

AS4C128M32MD2A-25BIN vs MT42L128M32D1TK-25AAT Comparison

Part Number & result Parameter	AS4C128M32MD2A-25BIN	MT42L128M32D1TK-25AAT	Comparison Result
Product Description	LPDDR2 SDRAM	LPDDR2 SDRAM	Same
No. of Die / package	Dual Die	Single Die	Different
Density	4Gb	4Gb	Same
Memory Organization	16Meg x 32DQs x 8 banks	16Meg x 32DQs x 8 banks	Same
Bank Address	BA0-BA2	BA0-BA2	Same
Row / Column Address	16K (R0~R13) / 1K (C0~C9)	16K (A0-A13) / 1K (A0-A9)	Same
Operating Power Supply	VDD1/2/Q = 1.8v/1.2v/1.2v	VDD1/2/Q = 1.8v/1.2v/1.2v	Same
Operating Temperature	-40°C~85°C (Industrial Grade)	-40°C~105°C (Automotive Grade)	Micron better
Clock Frequency	400 MHz	400 MHz	Same
Data Rate (Mb/s/pin)	800 Mbps	800 Mbps	Same
RL / WL	6/3	6/3	Same
tRCD / tRP (ns)	18	18	Same
I/O Capacitance	CIO : 5pF Max	CIO : 2.5pF Max	Comparable
Pin to Pin Compatible	Dual Die, Single CS#, Single CKE, Dual ZQ(0,1) pins	Single Die, Single CS#, Single CKE and Single ZQ(0) pin	Customer to review
AC/DC Characteristics	Same	Same	Meet JEDEC
IDD Specification (VDD1 / VDD2 / VDDQ)			
I _{DD0} (mA)	30/130/12	15/70/6	Micron better
I _{DD2P/S} (mA)	1/1/0.04	0.6/0.8/0.05	Comparable
I _{DD2N} (mA)	2/66/12	2/30/6	Micron better
I _{DD2NS} (mA)	2/6/12	1.7/27/6	Alliance better
I _{DD3P/S} (mA)	1/4/0.04	1.2/8/0.15	Alliance better
I _{DD3N} (mA)	4/80/12	2.5/30/6	Micron better
I _{DD3NS} (mA)	4/8/8	2/27/6	Alliance better
I _{DD4R} (mA)	8/300/12	3/194/6	Micron better
I _{DD4W} (mA)	8/260/20	10/185/25	Micron better
I _{DD5} (mA)	30/240/12	40/150/6	Micron better
I _{DD5AB/PB} (mA)	4/70/12	5/50/8	Comparable
I _{DD6} (mA)	2/5/0.06	1/3.2/0.05	Comparable
I _{DD8} (mA)	0.02/0.06/0.06	0.025/0.1/0.1	Comparable
Package 134b FBGA	10 x 11.5 x 1.0mm	10 x 11.5 x 0.7mm	Comparable.
Package Material	Pb and Halogen Free	Pb and Halogen Free	Same