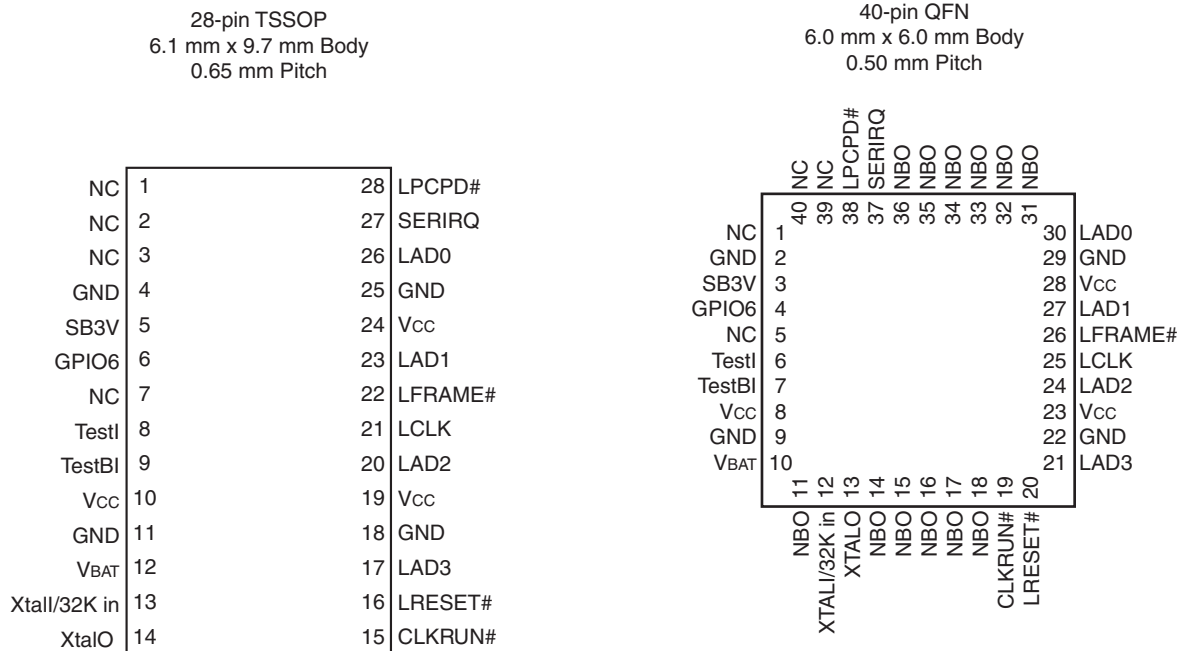
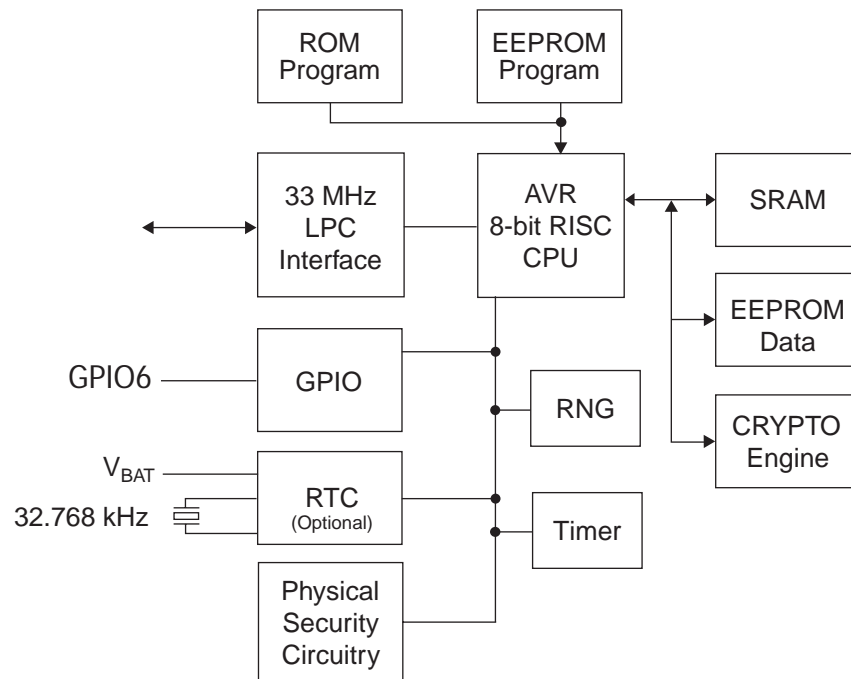


Pin Name	Description
SERIQ	Serialized Interrupt Request Input/Output
Xtall/32K in	32.768 kHz Crystal Input
Xtal0	32.768 kHz Crystal Output
GPIO6	General Purpose Input/Output
TestI	Test Input (disabled)
TestBI	Test Input (disabled)
NC	No Connect
NBO	Not Bonded Out

**Figure 1.** Pin Configurations



**Figure 2.** AT97SC3203 Block Diagram


## Description (continued)

The TPM includes a hardware random number generator, including a FIPS-approved Pseudo Random Number Generator, that is used for key generation and TCG protocol functions. The RNG is also available to the system to generate random numbers that may be needed during normal operation.

