

ITEM	Partnumber	Production Status	Density	Organization	Tech(nm)	Vdd/Vddq(V)	Speed(Mbps)	Package	Grade	Temperature(C)
LPDDR4	K4F2E3S4HM-MFCJ	Sample	12Gb	x32	20	1.8 / 1.1 / 1.1 V	3733 Mbps	200FBGA	Grade 3	-40~95
	K4F2E3S4HM-MHCJ	Sample	12Gb	x32	20	1.8 / 1.1 / 1.1 V	3733 Mbps	200FBGA	Grade 2	-40~105
	K4F6E3D4HB-MFCJ	Mass Production	16Gb	x32	20	1.8 / 1.1 / 1.1 V	3733 Mbps	200FBGA	Grade 3	-40~95
	K4F6E3D4HB-MHCJ	Mass Production	16Gb	x32	20	1.8 / 1.1 / 1.1 V	3733 Mbps	200FBGA	Grade 2	-40~105
	K4F8E3S4HB-MFCJ	Mass Production	8Gb	x32	20	1.8 / 1.1 / 1.1 V	3733 Mbps	200FBGA	Grade 3	-40~95
	K4F8E3S4HB-MHCJ	Mass Production	8Gb	x32	20	1.8 / 1.1 / 1.1 V	3733 Mbps	200FBGA	Grade 2	-40~105
	K4F4E3S4HF-MFCJ	Sample	4Gb	x32	20	1.8 / 1.1 / 1.1 V	3733 Mbps	200FBGA	Grade 3	-40~95
	K4F4E3S4HF-MHCJ	Sample	4Gb	x32	20	1.8 / 1.1 / 1.1 V	3733 Mbps	200FBGA	Grade 2	-40~105
	K4FHE3D4HM-MFCJ	Sample	24 Gb	x32	20	1.8 / 1.1 / 1.1 V	3733 Mbps	200FBGA	Grade 3	-40~95
	K4FHE3D4HM-MHCJ	sample	24Gb	x32	20	1.8 / 1.1 / 1.1 V	3733 Mbps	200FBGA	Grade 2	-40~105
	K4F4E3S4HF-GFCJ	Mass Production	4Gb	x32	20	1.8 / 1.1 / 1.1 V	3733 Mbps	200FBGA	Grade 3	-40 ~ 95 °C
	K4F4E3S4HF-GHCJ	Mass Production	4Gb	x32	20	1.8 / 1.1 / 1.1 V	3733 Mbps	200FBGA	Grade 2	-40 ~ 105 °C
	K4F4E3S4HF-GUCJ	Mass Production	4Gb	x32	20	1.8 / 1.1 / 1.1 V	3733 Mbps	200FBGA	Grade 1	-40 ~ 125 °C
	K4F8E3S4HD-GFCL	Mass Production	8Gb	x32	18	1.8 / 1.1 / 1.1 V	4266 Mbps	200FBGA	Grade 3	-40 ~ 95 °C
	K4F8E3S4HD-GHCL	Mass Production	8Gb	x32	18	1.8 / 1.1 / 1.1 V	4266 Mbps	200FBGA	Grade 2	-40 ~ 105 °C
	K4F8E3S4HD-GUCL	Mass Production	8Gb	x32	18	1.8 / 1.1 / 1.1 V	4266 Mbps	200FBGA	Grade 1	-40 ~ 125 °C
	K4F2E3S4HA-GFCL	Mass Production	12Gb	x32	18	1.8 / 1.1 / 1.1 V	4266 Mbps	200FBGA	Grade 3	-40 ~ 95 °C
	K4F2E3S4HA-GHCL	Mass Production	12Gb	x32	18	1.8 / 1.1 / 1.1 V	4266 Mbps	200FBGA	Grade 2	-40 ~ 105 °C
	K4F2E3S4HA-GUCL	Mass Production	12Gb	x32	18	1.8 / 1.1 / 1.1 V	4266 Mbps	200FBGA	Grade 1	-40 ~ 125 °C
	K4F6E3S4HM-GFCL	Mass Production	16Gb	x32	18	1.8 / 1.1 / 1.1 V	4266 Mbps	200FBGA	Grade 3	-40 ~ 95 °C
