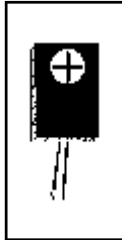


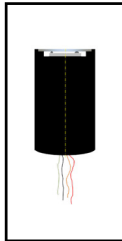


Packaged Cryogenic Hall Effect Sensors



Model HSP-T Hall Effect Sensor

This model features transverse mounting construction in a sturdy epoxy filled package. High linearity of the hall voltage versus magnetic field and small temperature dependence of sensitivity sets this sensor apart from commonly available hall effect sensors.



Model HSP-A Hall Effect Sensor

This model features axial mounting construction in a sturdy epoxy filled package. Hall voltages are guaranteed to be at least 10 mV per Tesla. This represents a 25% increase in sensitivity over sensors previously offered.

SPECIFICATIONS

| Parameter | Unit | Value |
|---|-----------------|--------------------|
| Magnetic Field Range | Tesla | 0 - 30 |
| Temperature Range | Kelvin | 1.5 - 300 |
| HSP-T Control Current | mA | 100 |
| HSP-A Control Current | mA | 50 |
| Sensitivity at In | mV/T | > 10 |
| Linearity Error at 300K, B = 0 - 1T | % | < 0.2 |
| Linearity Error at 77K, B = 0 - 0.2T | % | < 0.1 |
| Linearity Error at 4.2K, B = 0 - 1T | % | < 1 |
| Mean Temp. Coefficient of Sensitivity at Temperature Range 4.2K - 77K | K ⁻¹ | 2.10 ⁻⁵ |
| Mean Temp. Coefficient of Sensitivity at Temperature Range 77K - 300K | K ⁻¹ | 3.10 ⁻⁵ |
| Residual Voltage | μV | < 50 |
| Temperature Coefficient of Residual Voltage | μV/K | < 0.02 |
| Input Resistance at 4.2K (in zero field, including leads) | ohms | 0.9 |
| Input Resistance at 77K (in zero field, including leads) | ohms | 1.1 |
| Input Resistance at 300K (in zero field, including leads) | ohms | 1.5 |
| Output Resistance at 4.2K (in zero field, including leads) | ohms | 1.3 |
| Output Resistance at 77K (in zero field, including leads) | ohms | 1.8 |
| Output Resistance at 300K (in zero field, including leads) | ohms | 3.0 |
| Quantum Oscillations Beginning at 4.2K | Tesla | > 2 |
| Amplitude of Quantum Oscillations at 4.2K, B = 0 - 5T | % | < 0.1 |
| Active Area | mm ² | 0.625 |
| HSP-T Dimensions | mm | 7 x 5 x 1 |
| HSP-A Dimensions | mm | Ø 6 x 8 |
| Control Current Leads (green, black) | mm | Ø 0.1 |
| Hall Voltage Leads (orange, red) | mm | Ø 0.08 |