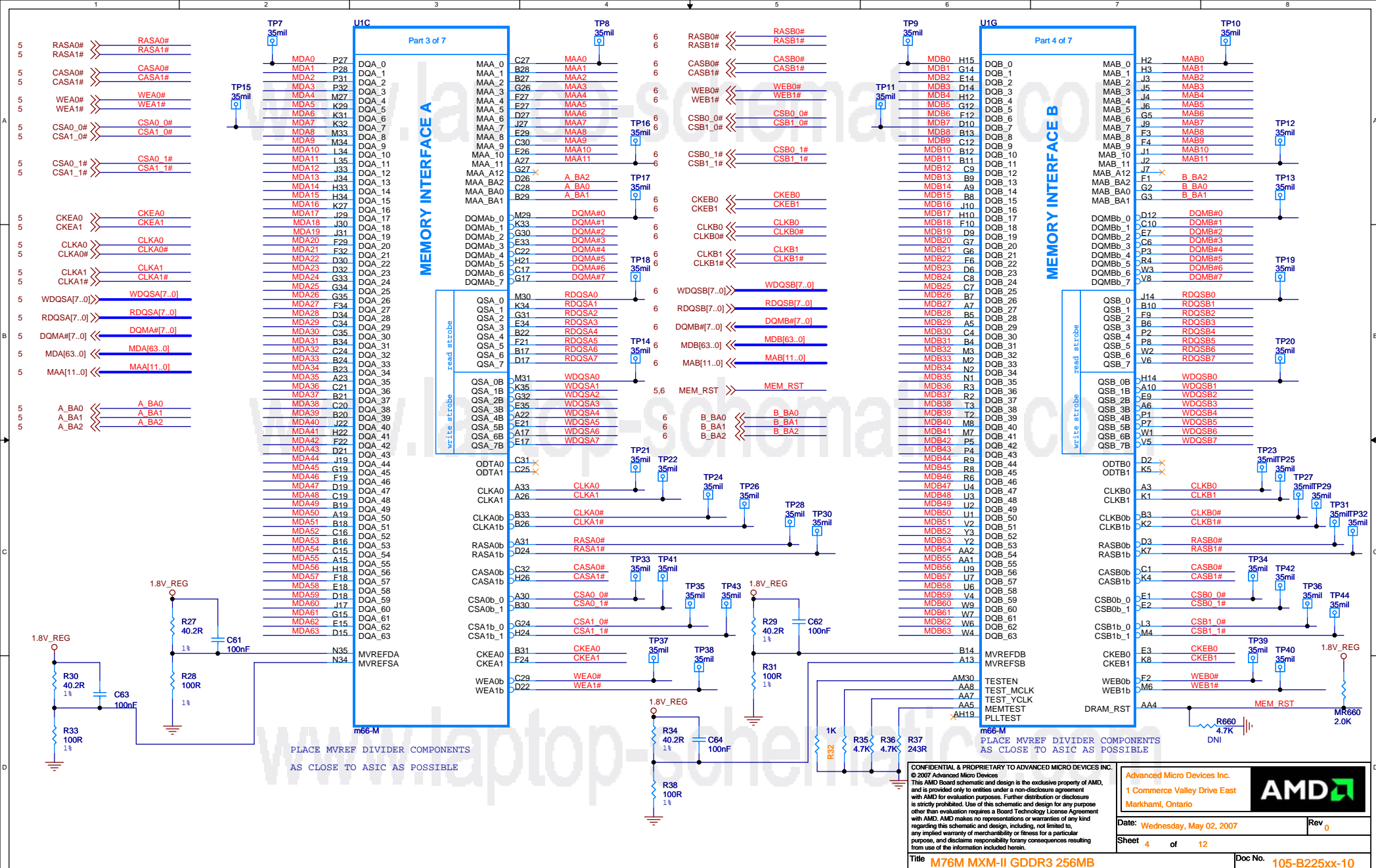
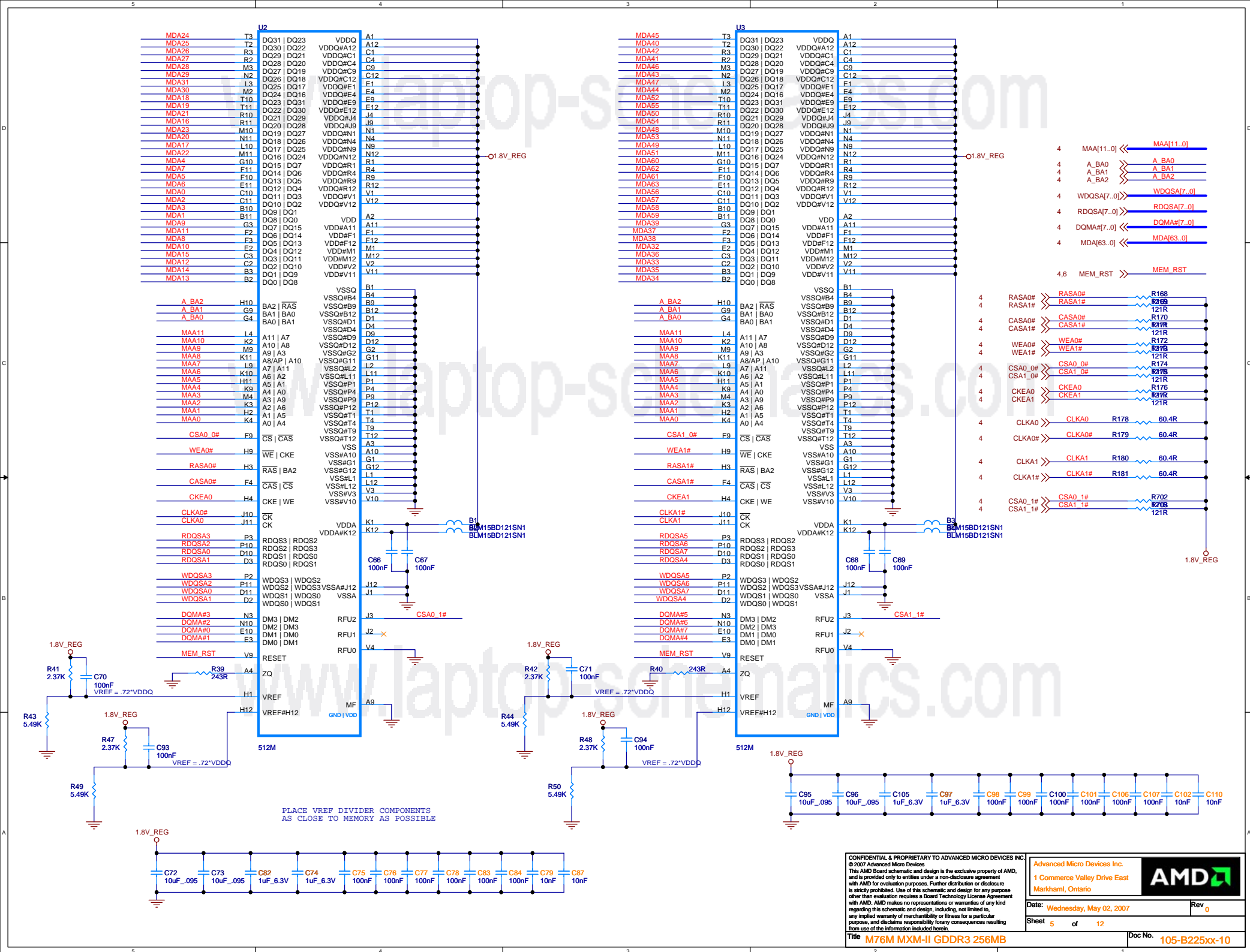
