

**PRML READ/WRITE CHANNEL**

PRODUCT PREVIEW

**■ SIGNAL PROCESSING**

- PR4 signal equalization and loops
- 8th order optimized low pass filter with programmable cut-off frequency and boost
- single flash 6-bit ADC
- 5-TAP programmable/self-adaptive digital FIR for signal equalization
- Programmable/self-adaptive Offset and MR Head Asymmetry compensation for signal equalization
- Timing and Gain loops for optimum data recovery
- Encoder scheme:
  - Rate 304/338 with Local ECC (16/17 without Local ECC)
- Detector scheme:
  - Media Noise Terminator™ Detector
  - Optional Local ECC Post Processing scheme
- 8-bit NRZ interface to disk controller
- Thermal Asperity detection/compensation and Erasure Flag

**■ WRITE**

- 2 level Write Precomp for Non Linear Transition Shift compensation
- Asynchronous and Synchronous Direct Write for disk/head characterization

**■ SERVO**

- Digital Synchronous Servo with data rates up to 75MHz (8x Oversampling)
- Internal Burst and Grey Code detection
- Repeatable Run Out Support

**■ CHANNEL QUALITY MONITOR**

- Fast read parameters optimization for minimum BER
- Advanced Disk Surface Defect Scan

**■ QUALITY AND RELIABILITY**

- BIST for analog front-end and digital back-end
- Iddq and I/O pins mapping

**■ POWER SUPPLY AND CONTROL**

- 2.5V Analog and 1.8V Digital supply; 1.8V to 3.3V supply for I/O pins
- Advanced Power Management features

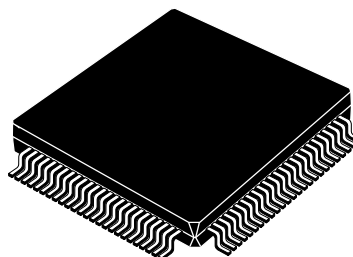
**DESCRIPTION**

L6363 is a 0.18µm CMOS PRML R/W channel supporting data rates up to 750Mb/sec with Servo Demodulation, Clock Synthesis, Channel Quality Monitor for channel optimization and Disk Surface Defect Scan capability

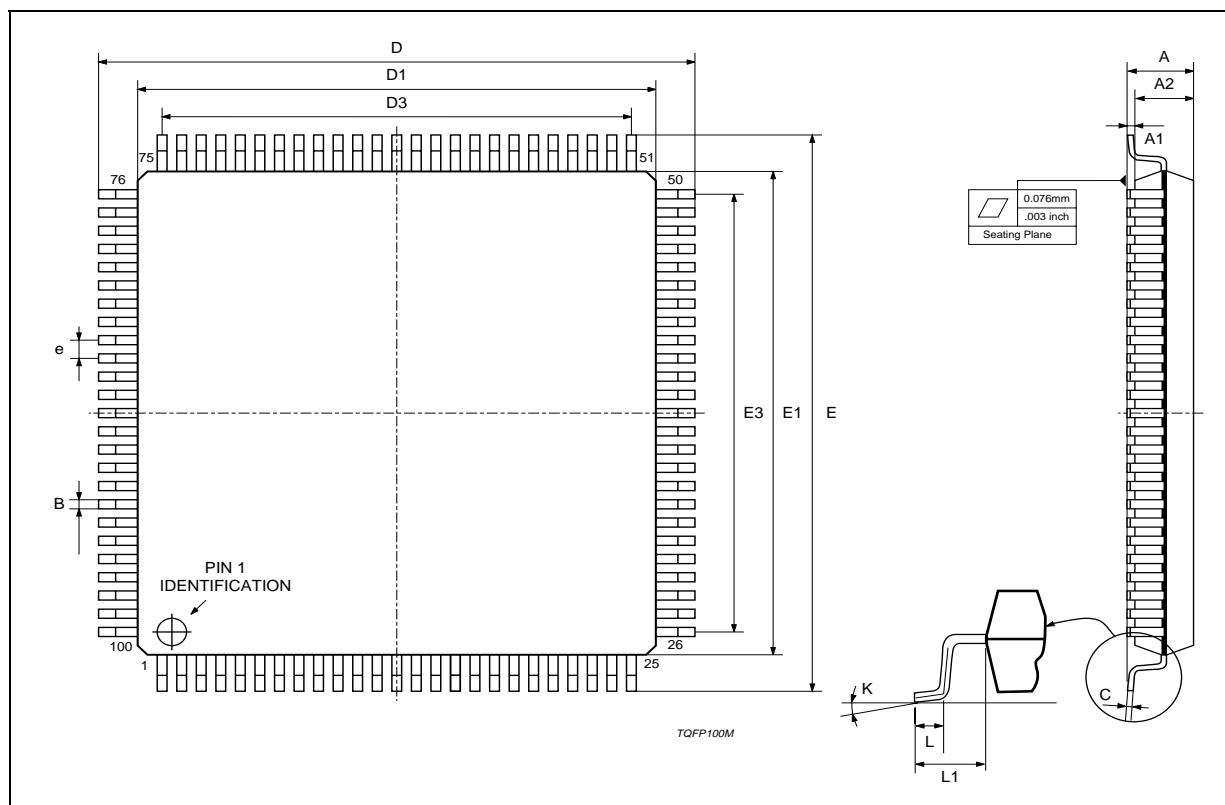


| DIM. | mm                   |       |      | inch  |        |       |
|------|----------------------|-------|------|-------|--------|-------|
|      | MIN.                 | TYP.  | MAX. | MIN.  | TYP.   | MAX.  |
| A    |                      |       | 1.60 |       |        | 0.063 |
| A1   | 0.05                 |       | 0.15 | 0.002 |        | 0.006 |
| A2   | 1.35                 | 1.40  | 1.45 | 0.053 | 0.055  | 0.057 |
| B    | 0.17                 | 0.22  | 0.27 | 0.007 | 0.009  | 0.011 |
| C    | 0.09                 |       | 0.20 | 0.003 |        | 0.008 |
| D    |                      | 16.00 |      |       | 0.630  |       |
| D1   |                      | 14.00 |      |       | 0.551  |       |
| D3   |                      | 12.00 |      |       | 0.472  |       |
| e    |                      | 0.50  |      |       | 0.019  |       |
| E    |                      | 16.00 |      |       | 0.630  |       |
| E1   |                      | 14.00 |      |       | 0.551  |       |
| E3   |                      | 12.00 |      |       | 0.472  |       |
| L    | 0.45                 | 0.60  | 0.75 | 0.018 | 0.024  | 0.030 |
| L1   |                      | 1.00  |      |       | 0.0393 |       |
| K    | 3.5°(min.), 7°(max.) |       |      |       |        |       |

## OUTLINE AND MECHANICAL DATA



### TQFP100



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