SMARTCARD MCU

Ordering Information For Package And Delivery

DATA BRIEFING

INTRODUCTION

The manufacturing process of Smartcards involves various components and technologies in order to issue a finished product:

– micromodules,
– flat packages,
– wafers.

■ MICROMODULES

Dedicated package for Smartcard products, the micromodule type depends on the size of the product and on the application.

Table 1 lists all available micromodules.

■ FLAT PACKAGES

For applications which require surface mount technology, suitable for PC cards, or other security modules, STMicroelectronics offers flat packages listed In Table 2.

■ WAFERS

For issuer production need, ST offers sawn and unsawn wafers deliveries, listed in Table 3.

Figure 1. Delivery form

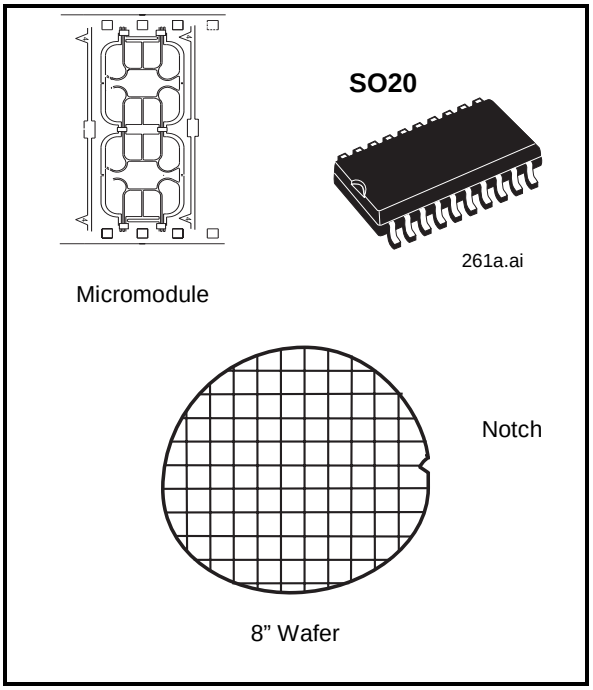


Table 1. Micromodules in super 35 standard tape

Type	Description
D1, D2	8 contacts for memory cards
D15	6 contacts for memory cards
D3, D4	8 contacts with ring MCU cards
D5	8 contacts for dual contact contactless MCU cards
D68	8 contacts for MCU cards
D7	6 contacts for dual contact contactless MCU cards
C7	Full contactless for MCU cards
D8	8 contacts for MCU cards

Table 2. Flat Packages

Type	Description
O20	SO20 for MCU products
QF4	TQFP44 for MCU products
R20	SO20 on tape and reel for MCU products

Table 3. Wafers

Type	Description
W00	Unsawn wafers, 750 µm thickness
W20	Unsawn wafers, 275 µm thickness
W40	Unsawn wafers, 180 µm thickness
S2x	280 µm sawn wafers on UV tape
R4x	180 µm sawn wafers on insolated UV tape
S4x	180 µm sawn wafers on UV tape
T4x	180 µm sawn wafers on blue tape

This is Brief Data from STMicroelectronics. Details are subject to change without notice. For complete data, please contact your nearest Sales Office or SmartCard Products Divison, Rousset, France. Fax: (+33) 4 42 68 87 29.

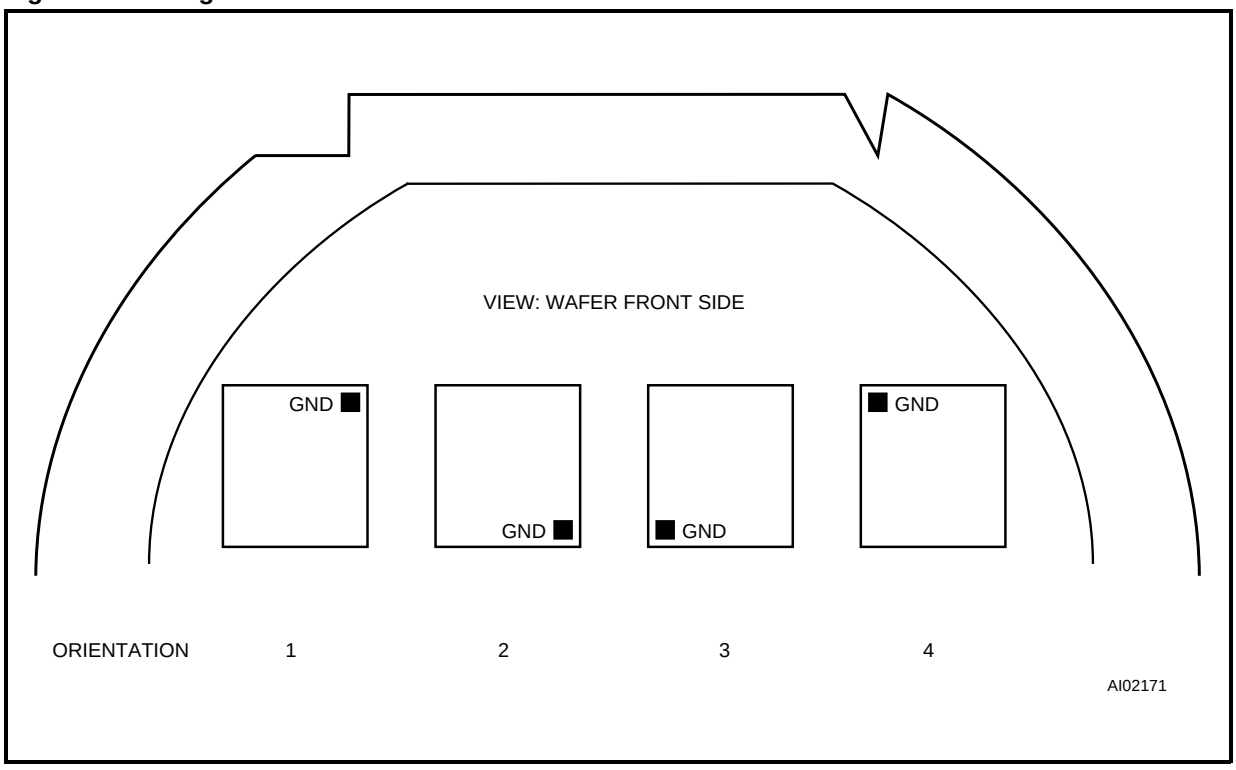
Table 4. Ordering Information Scheme

Example:	ST19SF08C	D45	XXX	Z
Product name				**Pre-personalization name**
				"+" if no pre-personalization
Delivery Form				**Customer ROM code name**

Dxx: Module contact or dual
Cxx: Contactless modules
Oxx: SO package
Wxx: Unsawn wafer
Sxy*: Sawn wafer (std UV tape)
Rxy*: Sawn wafer (insolated UV tape) or SO on tape and reel

Note: *where "y" indicates the sawing orientation as shown in Figure 2

Figure 2. Sawing orientation



Sawn wafers are scribed and mounted in a frame on adhesive tape. The orientation is defined by the position of the GND pad on the die, viewed with active area of product visible, relative to the notches of the frame (as shown in Figure 2). The orientation of the die with respect to the plastic frame notches is specified by the Customer.

One further concern, when specifying devices to be delivered in this form, is that wafers mounted on adhesive tape must be used within a limited period from the mounting date:

– two months, if wafers are stored at 25°C, 55% relative humidity
– six months, if wafers are stored at 4°C, 55% relative humidity