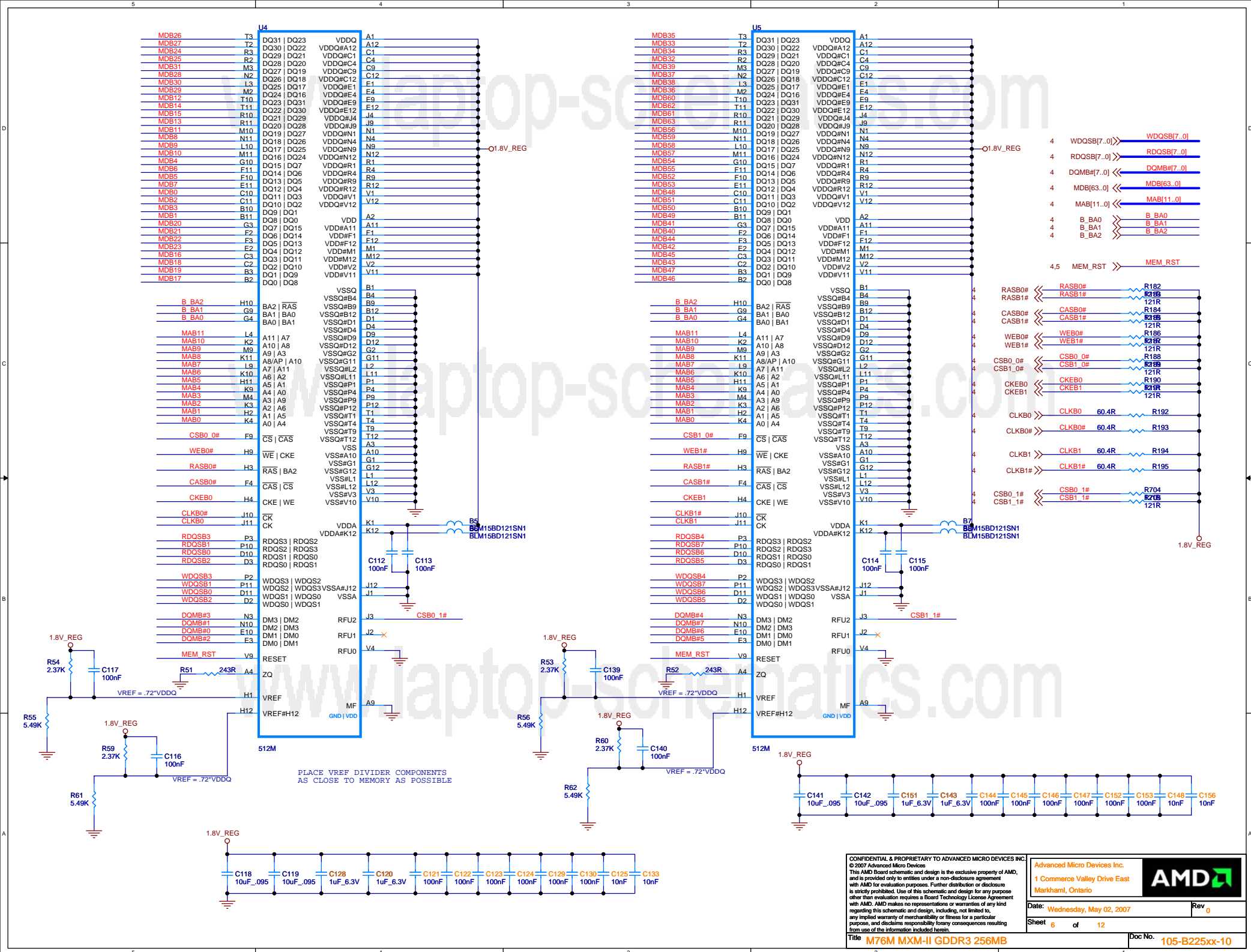
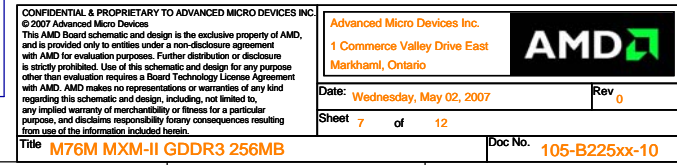


