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Product/Process Change Notice

(Initial and date all changes/No pencil or whiteout/Cross out all errors.)

PCN # : 110607-154

Part # : FM28V020

Date Issued: 6/07/11

Date Effective: 6/07/11

Means of Distinguishing Change :

- ☐ Product Mark
☐ Date Code
☐ Other

All parts and all date codes.

Purpose of Change:

- ☐ Design
☐ Process
☐ Assembly
☐ Test
☐ Manufacturing
☒ Data Sheet
☐ Product Mark
☐ Other

Recent evaluation has shown the part to be sensitive to output loading and I/O undershoot/overshoot near the specified limits. This condition is more pronounced at high V_{DD} levels, fast cycle times, and at low temperatures (near -40C).

Although problems have not been observed at the data sheet conditions, we consider the margin to be insufficient. The data sheet is therefore being changed (see page 2 for spec comparison) until such time as the design can be improved. The PCB Layout Recommendations (see datasheet pg. 6) are effective in mitigating any potential problems.

Quality Assurance Summary:

Part numbers affected:

FM28V020-G
FM28V020-GTR

Contact: pcnadmin@ramtron.com

AC Timing Parameters ($T_A = -40^\circ\text{C}$ to $+85^\circ\text{C}$, $C_L = 30\text{ pF}$, $V_{DD} = 2.0\text{V}$ to 3.6V unless otherwise specified)

		Previous Spec (Data sheet Rev 2.0 and prior)		New Spec (Data sheet Rev 2.1)			
Symbol	Parameter	Min	Max	Min	Max	Units	Notes

READ CYCLE PARAMETERS

t_{RC}	Read Cycle Time	90	-	140	-	ns	
t_{CE}	Chip Enable Access Time	-	60	-	70	ns	
t_{AA}	Address Access Time	-	90	-	140	ns	
t_{AAP}	Page Mode Address Access Time	-	30	-	60	ns	
t_{CA}	Chip Enable Active Time	60	-	70	-	ns	
t_{PC}	Precharge Time	30	-	70	-	ns	
t_{AH}	Address Hold Time (/CE-controlled)	60	-	70	-	ns	

WRITE CYCLE PARAMETERS

t_{WC}	Write Cycle Time	90	-	140	-	ns	
t_{CA}	Chip Enable Active Time	60	-	70	-	ns	
t_{CW}	Chip Enable to Write Enable High	60	-	70	-	ns	
t_{PC}	Precharge Time	30	-	70	-	ns	
t_{AH}	Address Hold Time (/CE-controlled)	60	-	70	-	ns	
t_{AWH}	A(14:3) Change to Write Enable High	90	-	140	-	ns	