



DEVELOPMENT STANDARD

QIC-114
Revision B
18 Jan 89

MAGNETIC HEAD FOR USE WITH
QIC-525-DC RECORDING FORMAT

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(See important notices on the following page)

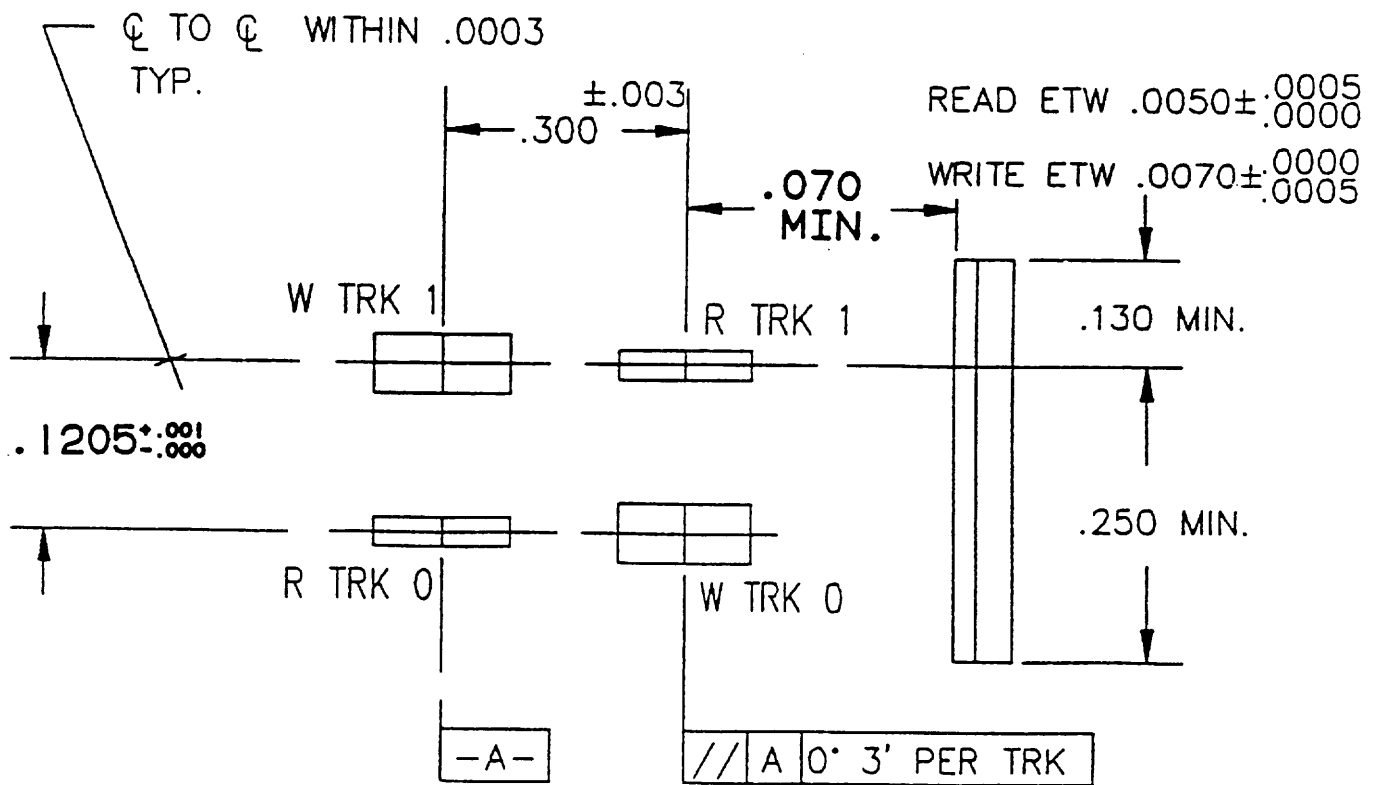
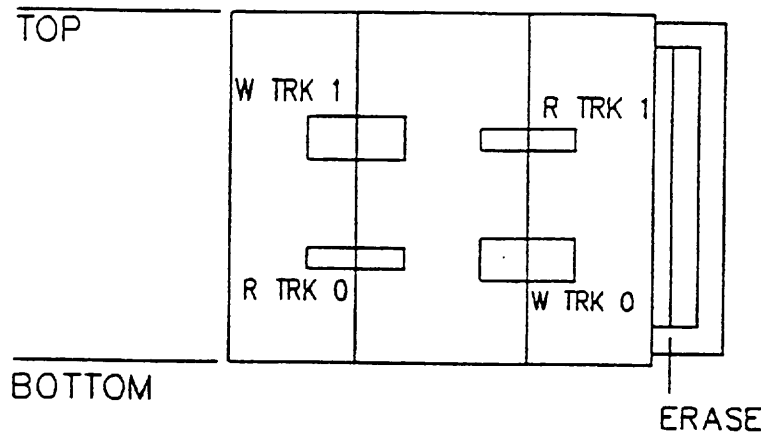
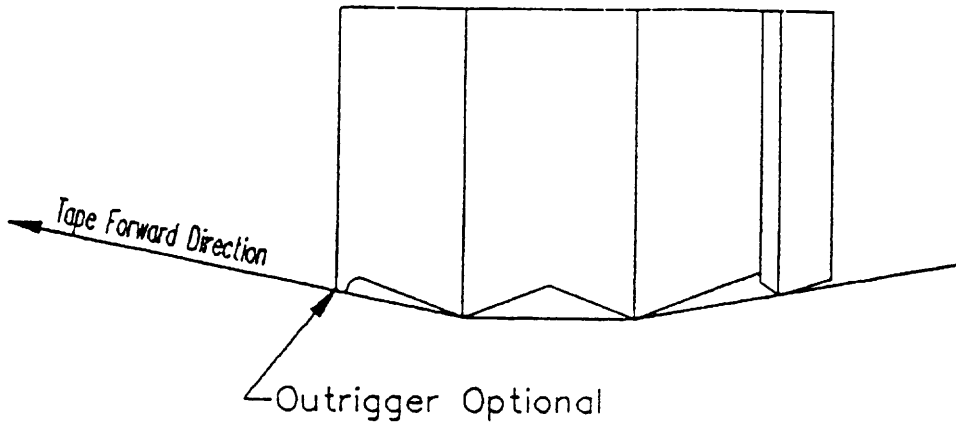
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1.0 Mechanical outline QIC 320, 26 Tracks, 20,000 FRPI



