

MT40A1G8SA-075:E vs MT40A1G8AG-062E:R Comparison

Part Number & result Parameter	MT40A1G8SA-075:E	MT40A1G8AG-062E:R	Comparison Result
Product Description	DDR4 SDRAM	DDR4 SDRAM	Same
Die	Micron Die Rev.E	Micron Die Rev.R	Different
Capacity	8Gb (1G x 8)	8Gb (1G x 8)	Same
Memory Organization	64Meg, x8bits, x16 banks	64Meg, x8bits, x16 banks	Same
Operating Power Supply	V _{DD} & V _{DDQ} = 1.2V (+/- 60mV)	V _{DD} & V _{DDQ} = 1.2V (+/- 60mV)	Same
	V _{pp} = 2.5V (-125mV,+250mV)	V _{pp} = 2.5V (-125mV,+250mV)	Same
Operating Temperature	Commercial (0°C ≤ T _c ≤ +95°C)	Commercial (0°C ≤ T _c ≤ +95°C)	Same
Max Clock Frequency	1333 MHz	1600 MHz Also supports 1333MHz	Rev.R better
Min. Cycle Time	0.75ns	0.625ns	Same
Max Data Rate	2666 Mbps	3200 Mbps Also supported 2666 Mbps	Rev.R better
CAS Latency	19	22, 19	Rev.R better
tAA(ns)	14.25	13.75, 14.25	Rev.R better
tRCD (ns)	14.25	13.75, 14.25	Rev.R better
tRP (ns)	14.25	13.75, 14.25	Rev.R better
Number of Bank groups	4	4	Same
Bank Count per Group	4	4	Same
Row Addressing	64K (A0..A15)	64K (A0..A15)	Same
Column Addressing	1K (A0..9)	1K (A0..9)	Same
Page Size per bank	1KB	1KB	Same
Temperature controlled Refresh time	8192 Cycles at T _c range 64ms at 0C ~ 85C 32ms at 85C ~ 95C	8192 Cycles at T _c range 64ms at 0C ~ 85C 32ms at 85C ~ 95C	Same
Low Power Auto Self Refresh support	Yes	Yes	
I/O Capacitance	CIO = 0.78pF Max	CIO = 0.78pF Max	same
Pin to Pin Compatible	Pin to Pin Compatible		
AC/DC Characteristics	Same		Meet JEDEC



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IDD Specification			
Parameter	MT40A1G8SA-075:E	MT40A1G8AG-062E:R	Comparison Result
IDD Spec conditions	0C to 95C	0C to 95C	
I _{DD0} (mA) , I _{pp0} (mA)	51 , 3	48 , 4	Rev.R better
I _{DD1} (mA)	63	55	Rev.R better
I _{DD2N} (mA)	35	38	Rev.E better
I _{DD2NT} (mA)	50	41	Rev.R better
I _{DD2P} (mA)	25	30	Rev.E better
I _{DD2Q} (mA)	30	34	Rev.E better
I _{DD3N} (mA)	51	43	Rev.R better
I _{DD3P} (mA)	39	33	Rev.R better
I _{DD4R} (mA)	156	123	Rev.R better
I _{DD4W} (mA)	137	106	Rev.R better
I _{DD6N} (mA)	34	32	Rev.R better
I _{DD6R} (mA)	21	19	Rev.R better
I _{DD6E} (mA)	46	52	Rev.E better
I _{DD7} (mA)	184	155	Rev.R better
Package	78b FBGA (7.5mm x 11mm x 1.2mm) Ball Array (mm): 9.6 x 6.4 x 0.8	78b FBGA (7.5mm x 11mm x 1.2mm) Ball Array (mm): 9.6 x 6.4 x 0.8	same
Solder Ball material Composition	SAC302 (96.8% Sn, 3% Ag, 0.2% Cu).	SACQ (92.45% Sn, 4% Ag, 0.5% Cu, 3% Bi, 0.05% Ni)..	Different
Package Material	Pb and Halogen Free	Pb and Halogen Free	Same