Part 6 of 7		
P33	PCIE_VSS_1	L33
P34	PCIE_VSS_2	P6
P35	PCIE_VSS_3	M0
R27	PCIE_VSS_4	M26
R28	PCIE_VSS_5	VSS_69
R29	PCIE_VSS_6	VSS_70
R32	PCIE_VSS_7	M32
R33	PCIE_VSS_8	N14
U20	PCIE_VSS_9	VSS_72
U32	PCIE_VSS_10	N19
V29	PCIE_VSS_11	N22
U32	PCIE_VSS_12	N33
T33	PCIE_VSS_13	R5
V34	PCIE_VSS_14	VSS_77
V35	PCIE_VSS_15	P13
W29	PCIE_VSS_16	P15
W32	PCIE_VSS_17	VSS_80
W33	PCIE_VSS_18	P21
AA29	PCIE_VSS_19	VSS_83
AA32	PCIE_VSS_20	P26
AB29	PCIE_VSS_21	VSS_84
AB32	PCIE_VSS_22	P29
AB33	PCIE_VSS_23	VSS_85
AB34	PCIE_VSS_24	P30
AC33	PCIE_VSS_25	VSS_87
AD29	PCIE_VSS_26	U5
AD32	PCIE_VSS_27	VSS_88
AF29	PCIE_VSS_28	R10
AF32	PCIE_VSS_29	R14
AF33	PCIE_VSS_30	VSS_92
AD33	PCIE_VSS_31	R17
AF34	PCIE_VSS_32	R19
AF35	PCIE_VSS_33	R22
AG27	PCIE_VSS_34	VSS_95
AG29	PCIE_VSS_35	VSS_96
AG32	PCIE_VSS_36	VSS_97
AG33	PCIE_VSS_37	U10
AI29	PCIE_VSS_38	VSS_98
AI32	PCIE_VSS_39	U18
AI33	PCIE_VSS_40	VSS_100
AL34	PCIE_VSS_41	U21
AL35	PCIE_VSS_42	VSS_102
AK32	PCIE_VSS_43	VSS_103
A2	VSS_1	VSS_104
A4	VSS_2	VSS_105
A3	VSS_3	VSS_106
C3	VSS_4	VSS_107
C5	VSS_5	VSS_108
C18	VSS_6	VSS_109
A21	VSS_7	VSS_110
C23	VSS_8	VSS_111
C11	VSS_9	VSS_112
C14	VSS_10	VSS_113
A18	VSS_11	VSS_114
C26	VSS_12	VSS_115
C33	VSS_13	VSS_116
C35	VSS_14	VSS_117
C36	VSS_15	VSS_118
R7	VSS_16	VSS_119
G10	VSS_17	VSS_120
F15	VSS_18	VSS_121
H17	VSS_19	VSS_122
G21	VSS_20	VSS_123
D20	VSS_21	VSS_124
A29	VSS_22	VSS_125
G1	VSS_23	VSS_126
F14	VSS_24	VSS_127
J15	VSS_25	VSS_128
F19	VSS_26	VSS_129
E22	VSS_27	VSS_130
E24	VSS_28	VSS_131
G7	VSS_29	VSS_132
G9	VSS_30	VSS_133
F26	VSS_31	VSS_134
D33	VSS_32	VSS_135
G29	VSS_33	VSS_136
M5	VSS_34	VSS_137
G4	VSS_35	VSS_138
E10	VSS_36	VSS_139
E12	VSS_37	VSS_140
G18	VSS_38	VSS_141
G22	VSS_39	VSS_142
F30	VSS_40	VSS_143
J35	VSS_41	VSS_144
H19	VSS_42	VSS_145
J21	VSS_43	VSS_146
J24	VSS_44	VSS_147
K30	VSS_45	VSS_148
J32	VSS_46	VSS_149
K6	VSS_47	VSS_150
K9	VSS_48	VSS_151
K14	VSS_49	VSS_152
K15	VSS_50	VSS_153
K17	VSS_51	VSS_154
K18	VSS_52	VSS_155
K19	VSS_53	VSS_156
K21	VSS_54	VSS_157
K22	VSS_55	VSS_158
M28	VSS_56	VSS_159
K3	VSS_57	VSS_160
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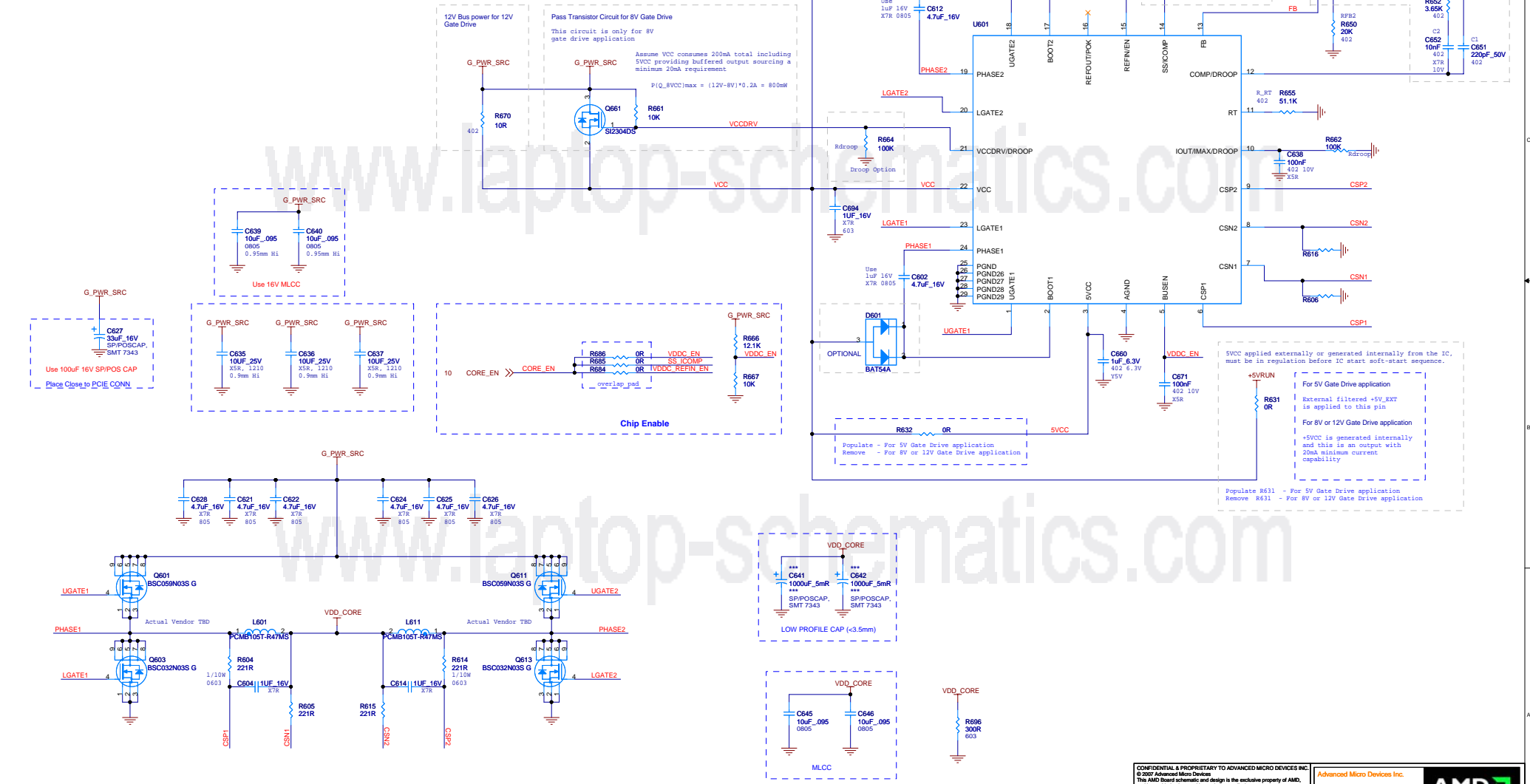






