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

MT40A512M8SA-062EITF vs AS4C512M8D4-75BIN Comparison

Parameter / Part Number & result	MT40A512M8SA-062EITF	AS4C512M8D4-75BIN	Comparison Result
Product Description	DDR4 SDRAM	DDR4 SDRAM	Same
Capacity	4Gb (512M x 8)	4Gb (512M x 8)	Same
Memory Organization	32Meg, x8bits, x4 banks x4 groups	32Meg, x8bits, x4 banks x4 groups	Same
Operating Power Supply	V_{DD} & V_{DDQ} = 1.2V (+/-0.06V) Vpp = +2.5V(-0.125V/+0.25V)	V_{DD} & V_{DDQ} = 1.2V (+/-0.06V) Vpp = +2.5V(-0.125V/+0.25V)	Same
Operating Temperature	Industrial (-40°C to 95°C)	Industrial (-40°C to 95°C)	Same
Clock Frequency(MHz)	Max 1600, also supports 1333	Max 1333	Micron better
Data Rate (MT/s)	Max 3200,also supports 2666	Max 2666	Micron better
CAS Latency	22, also supports 19	19	Micron better
tRCD & tRP (ns)	13.75, also supports 14.25	14.25	Micron better
Average Refresh Period	7.8uS at -40C ~ +85C 3.9uS at +85C to +95C	7.8uS at -40C ~ +85C 3.9uS at +85C to +95C	Same
I/O Capacitance (C_{IO})	1.4pf	1.15pf	comparable
Pin to Pin Compatible	Pin to Pin Compatible		Same
AC/DC Characteristics	Same	Same	Meet JEDEC
IDD Specification			
I_{DD0} (mA)	47	77	Micron better
I_{DD1} (mA)	55	84	Micron better
I_{DD2P} (mA)	22	36	Micron better
I_{DD2Q} (mA)	26	52	Micron better
I_{DD2N} (mA)	33	55	Micron better
I_{DD3P} (mA)	33	45	Micron better
I_{DD3N} (mA)	43	88	Micron better
I_{DD4R} (mA)	178	128	Alliance better
I_{DD4W} (mA)	150	146	Alliance better
I_{DD6N} (mA)	24	28	Micron better
I_{DD6R} (mA)	16	25	Micron better
I_{DD6A} (mA)	23	32	Micron better
I_{DD7} (mA)	190	179	Alliance better
Package 78b FBGA	7.5mm x 11mm x 1.2mm	7.5mm x 11mm x 1.2mm	Same
Package Material	Pb and Halogen Free	Pb and Halogen Free	Same