12815 NE 124th St STE#D, Kirkland, WA-98034

AS4C64M32MD1-5BCN/BIN vs AS4C64M32MD1A-5BIN Comparison

Part Number & result / Parameter	AS4C64M32MD1-5BCN AS4C64M32MD1-5BIN	AS4C64M32MD1A-5BIN	Comparison Result
Product Description	**LPDDR1 SDRAM**	**LPDDR1 SDRAM**	Same
Process Technology	**46nm**	**46nm**	Same
Die	Dual Die	Single Die	Different
Density	2Gb	2Gb	Same
Memory Organization	16Meg x 32DQs x 4 banks	16Meg x 32DQs x 4 banks	Same
Bank Address Select	BA0-BA1	BA0-BA1	Same
Row / Column Address	**16K** (A0-A13) / **1K** (A0-A9)	**16K** (A0-A13) / **1K** (A0-A9)	Same
OperatingPower Supply	VDD/Q = 1.70~1.95V	VDD/Q = 1.70~1.95V	Same
Operating Temperature	-25°C~85°C (Commercial Grade) -40°C~85°C (Industrial Grade)	-40°C~85°C (Industrial Grade)	
Clock Frequency	200 MHz	200 MHz	Same
Data Rate	400 Mbps	400 Mbps	Same
CL	3	3	Same
tRCD / tRP (ns)	15 (Min)	15 (Min)	Same
I/O Capacitance	CIO : 5pF Max	CIO : 4.5pF Max	Comparable
Pin to Pin Compatible	Same		
AC/DC Characteristics	Same	Same	Meet JEDEC
I_{DD0} (mA)	190	70	Rev.A better
$I_{DD2P/S}$ (mA)	10	1	Rev.A better
I_{DD2N} (mA)	70	8	Rev.A better
I_{DD2NS} (mA)	60	4	Rev.A better
$I_{DD3P/S}$ (mA)	10	6/5	Rev.A better
I_{DD3N} (mA)	70	15	Rev.A better
I_{DD3NS} (mA)	54	10	Rev.A better
I_{DD4R} (mA)	180	100	Rev.A better
I_{DD4W} (mA)	180	90	Rev.A better
I_{DD5} (mA)	160	250	Rev.0 better
I_{DD8} (uA)	20	10	Rev.A better
I_{DD6} (mA)	3	2	Rev.A better
Package 90b FBGA	8 x 13 mm	8 x 13 mm	Same
Package Material	Pb and Halogen Free	Pb and Halogen Free	Same