



## Speciality Magnetic Components

QUALIFIED TO ISO 9001:2008

### Application of Type HTP50SV Hall Effect Current Transformers

The HTP 50SV Hall effect current transformer operates from a single +15V power supply. It is intended for use in applications that require the measurement of unidirectional currents. It will not produce a negative output for a negative DC primary current. It will however track small, brief negative transients (up to about 5A primary current for 1ms) provided that the mean DC current is substantially positive.

In common with all closed loop Hall effect devices, a current is produced in the internal coil to null out the flux in the magnetic circuit generated by the primary current. If, for some reason, the nulling current is not produced in response to a primary current, it is possible that the magnetic core will acquire a small degree of remanent magnetism that will induce an output offset of up to 500 $\mu$ A (corresponding to a primary current of 0.5A). Since substantial negative primary currents cannot be nulled out, these devices are not recommended for applications where these currents exist even if these currents do not need to be measured.

The device produces an output current that is an accurate linear representation of the primary current down to an output current in the region of 100 $\mu$ A. Internal effects will offset this linear relationship by an output current of  $\pm 200\mu$ A. The minimum output will be the leakage current of the output transistor of approximately 10 $\mu$ A at 25°C rising to 80 $\mu$ A at 70°C