	K4F6E3S4HM-GHCL	Mass Production	16Gb	x32	18	1.8 / 1.1 / 1.1 V	4266 Mbps	200FBGA	Grade 2	-40 ~ 105 °C
	K4F6E3S4HM-GUCL	Mass Production	16Gb	x32	18	1.8 / 1.1 / 1.1 V	4266 Mbps	200FBGA	Grade 1	-40 ~ 125 °C
	K4FHE3D4HA-GFCL	Mass Production	24Gb	x32	18	1.8 / 1.1 / 1.1 V	4266 Mbps	200FBGA	Grade 3	-40 ~ 95 °C
	K4FHE3D4HA-GHCL	Mass Production	24Gb	x32	18	1.8 / 1.1 / 1.1 V	4266 Mbps	200FBGA	Grade 2	-40 ~ 105 °C
	K4FHE3D4HA-GUCL	Mass Production	24Gb	x32	18	1.8 / 1.1 / 1.1 V	4266 Mbps	200FBGA	Grade 1	-40 ~ 125 °C
	K4FBE3D4HM-GFCL	Mass Production	32Gb	x32	18	1.8 / 1.1 / 1.1 V	4266 Mbps	200FBGA	Grade 3	-40 ~ 95 °C
	K4FBE3D4HM-GHCL	Mass Production	32Gb	x32	18	1.8 / 1.1 / 1.1 V	4266 Mbps	200FBGA	Grade 2	-40 ~ 105 °C
	K4FBE3D4HM-GUCL	Mass Production	32Gb	x32	18	1.8 / 1.1 / 1.1 V	4266 Mbps	200FBGA	Grade 1	-40 ~ 125 °C
	K4F2E3S4HA-TFCL	Mass Production	12Gb	x32	18	1.8 / 1.1 / 1.1 V	4266 Mbps	200FBGA	Grade 3	-40 ~ 95 °C
	K4F2E3S4HA-THCL	Mass Production	12Gb	x32	18	1.8 / 1.1 / 1.1 V	4266 Mbps	200FBGA	Grade 2	-40 ~ 105 °C
	K4F2E3S4HA-TUCL	Mass Production	12Gb	x32	18	1.8 / 1.1 / 1.1 V	4266 Mbps	200FBGA	Grade 1	-40 ~ 125 °C
	K4F6E3S4HM-TFCL	Mass Production	16Gb	x32	18	1.8 / 1.1 / 1.1 V	4266 Mbps	200FBGA	Grade 3	-40 ~ 95 °C
	K4F6E3S4HM-THCL	Mass Production	16Gb	x32	18	1.8 / 1.1 / 1.1 V	4266 Mbps	200FBGA	Grade 2	-40 ~ 105 °C
	K4F6E3S4HM-TUCL	Mass Production	16Gb	x32	18	1.8 / 1.1 / 1.1 V	4266 Mbps	200FBGA	Grade 1	-40 ~ 125 °C
	K4FHE3D4HA-TFCL	Mass Production	24Gb	x32	18	1.8 / 1.1 / 1.1 V	4266 Mbps	200FBGA	Grade 3	-40 ~ 95 °C
	K4FHE3D4HA-THCL	Mass Production	24Gb	x32	18	1.8 / 1.1 / 1.1 V	4266 Mbps	200FBGA	Grade 2	-40 ~ 105 °C
	K4FHE3D4HA-TUCL	Mass Production	24Gb	x32	18	1.8 / 1.1 / 1.1 V	4266 Mbps	200FBGA	Grade 1	-40 ~ 125 °C
	K4FBE3D4HM-TFCL	Mass Production	32Gb	x32	18	1.8 / 1.1 / 1.1 V	4266 Mbps	200FBGA	Grade 3	-40 ~ 95 °C
	K4FBE3D4HM-THCL	Mass Production	32Gb	x32	18	1.8 / 1.1 / 1.1 V	4266 Mbps	200FBGA	Grade 2	-40 ~ 105 °C
	K4FBE3D4HM-TUCL	Mass Production	32Gb	x32	18	1.8 / 1.1 / 1.1 V	4266 Mbps	200FBGA	Grade 1	-40 ~ 125 °C
