

AS4C128M16D3LC-12BCN vs AS4C128M16D3LG-12BCN Comparison

Part Number & result Parameter	AS4C128M16D3LC-12BCN	AS4C128M16D3LG-12BCN	Comparison Result
Product Description	DDR3L SDRAM, Rev.C	DDR3L SDRAM, Rev.G	Same Technology, different Design IPs
Die Process Technology	25nm	25nm	
Capacity	2Gb (128M x 16)	2Gb (128M x 16)	Same
Memory Organization	16Mwords, x16bits, x8 banks	16Mwords, x16bits, x8 banks	Same
Operating Power Supply	$V_{DD} \& V_{DDQ} = 1.35V$ (1.283V to 1.45V)	$V_{DD} \& V_{DDQ} = 1.35V$ (1.283V to 1.45V)	Same
DDR3 Compatibility	Compatible to 1.5±0.075	Compatible to 1.5±0.075	Same
Operating Temperature	Commercial (0°C to 95°C)	Commercial (0°C to 95°C)	Same
Clock Frequency	800MHz	800MHz	Same
Data Rate (MT/s)	1600	1600	Same
CAS Latency	11	11	Same
tRCD & tRP (ns)	13.75	13.75	Same
Average Refresh Period 8192 cycles	7.8us at 0°C ≤ TC ≤ +85°C 3.9us at +85°C ≤ TC ≤ +95°C	7.8us at 0°C ≤ TC ≤ +85°C 3.9us at +85°C ≤ TC ≤ +95°C	Same
I/O Capacitance	Comparable		Same
Pin to Pin Compatible	Pin to Pin Compatible		Same
AC/DC Characteristics	Same	Same	Meet JEDEC
IDD Specification			
IDD Spec conditions	0C to 95C	0C to 95C	Same
I_{DD0} (mA)	70	120	Rev C better
I_{DD1} (mA)	80	145	Rev C better
I_{DD2P0} (mA)	15	16	Rev C better
I_{DD2P1} (mA)	22	50	Rev C better
I_{DD2N} (mA)	35	85	Rev C better
I_{DD2Q} (mA)	35	85	Rev C better
I_{DD3P} (mA)	35	60	Rev C better
I_{DD3N} (mA)	55	95	Rev C better
I_{DD4R} (mA)	155	190	Rev C better
I_{DD4W} (mA)	160	210	Rev C better
I_{DD5B} (mA)	145	180	Rev C better
I_{DD6} (mA)	15	15	Same
I_{DD6ET} (mA)	20	16	Rev G better
I_{DD7} (mA)	240	235	Rev G better
I_{DD8} (mA)	14	18	Rev C better
Package 96b FBGA	(7.5mm x 13mm x 1.0mm) BallArray (mm): 12x 6.4 x 0.8	(7.5mm x 13mm x 1.0mm) Ball Array (mm): 12x 6.4 x 0.8	Same
Package Material	Pb and Halogen Free	Pb and Halogen Free	Same