



Hall Effect Current Sensor S29S1T0D24ZJ

Features:

- Closed Loop type
- Current or voltage output
- Conversion ratio K = 1:5000
- Panel mounting with JST : BH3P-VH-1.
- Large aperture
- Insulated plastic case according to UL94V0

Advantages:

- Excellent accuracy and linearity
- Very low temperature drift
- No insertion loss
- High Immunity to external interferences
- Optimised response time
- Wide supply voltage range

Specifications

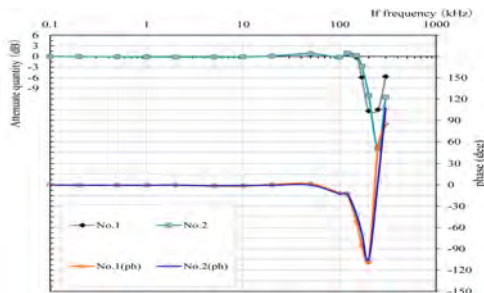
T_A=25°C, V_{CC}=±24V

| Parameters | Symbol | S29S1T0D24ZJ | | |
|---|--------------------|---|------|---|
| Rated Current | I _f | 1000A | | |
| Maximum Current | I _{fmax} | ± 2100A (see below) | | |
| I _f = ± A _{DC} Measuring resistance @ 85°C | R _M | ±15V | 70°C | 1000A : 0Ω ~ 21Ω 1200A : 0Ω ~ 9Ω 1300A : 0Ω ~ 5Ω |
| | | | 85°C | 1000A : 0Ω ~ 18Ω 1200A : 0Ω ~ 7Ω |
| | | ±24V | 70°C | 1000A : 0Ω ~ 60.5Ω 1800A : 0Ω ~ 14Ω 2100A : 0Ω ~ 4Ω |
| | | | 85°C | 1000A : 10Ω ~ 58.5Ω 1800A : 10Ω ~ 12Ω |
| Conversion Ratio | K | 1 : 5000 | | |
| Output Current | I _{OUT} | ± 200mA | | |
| Offset Current | I _{OE} | ≤ ± 0.4mA @ I _f = 0A ¹ | | |
| Output Current Accuracy | X | I _{OUT} ± 0.4% (without I _{of}) | | |
| Output Linearity | ε _L | ≤ ± 0.1% @ I _f | | |
| Supply Voltage | V _{CC} | ± 15V ~ ± 24V (±5%) | | |
| Consumption Current | I _{CC} | ± 35mA (Output Current is not included) | | |
| Response Time ² | t _r | < 1.0μs @ di/dt = 100A / μs | | |
| Output Temperature Characteristic | TCI _{OUT} | < ± 0.01 % / °C @ I _f (without TCI _{OE}) | | |
| Offset Temperature Characteristic | TCI _{OE} | ≤ ± 0.8mA max @ I _f = 0A | | |
| Hysteresis allowance | I _{OH} | ≤ 0.2mA (0A ↔ 3 x I _f) | | |
| Insulation Withstanding | V _d | AC 4000V, for 1minute (sensing current 0.5mA), inside of aperture ↔ terminals | | |
| Insulation Resistance | R _{IS} | > 500MΩ (@ DC 500V) inside of aperture ↔ terminals | | |
| Frequency Bandwidth | f | DC .. 100 kHz | | |
| Secondary Coil Resistance | R _S | 48Ω @ T _A = 70°C 50Ω @ T _A = 85°C | | |
| Operating Temperature | T _A | - 40°C ~ +85°C | | |
| Storage Temperature | T _S | - 40°C ~ +90°C | | |

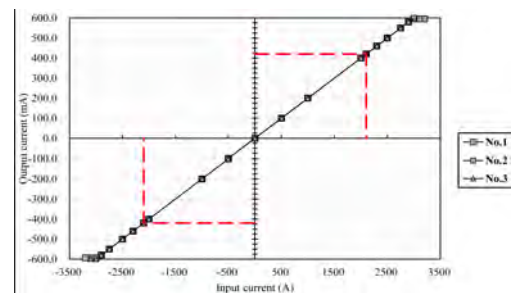
¹ Offset current value is after removal of core hysteresis — ² Time between 90% input current full scale and 90% of sensor output full scale

