



DATA SHEET

Hall Effect Current Sensor

PN: CHK_QR375S2L

$I_{PN}=800-1200A$

Feature

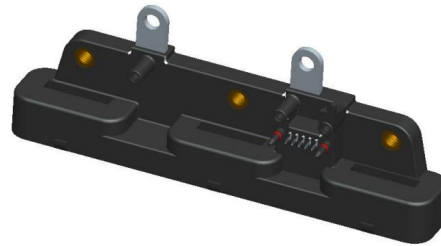
- Automotive grade hall chip.
- This sensor is an open-loop Hall current sensor with insulation between the primary and secondary circuits, used as a three-phase sensor for DC, AC, or pulse current measurement in high-power and low-voltage automotive applications.
- Supply voltage: DC +5.0V

Advantages

- Convenient installation
- High cost performance
- No insertion losses
- High immunity to external interference

Applications

- Generator
- Inverter
- HEV application
- Application of electric vehicles
- DC/DC converter



RoHS

Electrical data: ($T_A=25^{\circ}C$, $V_c=+5.0VDC$, $R_L=10.0K\Omega$)

Parameter Ref	CHK800 QR375S2L	CHK900 QR375S2L	CHK1000 QR375S2L	CHK1200 QR375S2L
Rated input $I_{pn}(A)$	800	900	1000	1200
Measuring range $I_p(A)$	$0 \sim \pm 800$	$0 \sim \pm 900$	$0 \sim \pm 100$	$0 \sim \pm 1200$
Rated measurement output (V)	$U_C/5 \times (2.5 + 2 \times I_p/I_{PN})$ ($+25^{\circ}C$)			
Load resistance $R_L(k\Omega)$	≥ 10			
Power supply voltage (V)	$+5V (\pm 5\%)$			
Current consumption $I_C(mA)$	@+5V	≤ 60		
Accuracy $X_G(\%)$	@ $I_p = \pm I_{PN}, T_A = 25^{\circ}C$	$\leq 0.5\%$		
Linearity error $\epsilon_r(\%FS)$	@ $T_A = 25^{\circ}C$	$\leq 1\%$		
Zero offset voltage $V_{OE}(mV)$	@+5V, $T_A = 25^{\circ}C$	2.5 ± 10		
Zero offset voltage coefficient $TCV_{OE}(mV/^{\circ}C)$	$\leq \pm 0.05 (-40^{\circ}C \sim +125^{\circ}C)$			
Output voltage temperature coefficient $TCV_{out}(\%/^{\circ}C)$	$\leq 0.03\% (-40^{\circ}C \sim +125^{\circ}C)$			
Hysteresis voltage $V_{OH}(mV)$	$\leq \pm 10$ (after $\pm I_{PM}$)			
Di/dt accurately followed ($A/\mu s$)	≥ 100			
Response time $t_{ra}(\mu s)$	≤ 6 (Typical value 3us)			



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Bandwidth (-3db) Bw(KHZ)		DC-40
Effective value of AC isolation withstand voltage Vd(KV)	@50Hz/60s/0.1mA	2.5

General data:

Parameter	Value
Operating temperature TA(°C)	-40 ~ +125
Storage temperature TS(°C)	-55 ~ +125
Mass M(g)	90g
Standards	High and low temperatures meet the testing requirements of EN50178 standard 9.4.2.1.
	Damp heat meets the testing requirements of EN50178 standard 9.4.2.2.
	Vibration meets the testing requirements of EN50178 standard 9.4.3.2.
	Electromagnetic compatibility meets the testing requirements of EN50178 standard 9.4.6.1 and 9.4.6.2.

Dimensions(mm):

1	+5V
2	GND
3	OUT1
4	OUT3
5	OUT2

Connection

General tolerance

General tolerance: $\pm 0.5\text{mm}$

Remarks:

- When the current to be measured flows through the input pin of the sensor, it can be measured at the output end measure the magnitude of the current.
- Dynamic performance (di/dt and noise) when the busbar is fully filled with primary perforation
- Different rated input current and output voltage can be customized according to user requirements The sensor.

WARNING : Incorrect wiring may cause damage to the sensor.