LPDDR4X	K4U2E3S4AA-GFCL	ES	12Gb	x32	18	1.8 / 1.1 / 0.6 V	4266 Mbps	200FBGA	Grade 3	-40 ~ 95 °C
	K4U2E3S4AA-GHCL	ES	12Gb	x32	18	1.8 / 1.1 / 0.6 V	4266 Mbps	200FBGA	Grade 2	-40 ~ 105 °C
	K4U2E3S4AA-GUCL	ES	12Gb	x32	18	1.8 / 1.1 / 0.6 V	4266 Mbps	200FBGA	Grade 1	-40 ~ 125 °C
	K4U6E3S4AM-GFCL	ES	16Gb	x32	18	1.8 / 1.1 / 0.6 V	4266 Mbps	200FBGA	Grade 3	-40 ~ 95 °C
	K4U6E3S4AM-GHCL	ES	16Gb	x32	18	1.8 / 1.1 / 0.6 V	4266 Mbps	200FBGA	Grade 2	-40 ~ 105 °C
	K4U6E3S4AM-GUCL	ES	16Gb	x32	18	1.8 / 1.1 / 0.6 V	4266 Mbps	200FBGA	Grade 1	-40 ~ 125 °C
	K4UHE3D4AA-GFCL	ES	24Gb	x32	18	1.8 / 1.1 / 0.6 V	4266 Mbps	200FBGA	Grade 3	-40 ~ 95 °C
	K4UHE3D4AA-GHCL	ES	24Gb	x32	18	1.8 / 1.1 / 0.6 V	4266 Mbps	200FBGA	Grade 2	-40 ~ 105 °C
	K4UHE3D4AA-GUCL	ES	24Gb	x32	18	1.8 / 1.1 / 0.6 V	4266 Mbps	200FBGA	Grade 1	-40 ~ 125 °C
	K4UBE3D4AM-GFCL	ES	32Gb	x32	18	1.8 / 1.1 / 0.6 V	4266 Mbps	200FBGA	Grade 3	-40 ~ 95 °C
	K4UBE3D4AM-GHCL	ES	32Gb	x32	18	1.8 / 1.1 / 0.6 V	4266 Mbps	200FBGA	Grade 2	-40 ~ 105 °C
	K4UBE3D4AM-GUCL	ES	32Gb	x32	18	1.8 / 1.1 / 0.6 V	4266 Mbps	200FBGA	Grade 1	-40 ~ 125 °C
	K4U8E3S4AD-GFCL	Mass Production	8Gb	x32	18	1.8 / 1.1 / 0.6 V	4266 Mbps	200FBGA	Grade 3	-40 ~ 95 °C
	K4U8E3S4AD-GHCL	Mass Production	8Gb	x32	18	1.8 / 1.1 / 0.6 V	4266 Mbps	200FBGA	Grade 2	-40 ~ 105 °C
	K4U8E3S4AD-GUCL	Mass Production	8Gb	x32	18	1.8 / 1.1 / 0.6 V	4266 Mbps	200FBGA	Grade 1	-40 ~ 125 °C
	K4U2E3S4AA-TFCL	Mass Production	12Gb	x32	18	1.8 / 1.1 / 0.6 V	4266 Mbps	200FBGA	Grade 3	-40 ~ 95 °C
	K4U2E3S4AA-THCL	Mass Production	12Gb	x32	18	1.8 / 1.1 / 0.6 V	4266 Mbps	200FBGA	Grade 2	-40 ~ 105 °C
	K4U2E3S4AA-TUCL	Mass Production	12Gb	x32	18	1.8 / 1.1 / 0.6 V	4266 Mbps	200FBGA	Grade 1	-40 ~ 125 °C
	K4U6E3S4AM-TFCL	Mass Production	16Gb	x32	18	1.8 / 1.1 / 0.6 V	4266 Mbps	200FBGA	Grade 3	-40 ~ 95 °C
	K4U6E3S4AM-THCL	Mass Production	16Gb	x32	18	1.8 / 1.1 / 0.6 V	4266 Mbps	200FBGA	Grade 2	-40 ~ 105 °C
	K4U6E3S4AM-TUCL	Mass Production	16Gb	x32	18	1.8 / 1.1 / 0.6 V	4266 Mbps	200FBGA	Grade 1	-40 ~ 125 °C
	K4UHE3D4AA-TFCL	Mass Production	24Gb	x32	18	1.8 / 1.1 / 0.6 V	4266 Mbps	200FBGA	Grade 3	-40 ~ 95 °C