Electrical Performances

Frequency Characteristics

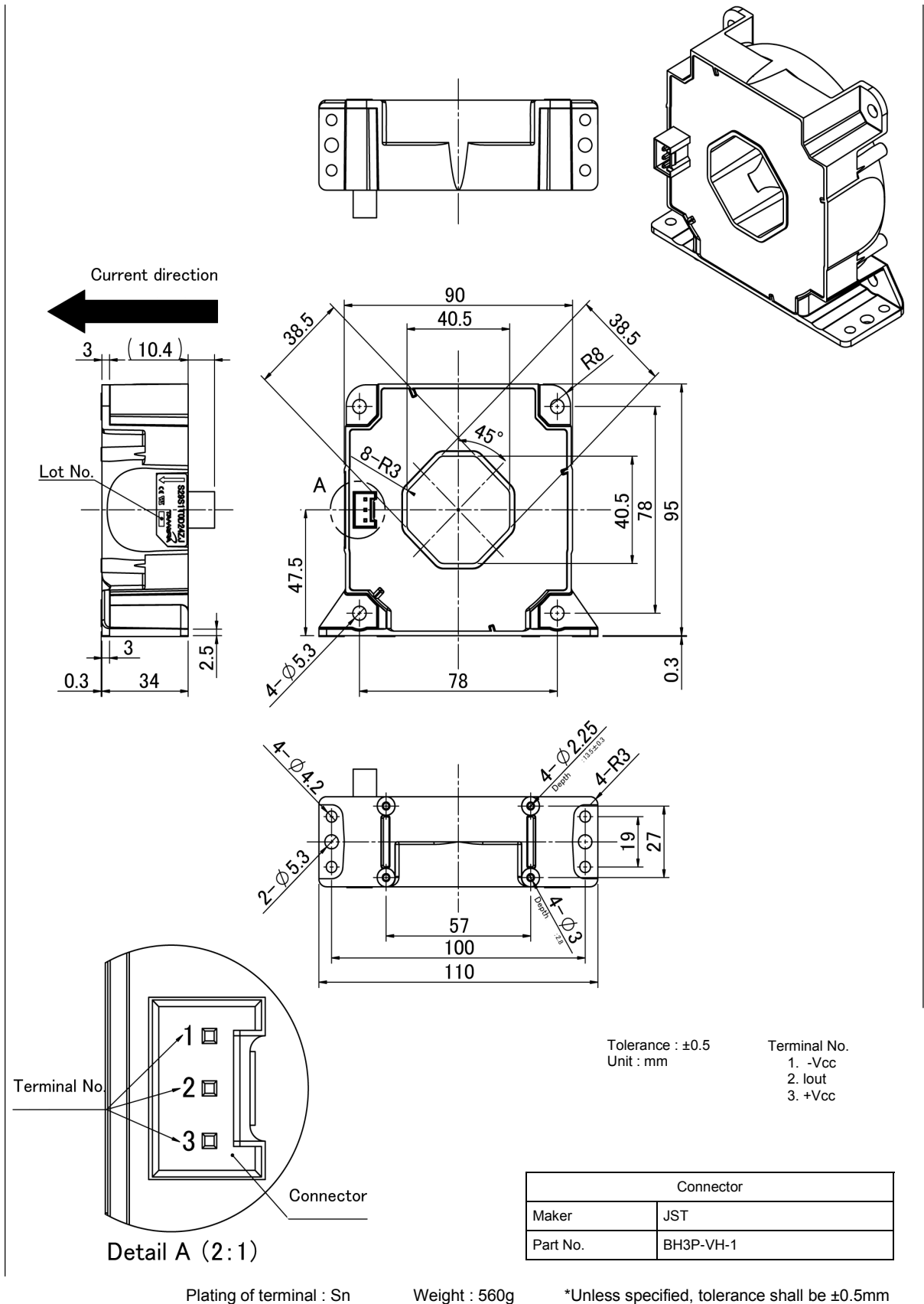


Saturation Characteristics



Hall Effect Current Sensor S29S1T0D24ZJ

Mechanical dimensions in mm



Mouser Electronics

Authorized Distributor

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Tamura:

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