance	8mm PCB 安装
爬电距离	Creepage distance	8mm PCB 安装
CTI	Comparative tracking index	600
脉冲耐受电压 1.2/50us	Impulse withstand voltage 1.2/50us	8kV
冲击电流 8/20us	Impulse current	20KA
静电等级人体模型	ESD(Human)	2kV
外壳材料	Case material	UL 94-V0

Dimensions (in mm)



测试数据分享



机械特征 Mechanical characteristics	备注 Remark
未注公差 General tolerance	±0.2mm