Information on Compatible Controller Parts				
	PMN IC #1	PMN IC #2	PMN IC #3	PMN IC #4
Gate drive voltage	5V, 6V, 12V	5V, 6V, 12V	5V only	12V only
Vref	0.6V	0.6V	0.6V	0.6V
Bootstrap diodes	Internal (DNP D601, D611)	Internal (DNP D601, D611)	External (Populate D601, D611)	Internal (DNP D601, D611)
Phase current adjustable (unbalanced between phases)	Yes	Yes	Yes	TBD
Option Pin Selection				
Pin 10 (IOUT/IMAX/DROOP)	IOUT/DROOP (R662)	IOUT/IMAX	IOUT	IOUT/IMAX
Pin 11 (RT)	R_RT ~ 10,000,000/Pw	TBD	R_RT ~ 18,600,000/Pw	TBD
Pin 12 (COMP/DROOP)	COMP	DROOP (R663)	COMP	COMP
Pin 14 (SS/ICOMP)	SS/EN	GND (SS fixed internally)	ICOMP (SS dependent on Pw)	SS
Pin 16 (REFOUT/POK)	POK (Open drain)	IREFOUT/POK POK voltage = 1.2V	IMREFOUT/POK POK voltage = 1.25V	IMREFOUT/POK Vrefout = 0.6V
Pin 21 (VCCDRV/DROOP)	VCCDRV	VCCDRV	DROOP (R664)	DROOP (R664)

