

APPLICATION NOTE

ABSTRACT

This application note shows how a SC16C752 (or SC16C752B) or a SC16C2550 (or SC16C2550B) can be connected to an ISA bus. This application note is also applicable to all Philips SC16C products.

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SC16C752/SC16C752B/

SC16C2550/SC16C2550B

ISA bus hardware interface example

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Supersedes data of 2003 Sep 04

2004 Jun 25

SC16C752/SC16C752B/SC16C2550/SC16C2550B
ISA bus hardware interface example

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This application note shows how a SC16C752 or a SC16C2550 can be connected to an ISA bus.

The two channels of the UART are hardwired to the following addresses:

CH A → 3F8 – 3F0

CH B → 2F8 – 2F0

Hardware interrupt for each channel can be selected by JP1 and JP2. The following interrupts are supported: IRQ3, IRQ4, IR5, IRQ6, and IRQ7.

In an environment where the interrupt lines must be shared by other source, $\overline{OP2A}$ or $\overline{OP2B}$ can be used to drive a 3-State driver output enable. The input of this 3-State driver is connected to the UART's interrupt output, and the output of this 3-State is connected to the system's interrupt signal. This 3-State driver can be enabled/disabled by writing to MCR register bit 3.

SC16C752/SC16C752B/SC16C2550/SC16C2550B ISA bus hardware interface example

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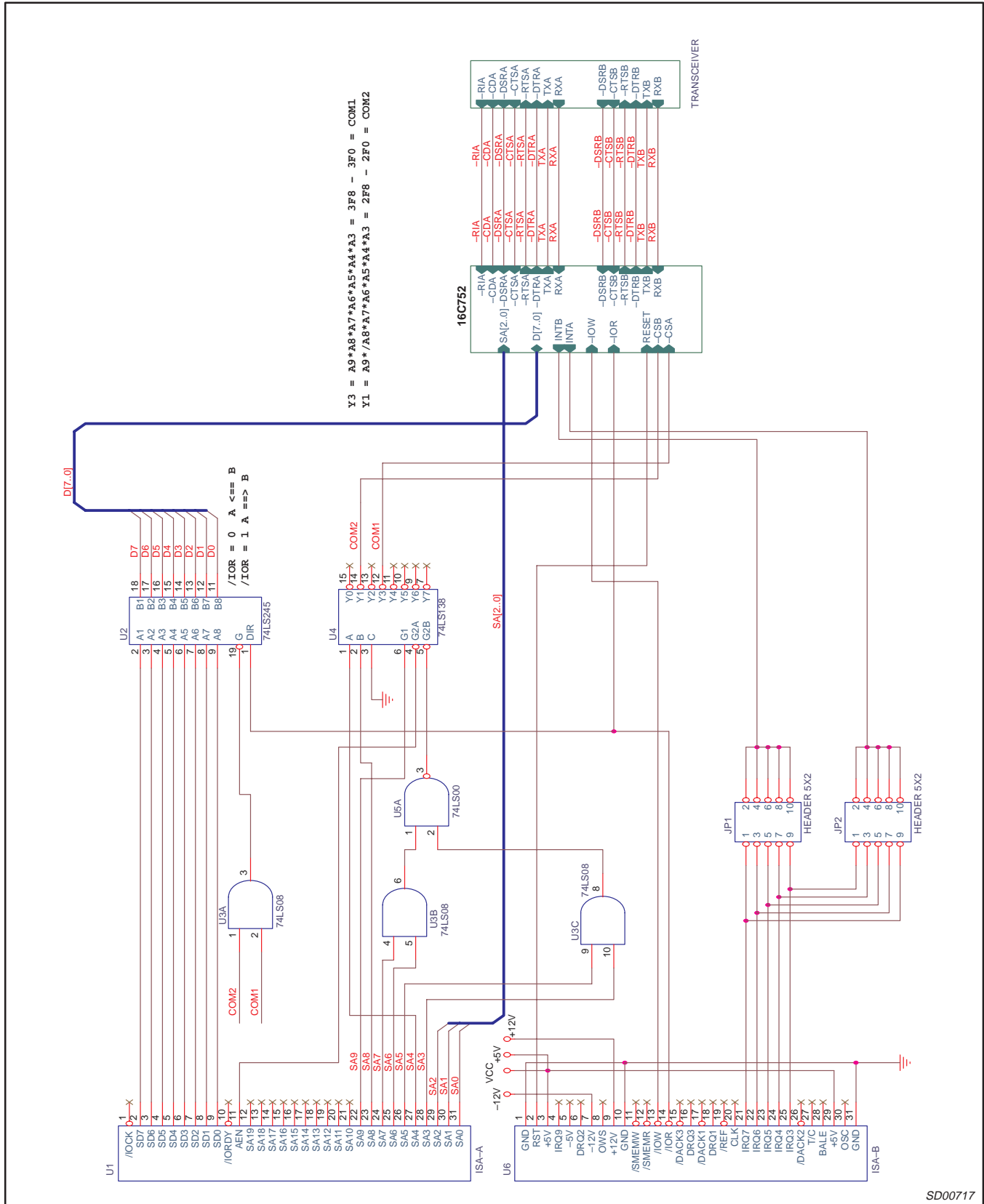


Figure 1.