	K4UHE3D4AA-THCL	Mass Production	24Gb	x32	18	1.8 / 1.1 / 0.6 V	4266 Mbps	200FBGA	Grade 2	-40 ~ 105 °C
	K4UHE3D4AA-TUCL	Mass Production	24Gb	x32	18	1.8 / 1.1 / 0.6 V	4266 Mbps	200FBGA	Grade 1	-40 ~ 125 °C
	K4UBE3D4AM-TFCL	Mass Production	32Gb	x32	18	1.8 / 1.1 / 0.6 V	4266 Mbps	200FBGA	Grade 3	-40 ~ 95 °C
	K4UBE3D4AM-THCL	Mass Production	32Gb	x32	18	1.8 / 1.1 / 0.6 V	4266 Mbps	200FBGA	Grade 2	-40 ~ 105 °C
	K4UBE3D4AM-TUCL	Mass Production	32Gb	x32	18	1.8 / 1.1 / 0.6 V	4266 Mbps	200FBGA	Grade 1	-40 ~ 125 °C
	K4UJE3Q4AA-GFCL	Mass Production	48Gb	x32	18	1.8 / 1.1 / 0.6 V	4266 Mbps	200FBGA	Grade 3	-40 ~ 95 °C
	K4UJE3Q4AA-GHCL	Mass Production	48Gb	x32	18	1.8 / 1.1 / 0.6 V	4266 Mbps	200FBGA	Grade 2	-40 ~ 105 °C
	K4UJE3Q4AA-GUCL	Mass Production	48Gb	x32	18	1.8 / 1.1 / 0.6 V	4266 Mbps	200FBGA	Grade 1	-40 ~ 125 °C
	K4UCE3Q4AM-GFCL	Mass Production	64Gb	x32	18	1.8 / 1.1 / 0.6 V	4266 Mbps	200FBGA	Grade 3	-40 ~ 95 °C
	K4UCE3Q4AM-GHCL	Mass Production	64Gb	x32	18	1.8 / 1.1 / 0.6 V	4266 Mbps	200FBGA	Grade 2	-40 ~ 105 °C
	K4UCE3Q4AM-GUCL	Mass Production	64Gb	x32	18	1.8 / 1.1 / 0.6 V	4266 Mbps	200FBGA	Grade 1	-40 ~ 125 °C
DDR3	K4B1G1646I-BFMA	Mass Production	1Gb	x16	25	Wide voltage (1.35 ~ 1.5)	Max 1866	96FBGA	Grade 3	-40~95
	K4B1G1646I-BHMA	Mass Production	1Gb	x16	25	Wide voltage (1.35 ~ 1.5)	Max 1866	96FBGA	Grade 2	-40~105
	K4B2G1646F-BFMA	Mass Production	2Gb	x16	25	Wide voltage (1.35 ~ 1.5)	Max 1866	96FBGA	Grade 3	-40~95
	K4B2G1646F-BHMA	Mass Production	2Gb	x16	25	Wide voltage (1.35 ~ 1.5)	Max 1866	96FBGA	Grade 2	-40~105
	K4B4G0846R-BFMA	Mass Production	4Gb	x8	25	Wide voltage (1.35 ~ 1.5)	Max 1866	78FBGA	Grade 3	-40~95
	K4B4G0846R-BHMA	Mass Production	4Gb	x8	25	Wide voltage (1.35 ~ 1.5)	Max 1866	78FBGA	Grade 2	-40~105
	K4B4G1646D-BFMA	Mass Production	4Gb	x16	25	Wide voltage (1.35~1.5)	Max 1866	96FBGA	Grade 3	-40~95
	K4B4G1646D-BHMA	Mass Production	4Gb	x16	25	Wide voltage (1.35 ~ 1.5)	Max 1866	96FBGA	Grade 2	-40~105
DDR2	K4T51163QN-BFF8	Under Development	512Mb	x16	35	1.8	Max 1066	84FBGA	Grade 3	-40~95
	K4T51163QN-BHF8	Under Development	512Mb	x16	35	1.8	Max 1066	84FBGA	Grade 2	-40~105