Choosing Different Gate Drive		
Gate Drive	Populate	Do Not Populate
5V Gate Drive	R631, R632	R630, R670, C660, R661, Q661
8V Gate Drive	R630, C660, R661, Q661	R631, R632, R670
12V Gate Drive	R630, C660, R670	R631, R632, R661, Q661



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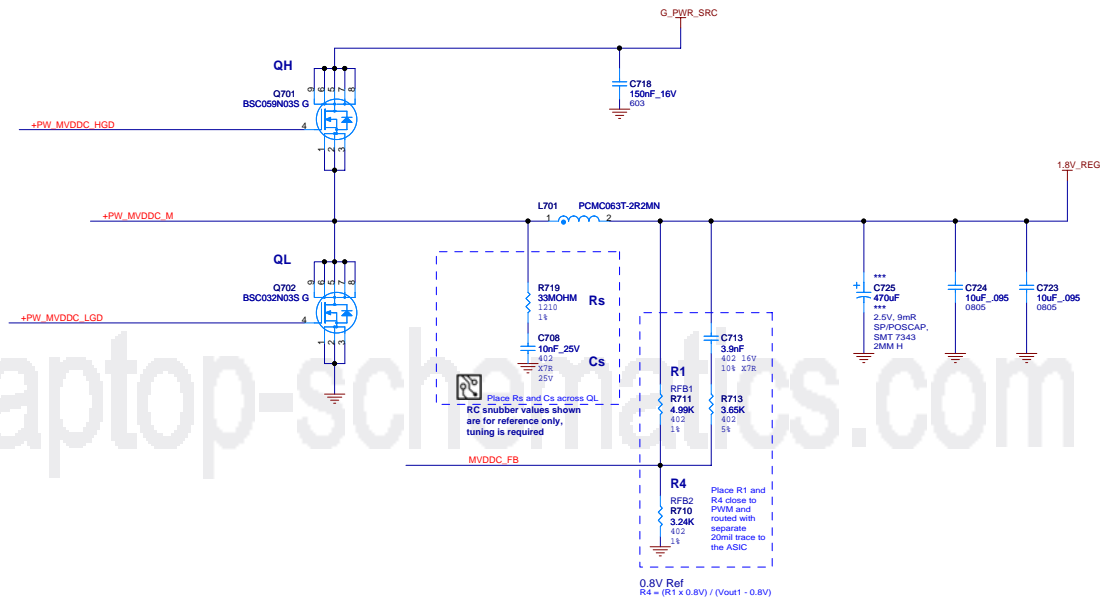
Doc No. 105-B225xx-10