SD00717

SC16C752/SC16C752B/SC16C2550/SC16C2550B ISA bus hardware interface example

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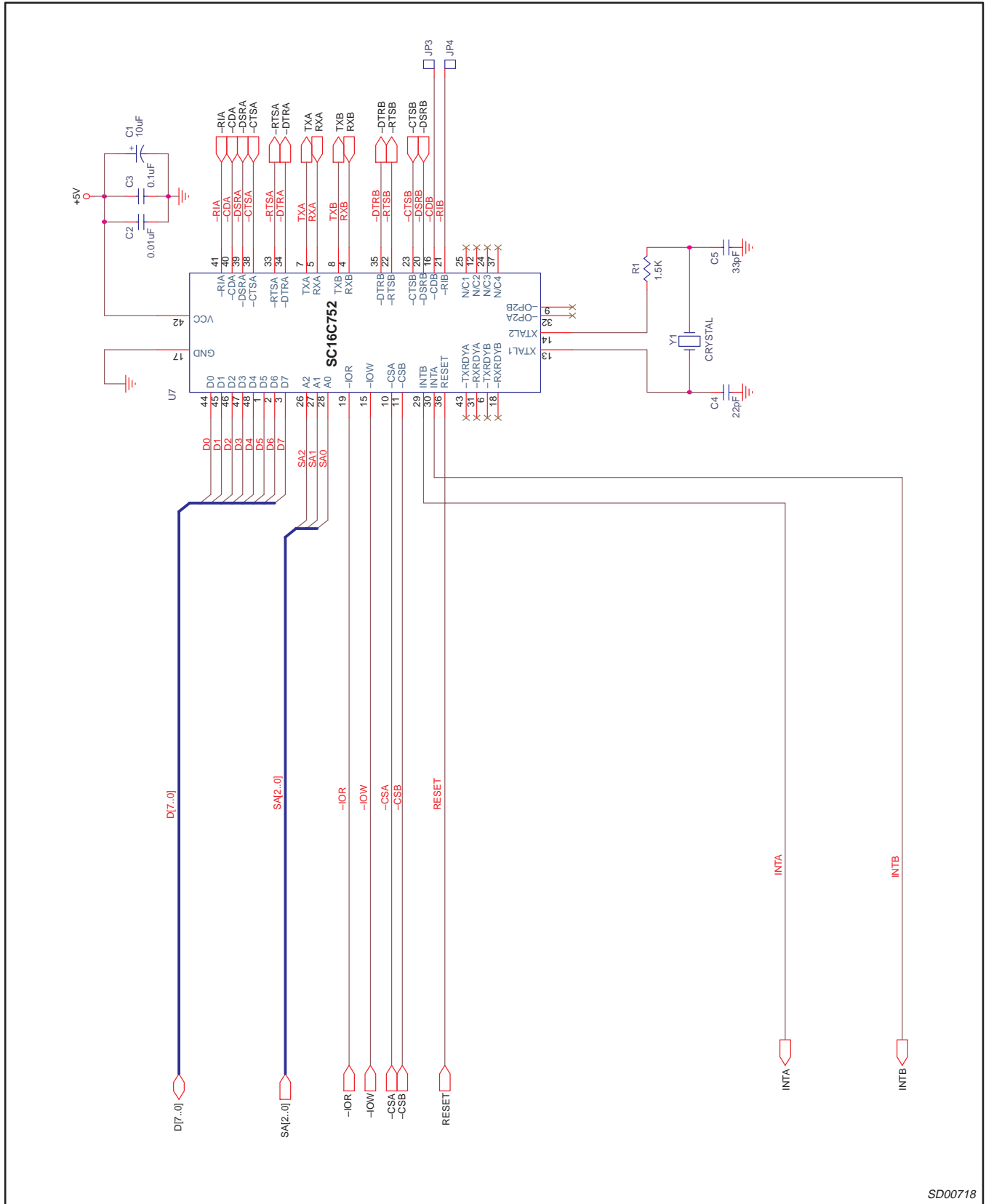


Figure 2.

