



Wafer and Die Infosheet

Memory Products

Features

- Async SRAMs, Dual-Ports, FIFOs, MicroPower SRAMs, PROMs, and Sync SRAMs wafer and die
- Wafer
 - Standard Wafer 25–30 mil thick
 - Background Wafer to 14 mil thick
 - Background Wafer to 11 mil thick
- Die
 - Die in wafer form 25–30 mil thick
 - Background Die to 14 mil thick
 - Background Die to 11 mil thick
 - Known Good Die (KGD) Levels 1, 2, and 3
- Temperature Ranges
 - Commercial, Industrial, and Automotive
- Waffle Pack Packages

Wafer and Die Classification

Cypress Semiconductor's package products are also sold in both wafer and die form. Cypress Semiconductor classifies them as follows:

Wafer

Wafers are probed at room and hot to guarantee full functionality. Other parameters are guaranteed based on the level of

product that is supplied to the customer. Details of product levels are described later in this specification.

Known Good Die

KGD is available in both die in wafer form and background die. Product in wafer form is not background and is anywhere from 25 to 30 mil thick. Background die are 14 or 11 mil thick, sawed, and shipped in waffle packs. The product in either form is tested to three different levels:

Level 1

Wafers are probed to guarantee full functionality and all static DC parameters. Other parameters are not guaranteed and warranted, including device reliability.

Level 2

Wafers are probed to guarantee full functionality, all static DC and partial AC parameters. Other parameters are not guaranteed and warranted, including device reliability.

Level 3

Wafers are probed to guarantee full functionality and all static DC and AC parameters. All parameters are guaranteed and warranted, including device reliability.

Wafers and die in wafer form are shipped in jars with die maps. Background die are shipped as die in waffle packs.



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Maximum Ratings

(Above which the useful life may be impaired. For user guidelines, not tested.)

Storage Temperature–65°C to +150°C

Ambient Temperature with

Power Applied.....–55°C to +125°C

Operating Range

Range ^[1,2]	Ambient Temperature
Commercial	0°C to +70°C
Industrial	–40°C to +85°C
Automotive	–40°C to +125°C

Functional Characteristics

Product Type	Silicon Type	DC Test Parameters ^[2, 3]	AC Test Parameters ^[2, 3]
Async SRAMs, Dual-Ports, FIFOs, MicroPower SRAMs, PROMs and Sync SRAMs	Wafer	Per product spec.	None.
	KGD 1	Per product spec.	None.
	KGD 2	Per product spec.	Partial per product spec.
	KGD 3	Per product spec.	Full per product spec.

Ordering Information

Silicon Type	Ordering Code ^[2,4]	Wafer Code	Wafer/Die Type	Operating Range
Wafer	CYxxxx-WAF	WW	Wafer (25-30 mil).	Commercial
	CYxxxx-WW14	WW	Wafer (14 mil).	
	CYxxxx-WW11	WW	Wafer (11 mil).	
KGD1	CYxxxx-1XW	XW	Die (25-30 mil) in wafer form.	Commercial
	CYxxxx-1XW14	XW	Die (14 mil) in wafer form.	
	CYxxxx-1XW11	XW	Die (11 mil) in wafer form.	
	CYxxxx-1X14	X	Die (14 mil) in waffle pack.	
	CYxxxx-1X11	X	Die (11 mil) in waffle pack.	
	CYxxxx-1XWI	XW	Die (25-30 mil) in wafer form.	Industrial
	CYxxxx-1XW14I	XW	Die (14 mil) in wafer form.	
	CYxxxx-1XW11I	XW	Die (11 mil) in wafer form.	
	CYxxxx-1X14I	X	Die (14 mil) in waffle pack.	
	CYxxxx-1X11I	X	Die (11 mil) in waffle pack.	
	CYxxxx-1XWE	XW	Die (25-30 mil) in wafer form.	Automotive
	CYxxxx-1XW14E	XW	Die (14 mil) in wafer form.	
	CYxxxx-1XW11E	XW	Die (11 mil) in wafer form.	
	CYxxxx-1X14E	X	Die (14 mil) in waffle pack.	
	CYxxxx-1X11E	X	Die (11 mil) in waffle pack.	

Notes:

1. Check product specific datasheets for available temperature ranges.
2. Shaded area is advance information.
3. Contact a Cypress Representative for product specific test parameters.
4. CYxxxx denotes the packaged product designator. For example, the Cypress part number CY7C1049B-12VI in KGD1 (14 mil) would be a CY7C1049B-1X14I. Not all combinations are available for all products. Contact a Cypress Representative for product availability.

Ordering Information (continued)

Silicon Type	Ordering Code ^[2,4]	Wafer Code	Wafer/Die Type	Operating Range
KGD2	CYxxx-2XW	XW	Die (25-30 mil) in wafer form.	Commercial
	CYxxx-2XW14	XW	Die (14 mil) in wafer form.	
	CYxxx-2XW11	XW	Die (11 mil) in wafer form.	
	CYxxx-2X14	X	Die (14 mil) in waaffle pack.	
	CYxxx-2X11	X	Die (11 mil) in waaffle pack.	
	CYxxx-2XWI	XW	Die (25-30 mil) in wafer form.	Industrial
	CYxxx-2XW14I	XW	Die (14 mil) in wafer form.	
	CYxxx-2XW11I	XW	Die (11 mil) in wafer form.	
	CYxxx-2X14I	X	Die (14 mil) in waaffle pack.	
	CYxxx-2X11I	X	Die (11 mil) in waaffle pack.	
	CYxxx-2XWE	XW	Die (25-30 mil) in wafer form.	Automotive
	CYxxx-2XW14E	XW	Die (14 mil) in wafer form.	
	CYxxx-2XW11E	XW	Die (11 mil) in wafer form.	
	CYxxx-2X14E	X	Die (14 mil) in waaffle pack.	
	CYxxx-2X11E	X	Die (11 mil) in waaffle pack.	
KGD3	CYxxx-3XW	XW	Die (25-30 mil) in wafer form.	Commercial
	CYxxx-3XW14	XW	Die (14 mil) in wafer form.	
	CYxxx-3XW11	XW	Die (11 mil) in wafer form.	
	CYxxx-3X14	X	Die (14 mil) in waaffle pack.	
	CYxxx-3X11	X	Die (11 mil) in waaffle pack.	
	CYxxx-3XWI	XW	Die (25-30 mil) in wafer form.	Industrial
	CYxxx-3XW14I	XW	Die (14 mil) in wafer form.	
	CYxxx-3XW11I	XW	Die (11 mil) in wafer form.	
	CYxxx-3X14I	X	Die (14 mil) in waaffle pack.	
	CYxxx-3X11I	X	Die (11 mil) in waaffle pack.	
	CYxxx-3XWE	XW	Die (25-30 mil) in wafer form.	Automotive
	CYxxx-3XW14E	XW	Die (14 mil) in wafer form.	
	CYxxx-3XW11E	XW	Die (11 mil) in wafer form.	
	CYxxx-3X14E	X	Die (14 mil) in waaffle pack.	
	CYxxx-3X11E	X	Die (11 mil) in waaffle pack.	

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Document History Page

Document Title: Wafer and Die Infosheet Memory Products Document Number: 38-05299				
REV.	ECN NO.	Issue Date	Orig. of Change	Description of Change
**	116316	09/26/02	DFP/MEG	New MPD SRAM wafer and die infosheet
*A	121670	12/10/02	DFP/DKJ	Changed title to "Wafer and Die Infosheet Memory Products." Added Dual-Ports, FIFOs, and PROMs to portfolio.