Rev 0

Date: Wednesday, May 02, 2007

Sheet 8 of 12

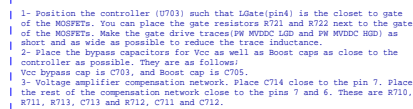
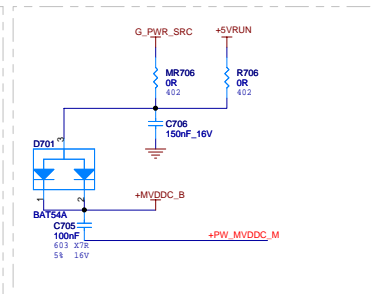
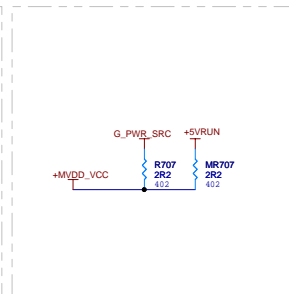
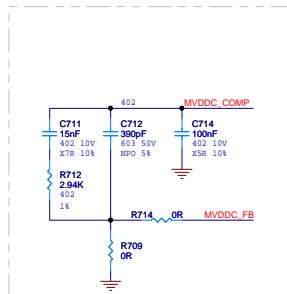
Title: M76M MXM-II GDDR3 256MB



