



Specialty & Mobile DRAM

A Mature Product Leader

SDR, DDR, DDR2, DDR3 and Mobile DRAM Products

Winbond is focusing on non-PC Main memory and mobile DRAM market. We provide long term support to various applications including Industrial, Automotive, Communication, Consumer and Computer Markets. All products are offered in both packaged and KGD (Known-Good-Die) form.

SDR Family

16Mb – 256Mb, up to 200MHz

DDR Family

64Mb – 256Mb, up to 200MHz

DDR2 Family

128Mb – 2Gb, up to 533MHz

DDR3/DDR3L Family

512Mb – 4Gb, up to 1066MHz

PSRAM Family

64Mb, up to 166MHz

LPSDR/LPDDR Family

128Mb to 1Gb, up to 200MHz

LPDDR2 Family

256Mb to 1Gb, up to 533MHz

LPDDR3 Family

2Gb and 4Gb, up to 933MHz

Category	Package type	Commercial Grade	Industrial Grade	Industrial+ Grade
Winbond PN example	Specialty DRAM	W631GG6KB-25	W631GG6KB25I	W631GG6KB25J
	Mobile DRAM	W97AH6KBVX2E	W97AH6KBVX2I	NA
Temperature range	SDR/DDR (Ta)	0c~85c	-40c~85c	-40~105c
	DDR2/DDR3/DDR3L(Tc)	0c~95c	-40c~95c	-40~105c
	LPSDR/LPDDR LPDDR2/LPDDR3(Tc)	-25c~85c	-40c~85c	NA

Winbond DRAM Product list

Type	Org	Package	Speed	Voltage	64Mb
pSRAM	x16	49WFBGA	166MHz	1.8v	W956D6KKBK

Type	Org	Package	Speed	Voltage	256Mb
LPSDR	x16	60WFBGA	200MHz	1.8V/1.8V	W948D6KBH
	X32	90VFBGA			N/A

Type	Org	Package	Speed	Voltage	256Mb	512Mb	1Gb
LPDDR	x16	60WFBGA	200MHz	1.8V/1.8V	W948D6KBH	W949D6DBH	W94AD6KBH
	X32	90VFBGA			N/A	W949D2DBJ	W94AD2KBJ

DRAM

Specialty DRAM and Mobile DRAM

Type	Org	Package	Speed	Voltage	256Mb	512Mb	1Gb	2Gb
LPDDR2	x16	134VFBGA	400MHz 533MHz	1.8V/1.2V	W978H6KBVX	W979H6KBVX	W97AH6KBVX	W97BH6MBVA*
		168WFBGA			N/A	W979H6KBQX	W97AH6KBQX	W97BH6MBQA*
	X32	134VFBGA			W978H2KBVX	W979H2KBVX	W97AH6KBQX	W97BH2MBVA*
		168WFBGA			N/A	W979H2KBQX	W97AH2KBQX	W97BH2MBQA*

*: The ES sample will be available in 2019'Q1

Type	Org	Package	Speed	Voltage	2Gb	4Gb
LPDDR3	x16	178WFBGA	800MHz	1.8V/1.2V	W63BH6MBV	W63CH6MBV
	X32		933MHz		W63BH2MBV	W63CH2MBV

Type	Org	Package	Speed	Voltage	16Mb	64Mb	128Mb	256Mb
SDRAM	x16	TSOP11 50	143MHz 166MHz 200MHz	3.3v	W9816G6JH	N/A	N/A	N/A
		FBGA 60			W9816G6JB	W9864G6JB	N/A	N/A
		FBGA 54			N/A	W9864G6JT	W9812G6JB	W9825G6JB
		TSOP11 54			N/A	W9864G6KH	W9812G6KH	W9825G6KH
	X32	FBGA 90			N/A	W9864G2JB	W9812G2KB	W9825G2JB
		TSOP11 86			N/A	W9864G2JH	N/A	N/A

Type	Org	Package	Speed	Voltage	64Mb	128Mb	256Mb
DDR	x16	TSOP11 66	200MHz	2.5V±0.2V	W9464G6KH	W9412G6KH	W9425G6KH
		TFBGA 60			N/A	W9412G6JB	W9425G6KH

Type	Org	Package	Speed	Voltage	128Mb	256Mb	512Mb	1Gb	2Gb
DDR2	X8	FBGA 60	333MHz 400MHz	1.8V±0.1V	W9816G6JH	W9725G8KB	W9751G8KS	W971GG8SS	W972GG8KS
	X16		533MHz		W9712G6KB	W9725G6KB	W9751G6KB	W971GG6SB	W972GG6KB

Type	Org	Package	Speed	Voltage	128Mb	256Mb	512Mb	1Gb	2Gb
DDR3	X8	FBGA 78	666MHz 800MHz	1.5V±0.075V	N/A	W631GG8MB	W9751G8KS	W632GG8MB	W634GG8MB
	X16	FBGA 96	933MHz 1066MHz		W6351G6KB	W631GG6MB	W9751G6KB	W632GG6MB	W634GG6MB

Type	Org	Package	Speed	Voltage	1Gb	2Gb	4Gb
DDR3L	X8	FBGA 78	666MHz 800MHz	1.283V to 1.45V	W631GU8MB	W632GU8MB	W634GU8MB
	X16	FBGA 96	933MHz 1066MHz		W631GU6MB	W632GU6MB	W634GU6MB



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