2.00 Electrical format: OIC 320 Head Development

- 2.01 Tape: DC 600 XTD (Enhanced) or equivalent. STD REF.Tape T.B.D.
- 2.02 Tape speed: 120 inches per second
- 2.03 Read while write head construction:
The data being recorded is read and verified on the same pass as they are written.
- 2.04 Recording density:
The nominal maximum recording density shall be 20,000 FTPI. (NRZI)
- 2.05 Erasure:
A separate erase gap shall be provided. Erase Frequency @ 4.8 MHz min. After erasure, residual signal on the tape < 3%

- 2.06 Peak shift:
Instantaneous spacings between flux transitions shall satisfy the following conditions:

In a sequence of flux transitions defined by the encoded pattern 0101001011... (HEX 29 data pattern). The maximum displacement of flux transitions on either side of the reference flux transitions shall not exceed +/- 28% from nominal Bit cell averaged over the six transition cells between the reference flux transitions.

- 2.07 AC-bias: (Optional)
A high frequency AC-bias write current with the write signal current superimposed may be used as a recording method .

No current values or bias frequency are set at this time for the AC-bias optional recording method.

- 2.08 Resolution:
With the recording method used, a 3:1 ratio in transition densities may occur. The resolution value is determined as the ratio:

$$\frac{E_o @ 20,000 \text{ FRPI} \times 100\%}{E_o @ 6,667 \text{ FRPI}}$$

This value shall be a minimum of 55%

2.09

- 2.10 Resonance frequency > 2 MHz with a 10pf read load.

2.11
AC bias).

- 2.12 Write current (I_w) is set at 110% of the write saturation current value (without AC bias).

- 2.13 Crossfeed:
The ratio of the signal through the read verify coil with the write coil under test energized at 20,000 FRPI, to the "read while write" output signal at 20,000 FRPI to be 5% maximum when the cross-feed output is measured at I_w using a spectrum analyzer set at 100KHz to 2.0 MHz Max.

- 2.14 Crosstalk:
The ratio of the signal through the adjacent read coil on the same gap with the write coil under test energized at 20,000 FRPI, to the read while write output signal at 20,000 FRPI to be 500% maximum when the crosstalk output is measured at I_w using a spectrum analyzer, set at 100 KHz to 2.0 MHz Max.