ITEM	Partnumber	Production Status	Density	Package Size		Temperature(°C)	Version	MLC	Grade	Application
	KLM8G1GESD-B03P	Mass Production	8GB	11.5x13x0.8	19	-40°C ~ 85°C	5.0	2bit MLC	Grade 3	Automotive
	KLM8G1GESD-B03Q	Mass Production	8GB	11.5x13x0.8	19	-40°C ~ 105°C	5.0	2bit MLC	Grade 2	Automotive
	KLMAG2GESD-B03P	Mass Production	16GB	11.5x13x0.8	19	-40°C ~ 85°C	5.0	2bit MLC	Grade 3	Automotive
	KLMAG2GESD-B03Q	Mass Production	16GB	11.5x13x0.8	19	-40°C ~ 105°C	5.0	2bit MLC	Grade 2	Automotive
	KLMBG4GESD-B03P	Mass Production	32GB	11.5x13x1.0	19	-40°C ~ 85°C	5.0	2bit MLC	Grade 3	Automotive

EMMC	KLMBG4GESD-B03Q	Mass Production	32GB	11.5x13x1.0	19	-40℃ ~ 105℃	5.0	2bit MLC	Grade 2	Automotive
	KLMCG8GESD-B03P	Mass Production	64GB	11.5x13x1.0	19	-40℃ ~ 85℃	5.0	2bit MLC	Grade 3	Automotive
	KLMCG8GESD-B03Q	Mass Production	64GB	11.5x13x1.0	19	-40℃ ~ 105℃	5.0	2bit MLC	Grade 2	Automotive
	KLM8G1GESD-B04P	Mass Production	8GB	11.5x13x0.8	16	-40℃ ~ 85℃	5.1	2bit MLC	Grade 3	Automotive
	KLM8G1GESD-B04Q	Mass Production	8GB	11.5x13x0.8	16	-40℃ ~ 105℃	5.1	2bit MLC	Grade 2	Automotive
	KLMAG2GESD-B04P	Mass Production	16GB	11.5x13x0.8	16	-40℃ ~ 85℃	5.1	2bit MLC	Grade 3	Automotive
	KLMAG2GESD-B04Q	Mass Production	16GB	11.5x13x0.8	16	-40℃ ~ 105℃	5.1	2bit MLC	Grade 2	Automotive
	KLMBG4GESD-B04P	Mass Production	32GB	11.5x13x1.0	16	-40℃ ~ 85℃	5.1	2bit MLC	Grade 3	Automotive
	KLMBG4GESD-B04Q	Mass Production	32GB	11.5x13x1.0	16	-40℃ ~ 105℃	5.1	2bit MLC	Grade 2	Automotive
	KLMCG8GESD-B04P	Mass Production	64GB	11.5x13x1.0	16	-40℃ ~ 85℃	5.1	2bit MLC	Grade 3	Automotive
	KLMCG8GESD-B04Q	Mass Production	64GB	11.5x13x1.0	16	-40℃ ~ 105℃	5.1	2bit MLC	Grade 2	Automotive
	KLM8G1GEUF-B04P	Mass Production	8GB	11.5x13x0.8	14	-40℃ ~ 85℃	5.1	2bit MLC	Grade 3	Automotive
	KLM8G1GEUF-B04Q	Mass Production	8GB	11.5x13x0.8	14	-40℃ ~ 105℃	5.1	2bit MLC	Grade 2	Automotive
	KLMAG2GEUF-B04P	Mass Production	16GB	11.5x13x0.8	14	-40℃ ~ 85℃	5.1	2bit MLC	Grade 3	Automotive
	KLMAG2GEUF-B04Q	Mass Production	16GB	11.5x13x0.8	14	-40℃ ~ 105℃	5.1	2bit MLC	Grade 2	Automotive