SD00718

SC16C752/SC16C752B/SC16C2550/SC16C2550B ISA bus hardware interface example

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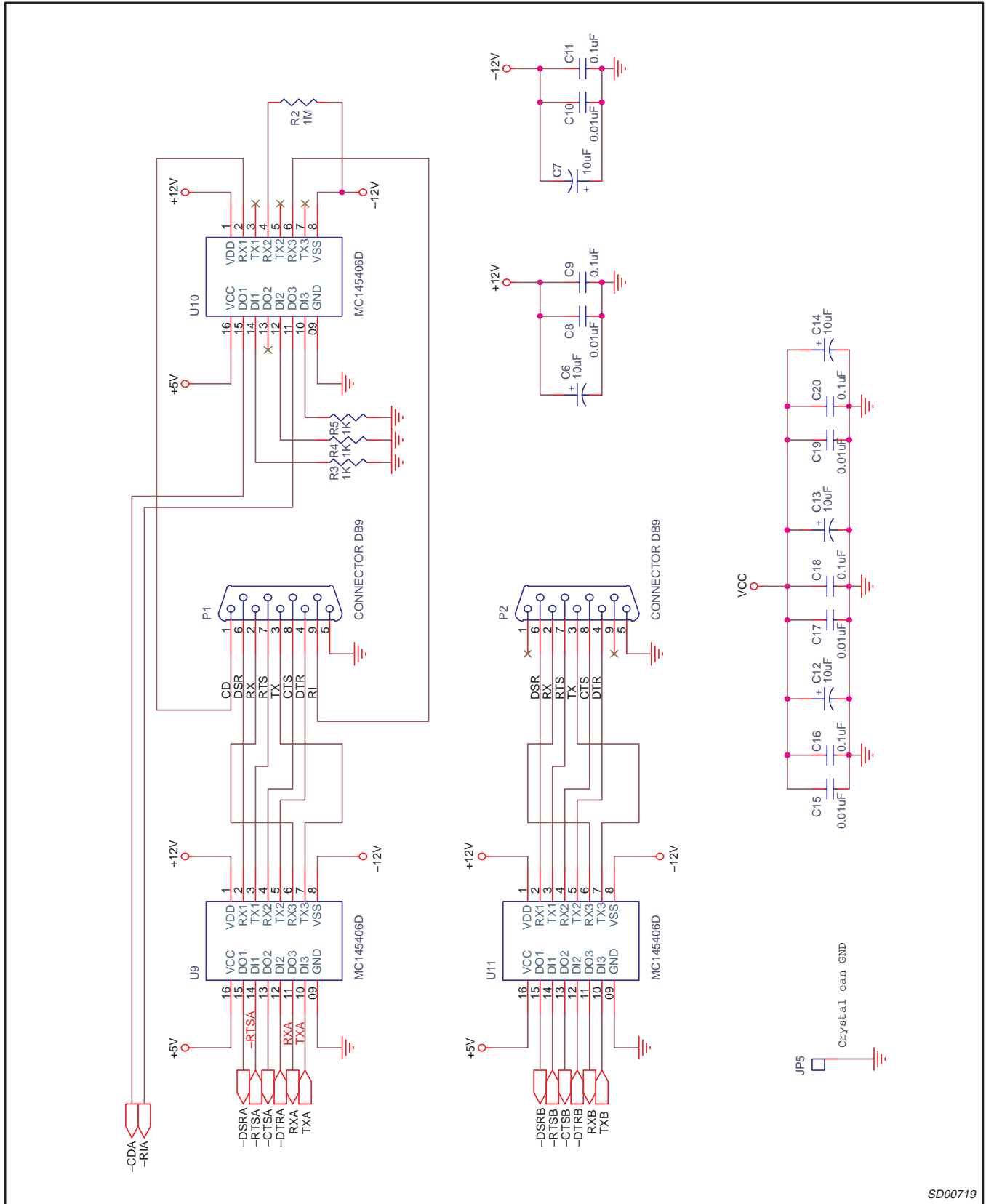


Figure 3.

SC16C752/SC16C752B/SC16C2550/SC16C2550B

ISA bus hardware interface example

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REVISION HISTORY

Rev	Date	Description
_2	20040625	Application note (9397 750 13517). Supersedes data of 04 Sep 2003 (9397 750 11996). Modifications: <ul style="list-style-type: none"> • Added part-types SC16C752B and SC16C2550B to title. • 'Abstract' modified to include references to SC16C752B and SC16C2550B.
_1	20030904	Application note, initial version (9397 750 11996).

Definitions

Short-form specification — The data in a short-form specification is extracted from a full data sheet with the same type number and title. For detailed information see the relevant data sheet or data handbook.

Limiting values definition — Limiting values given are in accordance with the Absolute Maximum Rating System (IEC 60134). Stress above one or more of the limiting values may cause permanent damage to the device. These are stress ratings only and operation of the device at these or at any other conditions above those given in the Characteristics sections of the specification is not implied. Exposure to limiting values for extended periods may affect device reliability.

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Date of release: 06-04

For sales offices addresses send e-mail to:
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Document order number:

9397 750 13517

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