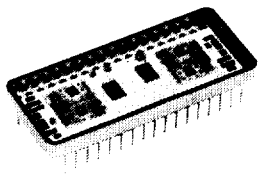
DDC
ILC DATA DEVICE CORPORATION®

DRC-11522

2 CHANNEL D/R CONVERTER



DESCRIPTION

The DRC-11522 is a Dual 16 Bit Digital to Resolver Converter. Each channel is independent from the other with the exception of the 16 digital lines. The DRC-11522 allows the user to program the Gain of the Resolver Output

Packaged in a 36 pin double DIP, the DRC-11522 is 2 DSC-11520 D/R converters in one hybrid module.

With a synchro or resolver reference input, the DRC-11522 is a digital-to-resolver converter.

With a DC reference input, the unit can be used as a hybrid digital-to-sin/cos dc converter.

With the reference input proportional to the radius vector, the DRC-11522 converts polar to rectangular coordinates.

Hybrid technology results in low weight, low power consumption, very high reliability and a wide operating temperature range. A new, improved circuit design allows higher accuracy and reduces the output scale factor variation so that the output can drive displays directly. The output line-to-line voltage can be scaled by pin programming. Other features include buffered reference input and output short circuit protection.

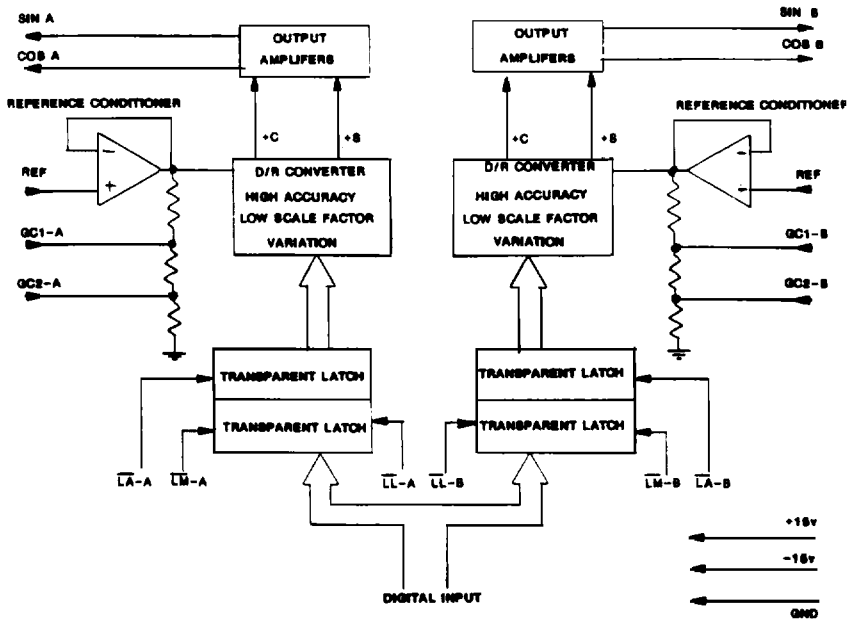
APPLICATIONS

Because of its high reliability, small size and low power consumption, the hybrid DRC-11522 is ideal for the most stringent and severe industrial and military ground or avionics applications. All units are available with MIL-STD-883B processing .

Among the many possible applications are computer based systems in which digital information is processed, such as simulators, flight trainers, flight instrumentation, fire control systems, radar and navigation systems.

FEATURES

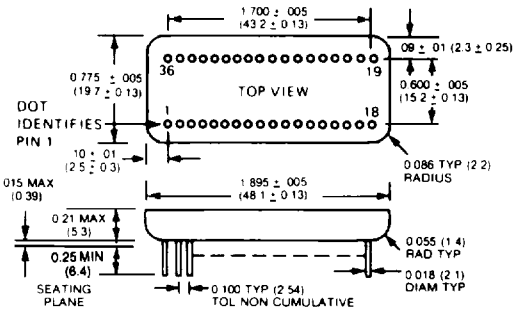
- *16 Bit Resolution*
- *Pin Programmable Gain Control*
- *2 Channels in One 36 Pin DDIP*
- *Accuracy: to ± 1 Min.*
- *0.05% Scale Factor Variation with Angle*
- *DC Coupled Reference*
- *High Rel CMOS D/R Chip*
- *8 Bit/2 Byte Double Buffered Transparent Latches*



DRC-11522 BLOCK DIAGRAM

MECHANICAL OUTLINE

36 PIN DOUBLE DIP



NOTES
1. Dimensions shown are in inches (millimeters).
2. Lead identification numbers are for reference only.
3. Lead cluster shall be centered within ±0.01 of outline dimensions. Lead spacing dimensions apply only at seating plane.
4. Pin material meets solderability requirements of MIL-STD-202E, Method 208C.
5. Package is Kovar with electroless nickel plating.
6. Case is electrically floating.

ORDERING INFORMATION

DRC-11522 — 3 0 2

- Accuracy
  - 2 = ±8 minutes
  - 3 = ±4 minutes
  - 4 = ±2 minutes
  - 5 = ±1 minute
- Reliability Grade:
  - 0 = Standard DDC procedures.
  - 1 = 883B processing available.
  - 2 = 883B processing available but without QCI testing.
- Operating Temperature Range:
  - 1 = -55°C to 125°C (Case)
  - 3 = 0°C to +70°C (Case)

F

E-ABR