The chip uses a dynamic internal memory management scheme to store multiple RSA keys. Other than the standard TCG commands (TPM\_FlushSpecific, TPM\_Loadkey2), no system intervention is required to manage this internal key cache.

The TPM is offered to OEM and ODM manufacturers as a turnkey solution, including the firmware integrated on the chip. In addition, Atmel provides the necessary device driver software for integration into certain operating systems, along with BIOS drivers. Atmel will also provide manufacturing support software for use by OEMs and ODMs during initialization and verification of the TPM during board assembly.

Full documentation for TCG primitives can be found in the TCG TPM Main Specification, Parts 1 – 3, on the TCG Web site located at <https://www.trustedcomputinggroup.org/>. TPM features specific to PC Client platforms are specified in the “TCG PC Client Specific TPM Interface Specification, Version 1.2”, also available on the TCG web site. Implementation guidance for 32-bit PC platforms is outlined in the “TCG PC Client Specific Implementation Specification for Conventional BIOS for TCG Version 1.2”, also available on the TCG web site.



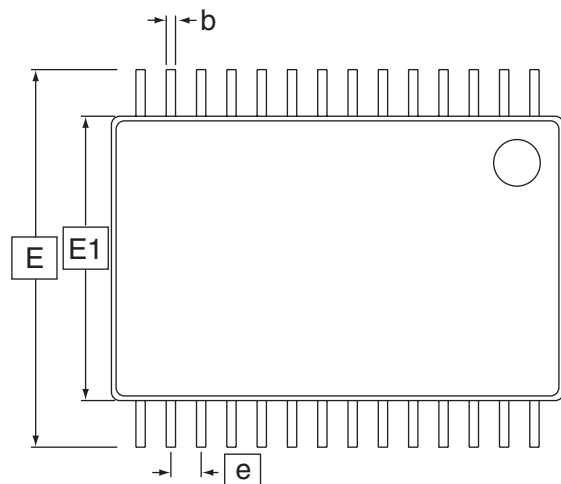
**Table 2.**      Ordering Information

Ordering Code	Package		Operation Range
AT97SC3203-X5A30	28A3 (28-pin TSSOP)	Lead-free, RoHS	Commercial (0°C to 70°C)
AT97SC3203-X5M30	40ML1 (40-pin QFN)	Lead-free, RoHS	Commercial (0°C to 70°C)

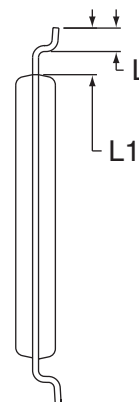


# Package Drawing

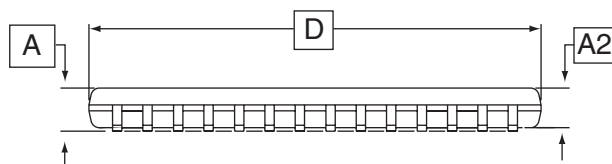
## 28A3 - TSSOP



Top View



End View



Side View

**COMMON DIMENSIONS**  
(Unit of Measure = mm)

SYMBOL	MIN	NOM	MAX	NOTE
D	9.60	9.70	9.80	2, 5
E	8.10 BSC			
E1	6.00	6.10	6.20	3, 5
A	—	—	1.20	
A2	0.80	1.00	1.05	
b	0.19	—	0.30	4
e	0.65 BSC			
L	0.45	0.60	0.75	
L1	1.00 REF			

- Notes:
1. This drawing is for general information only. Please refer to JEDEC Drawing MO-153, Variation DB for additional information.
  2. Dimension D does not include mold Flash, protrusions or gate burrs. Mold Flash, protrusions and gate burrs shall not exceed 0.15 mm (0.006 in) per side.
  3. Dimension E1 does not include inter-lead Flash or protrusions. Inter-lead Flash and protrusions shall not exceed 0.25 mm (0.010 in) per side.
  4. Dimension b does not include Dambar protrusion. Allowable Dambar protrusion shall be 0.08 mm total in excess of the b dimension at maximum material condition. Dambar cannot be located on the lower radius of the foot. Minimum space between protrusion and adjacent lead is 0.07 mm.
  5. Dimension D and E1 to be determined at Datum Plane H.