	KLMBG4GEUF-B04P	Mass Production	32GB	11.5x13x1.0	14	-40℃ ~ 85℃	5.1	2bit MLC	Grade 3	Automotive
KLMBG4GEUF-B04Q	Mass Production	32GB	11.5x13x1.0	14	-40℃ ~ 105℃	5.1	2bit MLC	Grade 2	Automotive	
KLMCG4JEUD-B04P	Mass Production	64GB	11.5x13x1.0	14	-40℃ ~ 85℃	5.1	2bit MLC	Grade 3	Automotive	
KLMCG4JEUD-B04Q	Mass Production	64GB	11.5x13x1.0	14	-40℃ ~ 105℃	5.1	2bit MLC	Grade 2	Automotive	
KLMDG8JEUD-B04P	Mass Production	128GB	11.5x13x1.2	14	-40℃ ~ 85℃	5.1	2bit MLC	Grade 3	Automotive	
KLMDG8JEUD-B04Q	Mass Production	128GB	11.5x13x1.2	14	-40℃ ~ 105℃	5.1	2bit MLC	Grade 2	Automotive	
ITEM	Partnumber	Production Status	Density	Package Size		Temperature(℃)	Version	MLC	Grade	Application
UFS	KLUBG4J1ZD-B0CP	Sample	32 GB	11.5x13x1.2	14	-40~85℃	2.1	G3 2Lane	Grade 3	Automotive
	KLUBG4J1ZD-B0CQ	Sample	32 GB	11.5x13x1.2	14	-40~105℃	2.1	G3 2Lane	Grade 2	Automotive
	KLUCG4J1ZD-B0CP	Sample	64 GB	11.5x13x1.2	14	-40~85℃	2.1	G3 2Lane	Grade 3	Automotive
	KLUCG4J1ZD-B0CQ	Sample	64 GB	11.5x13x1.2	14	-40~105℃	2.1	G3 2Lane	Grade 2	Automotive
	KLUDG8J1ZD-B0CP	Sample	128 GB	11.5x13x1.2	14	-40~85℃	2.1	G3 2Lane	Grade 3	Automotive
	KLUDG8J1ZD-B0CQ	Sample	128 GB	11.5x13x1.2	14	-40~105℃	2.1	G3 2Lane	Grade 2	Automotive
	KLUEGAJ1ZD-B0CP	Sample	256 GB	11.5x13x1.65	14	-40~85℃	2.1	G3 2Lane	Grade 3	Automotive
	KLUEGAJ1ZD-B0CQ	Sample	256 GB	11.5x13x1.65	14	-40~105℃	2.1	G3 2Lane	Grade 2	Automotive
	KLUBG4J1ZD-C0CP	Sample	32 GB	11.5x13x1.2	14	-40~85℃	2.1	G3 2Lane	Grade 3	Automotive
	KLUBG4J1ZD-C0CQ	Sample	32 GB	11.5x13x1.2	14	-40~105℃	2.1	G3 2Lane	Grade 2	Automotive
	KLUCG4J1ZD-C0CP	Sample	64 GB	11.5x13x1.2	14	-40~85℃	2.1	G3 2Lane	Grade 3	Automotive
	KLUCG4J1ZD-C0CQ	Sample	64 GB	11.5x13x1.2	14	-40~105℃	2.1	G3 2Lane	Grade 2	Automotive
	KLUDG8J1ZD-C0CP	Sample	128 GB	11.5x13x1.2	14	-40~85℃	2.1	G3 2Lane	Grade 3	Automotive
	KLUDG8J1ZD-C0CQ	Sample	128 GB	11.5x13x1.2	14	-40~105℃	2.1	G3 2Lane	Grade 2	Automotive
	KLUEGAJ1ZD-C0CP	Sample	256 GB	11.5x13x1.65	14	-40~85℃	2.1	G3 2Lane	Grade 3	Automotive
	KLUEGAJ1ZD-C0CQ	Sample	256 GB	11.5x13x1.65	14	-40~105℃	2.1	G3 2Lane	Grade 2	Automotive