[Product Generation Change]

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RENESAS TECHNICAL UPDATE

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Product Category	SRAM		Document No.	TN-M62-A134A/E	Rev.	1.00
Title	Notice about the generation change of 1Mbit LP SRAM (5V ver.) series		Information Category	Product Generation Change		
Applicable Product	1Mbit Low Power SRAM (5V ver.) ; M5M51008D series	Lot No. All shipped lots after '10/10	Reference Document	Nothing		

Please be informed that we, Renesas will be proceeding with the product generation change of 1Mbit LP SRAM 5V version from "M5M51008D series" to "R1LP0108E series". This generation change is scheduled as follows.

"R1LP0108E series" is upper compatible to "M5M51008D series", from the electrical characteristics specifications and package dimension. So your acceptance of paper qualification and your kind understanding are greatly appreciated.

<Generation Change>

This generation change is to shrink die with 0.15um technology, in order to improve the production efficiency.

All packages' outline is completely same.

We make a use of Renesas original technology with adoption of memory cell with TFT load and capacitor structure for this part. By adopting the original technology, we could offer an excellent high reliability against Soft error and latch-up phenomenon.

<Objective parts>

1Mb (x8) 5V, SOP : from M5M51008DFP series to R1LP0108ESP series

1Mb (x8) 5V, TSOP(normal bend) : from M5M51008DVP series to R1LP0108ESF series

1Mb (x8) 5V, TSOP(reverse bend) : from M5M51008DRV series to R1LP0108ESR series

1Mb (x8) 5V, sTSOP : from M5M51008DKV series to R1LP0108ESA series

<Document and Sample availability>

Data sheet : already available(preliminary) Sep., 2010(fixed version)

ES sample : Jul., 2010

CS sample : Sep., 2010

Reliability report : Sep., 2010

<Launch date of this "generation change">

We will be starting to ship out new generation parts accordingly from Oct. in 2010. There is a possibility to ship out both current parts series (M5M51008D) and new parts series (R1LV0108E) in parallel, because of our inventory of current parts series.

<replaced part name list on this generation change>

1) replaced part name on this generation change

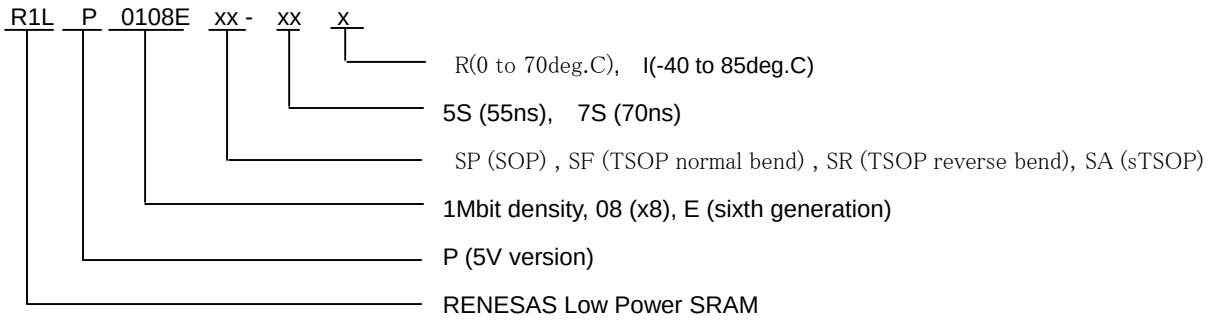
Package	Current part name	Replaced part name
SOP	M5M51008DFP-55H	R1LP0108ESP-5SR
	M5M51008DFP-70H	R1LP0108ESP-7SR
	M5M51008DFP-55HI	R1LP0108ESP-5SI
	M5M51008DFP-70HI	R1LP0108ESP-7SI

Package	Current part name	Replaced part name
TSOP (normal bend)	M5M51008DVP-55H	R1LP0108ESF-5SR
	M5M51008DVP-70H	R1LP0108ESF-7SR
	M5M51008DVP-55HI	R1LP0108ESF-5SI
	M5M51008DVP-70HI	R1LP0108ESF-7SI

Package	Current part name	Replaced part name
TSOP (reverse bend)	M5M51008DRV-55H	R1LP0108ESR-5SR
	M5M51008DRV-70H	R1LP0108ESR-7SR
	M5M51008DRV-55HI	R1LP0108ESR-5SI
	M5M51008DRV-70HI	R1LP0108ESR-7SI

Package	Current part name	Replaced part name
sTSOP	M5M51008DKV-55H	R1LP0108ESA-5SR
	M5M51008DKV-70H	R1LP0108ESA-7SR
	M5M51008DKV-55HI	R1LP0108ESA-5SI
	M5M51008DKV-70HI	R1LP0108ESA-7SI

2) Explanation about part name



Basically each correspondence follows above the list, however we'd like to ask you all to check data sheet of new part and to confirm whether all characteristics satisfy you or not.

<Comparison table between current parts series and new parts series>

Circuit	M5M51008D series	R1LP0108E series
Memory cell structure	TFT load	TFT load capacitor cell
Peripheral circuit	CMOS	CMOS

Process	M5M51008D series	R1LP0108E series
Wafer process layer	3poly, 2metal	8poly, 2metal, 1tungsten
Design rule	0.25um	0.15um
Gate oxide thickness	Memory cell : 7nm peripheral circuit : 12nm	Memory cell : 6.5nm peripheral circuit : 12nm
Gate oxide material	SiO2	SiO2
Passivation thickness	0.75um	0.75um
Passivation material	p-SiN	p-SiN

Assembly	M5M51008D series	R1LP0108E series
Resin material	Epoxy Resin	Epoxy Resin
Frame material	Fe-Ni 42 alloy	Fe-Ni 42 alloy
Lead frame plating	Sn/Cu	Sn/Cu
Inner wire material	Au	Au
Die bond material	Resin	Resin

Sincerely yours.