ANPEC APW7120/APW7065 (12V)
CAT CAT7583 (12V)
INTERSIL ISL6545
NEXSEM NX2114/2307
RICHTEK RT9214/RT8101
OnSemi ON1582
uPI UP6101 (No Ext_Vref in)
uPI UP6103 (with Ext_Vref in, can use voltage console UP6261 to change Vout)

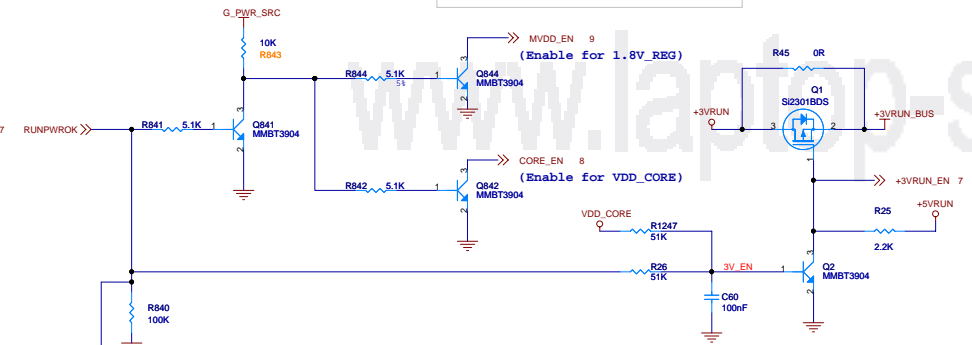
Part	Vout	RFB1	RFB2
0.8V Ref	2.03V (1.98V~2.08V)	4.99K p/n 3160499100G	3.24K p/n 3160324100G

	Nominal Value	Tolerance	Adjustable range / Notes
Vin (power stage)	12V	± +/-8% PCIe	ATX12V ver. 2.2 +/-5%
Vout	2V	± +/-2%/-2%	1.8V - 2.85V
Vout ripple (DC)	50mVpp		
	6Aavg, S8dc_max		
Step load	3mAax		
Vout ripple (AC)	+/-10% or 200mVpp	± 3A step load	
Switching Freq.	~300kHz		TBD
Protections			

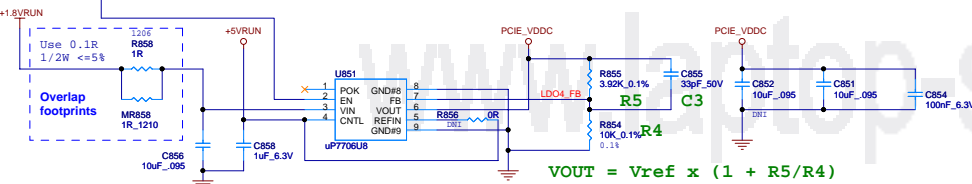


Title		Doc No.	
M76M MXM-II GDDR3 256MB		105-B225xx-10	

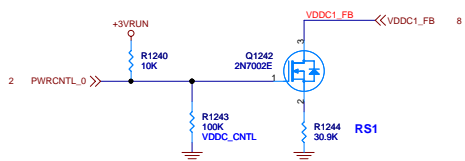
Power Up Sequencing



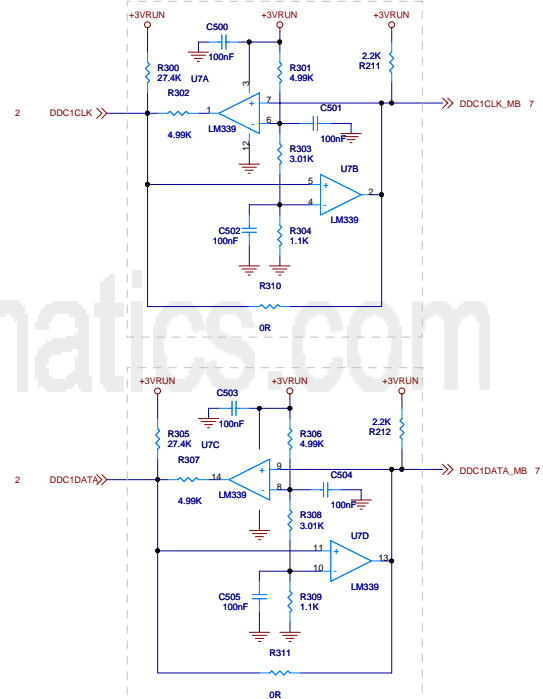
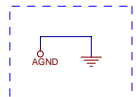
LDO #4: Vin = +1.8V +/-5% Vout = +1.1V +/- 3% Iout = 2A (TBV) RMS MAX
PCB: 50 to 70mm sq. copper area for cooling