1/8/02



2325 Orchard Parkway  
San Jose, CA 95131

### TITLE

**28A3**, 28-lead, 6.1 x 9.7 mm Body, 0.65 pitch,  
Thin Shrink Small Outline Package (TSSOP)

### DRAWING NO.

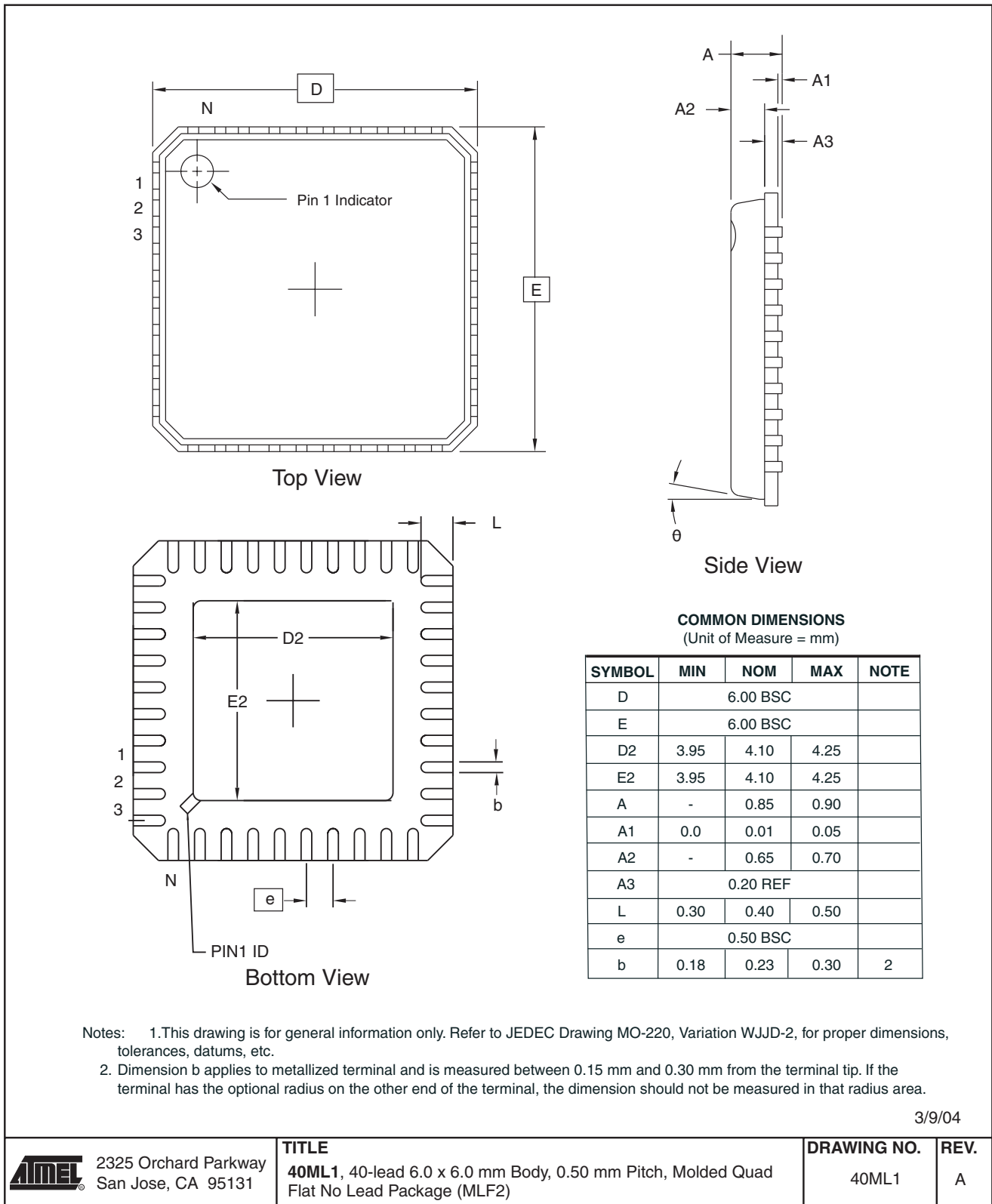
28A3

### REV.

A



## 40ML1 - QFN



## Revision History

Doc. Rev.	Date	Comments
5116BS	1/2007	Implemented revision history Added 'Summary' to page 1 Revised summary disclaimer text on page 1



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[www.atmel.com/literature](http://www.atmel.com/literature)

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