VDDC Voltage Control



0.6V Ref	VDDC	RS1	PWRCNTL_0
	.9V	N/A	LOW
	1.0V	59.0K 1% ATI # 3160590200G	HIGH
	1.1V	30.9K 1% ATI # 3160309200G	HIGH
	1.2V	20.0K 1% ATI # 3160200200G	HIGH



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Title M76M MXM-II GDDR3 256MB

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Date: Wednesday, May 02, 2007

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Rev

Title M76M MXM-II GDDR3 256MB

Doc No. 105-B225xx-10



Title

M76M MXM-II GDDR3 256MB

Schematic No.

105-B225xx-10

Date:

Wednesday, May 02, 2007

REVISION HISTORY

NOTE:

This schematic represents the PCB, it does not represent any specific SKU.

For Stuffing options (component values, DNI's, ...) please consult the product specific BOM.

Please contact AMD representative to obtain latest BOM closest to the application desired.

Rev

0

Sch
RevPCB
Rev

Date

REVISION DESCRIPTION

0

00A

27/12/06

Initial Design Based on B131

1

00B

27/03/07

Q2 REPLACE TO 2021390400G
R1245 ADD 3150000000 (option to connect AC/BAT# to GPIO14)
R1246 ADD 3150000000 (option to connect AC/BAT# to GPIO17)
R709 ADD 3150000000G (MVDD TO SUPPORT NEW PART)
R714 ADD 3150000000G (MVDD TO SUPPORT NEW PART)
R715 ADD 3160422200G (MVDD TO SUPPORT NEW PART)
R1247 ADD 3150051300G (OPTION TO USE VDD_CORE TO SWITCH +3.3RUN)

2

00

24/04/07

Q15 REPLACE TO 2021390400G (now NPN for +3VRUN_EN inverter)
U6 ADD 2430003000G (DUAL SPST)
R202 REPLACE TO 3150010400G (now 100K pull up)
C859 ADD 4214010600G (10uF on TPVDD)
C860 ADD 4214010600G (10uF on DPLL_PVDD)
R201 REMOVED
R229 ADD 3150000000G (Option to Bypass U6)
R230 ADD 3150000000G (Option to Bypass U6)
R228 ADD 3150010300G (Pull down on BL_BRIGHT_MB)
R227 ADD 3150010400G (Q15 base resistor)
R25 REPLACE TO 3150022200G (change to 2.2K so Q15 base load doesn't cause too much voltage drop)
C861 ADD 4170010400G (U6 Decoupling cap)

3

10

01/05/07

U7 ADD 2480001900G (Active level shifter for DDC1)
R304 ADD 3160110100G (Active level shifter for DDC1)
R309 ADD 3160110100G (Active level shifter for DDC1)
R300 ADD 3160274200G (Active level shifter for DDC1)
R305 ADD 3160274200G (Active level shifter for DDC1)
R303 ADD 3160301100G (Active level shifter for DDC1)
R308 ADD 3160301100G (Active level shifter for DDC1)
R301 ADD 3160499100G (Active level shifter for DDC1)
R302 ADD 3160499100G (Active level shifter for DDC1)
R306 ADD 3160499100G (Active level shifter for DDC1)
R307 ADD 3160499100G (Active level shifter for DDC1)
C500 ADD 4170010400G (Active level shifter for DDC1)
C501 ADD 4170010400G (Active level shifter for DDC1)
C502 ADD 4170010400G (Active level shifter for DDC1)
C503 ADD 4170010400G (Active level shifter for DDC1)
C504 ADD 4170010400G (Active level shifter for DDC1)
C505 ADD 4170010400G (Active level shifter for DDC1)
R310 ADD 3150000000G (Bypass Active level shifter for DDC1)
R311 ADD 3150000000G (Bypass Active level shifter for DDC1)
R312 ADD 3150000000G (Crystal only option)
R313 ADD 3150000000G (Crystal only option)
R314 ADD 3160100400G (Crystal only option)