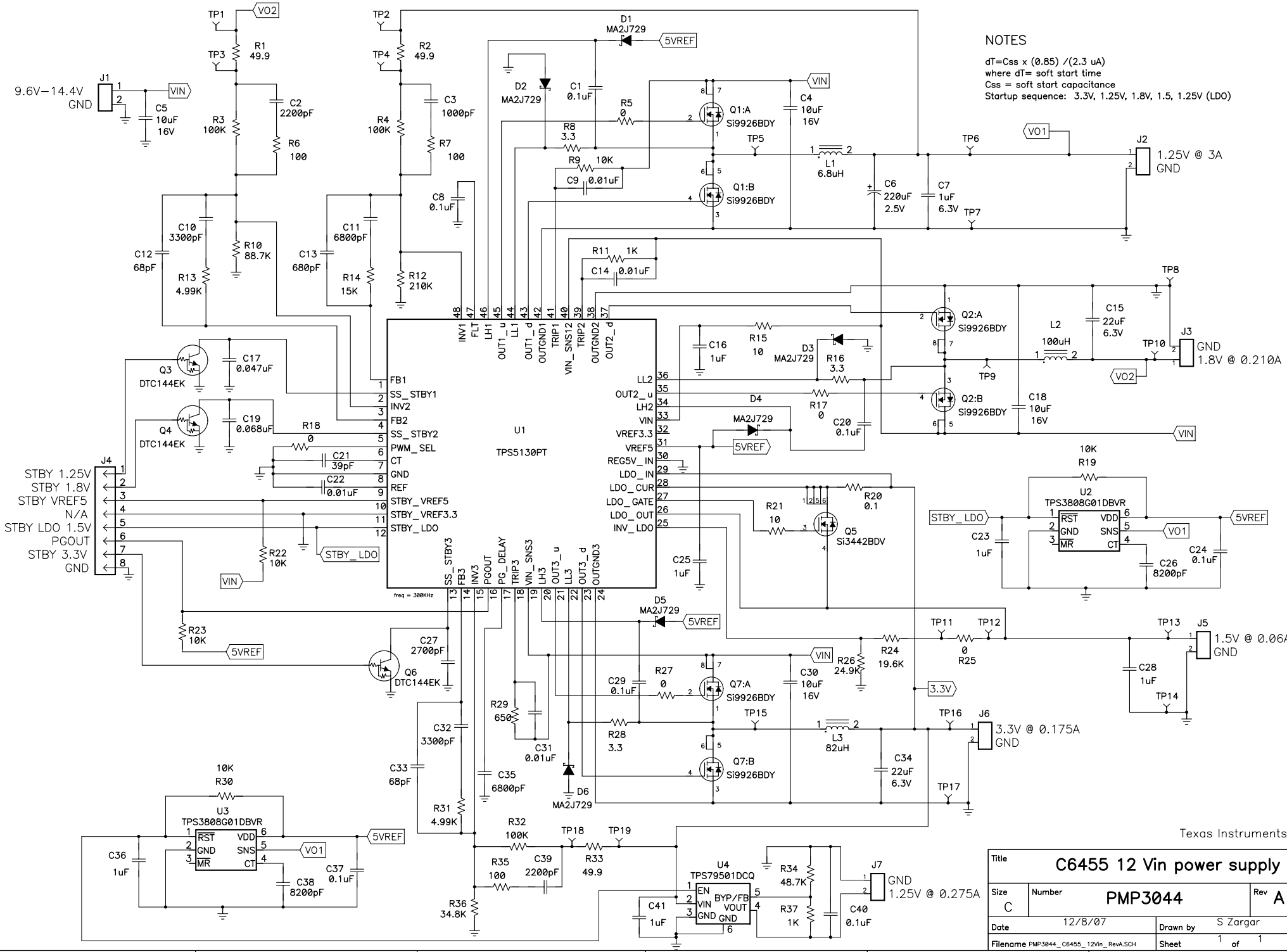

NOTES
dT=Css x (0.85) /(2.3 uA)
where dT= soft start time
Css = soft start capacitance
Startup sequence: 3.3V, 1.25V, 1.8V, 1.5, 1.25V (LDO)
U1
TPS5130PT
freq = 300KHz
U2
TPS3808G01DBVR
U3
TPS3808G01DBVR
U4
TPS79501DCQ
Q1:A Si9926BDY
Q1:B Si9926BDY
Q2:A Si9926BDY
Q2:B Si9926BDY
Q3 DTC144EK
Q4 DTC144EK
Q5 Si3442BDV
Q6 DTC144EK
Q7:A Si9926BDY
Q7:B Si9926BDY
D1 MA2J729
D2 MA2J729
D3 MA2J729
D4 MA2J729
D5 MA2J729
D6 MA2J729
9.6V–14.4V
GND
1.25V @ 3A
GND
1.8V @ 0.210A
1.5V @ 0.06A
GND
3.3V @ 0.175A
GND
1.25V @ 0.275A
GND
STBY 1.25V
STBY 1.8V
STBY VREF5
N/A
STBY LDO 1.5V
PGOUT
STBY 3.3V
GND
Texas Instruments
Title C6455 12 Vin power supply
Size C
Number PMP3044
Rev A
Date 12/8/07
Drawn by S Zargar
Filename PMP3044_C6455_12Vin_RevA.SCH
Sheet 1 of 1

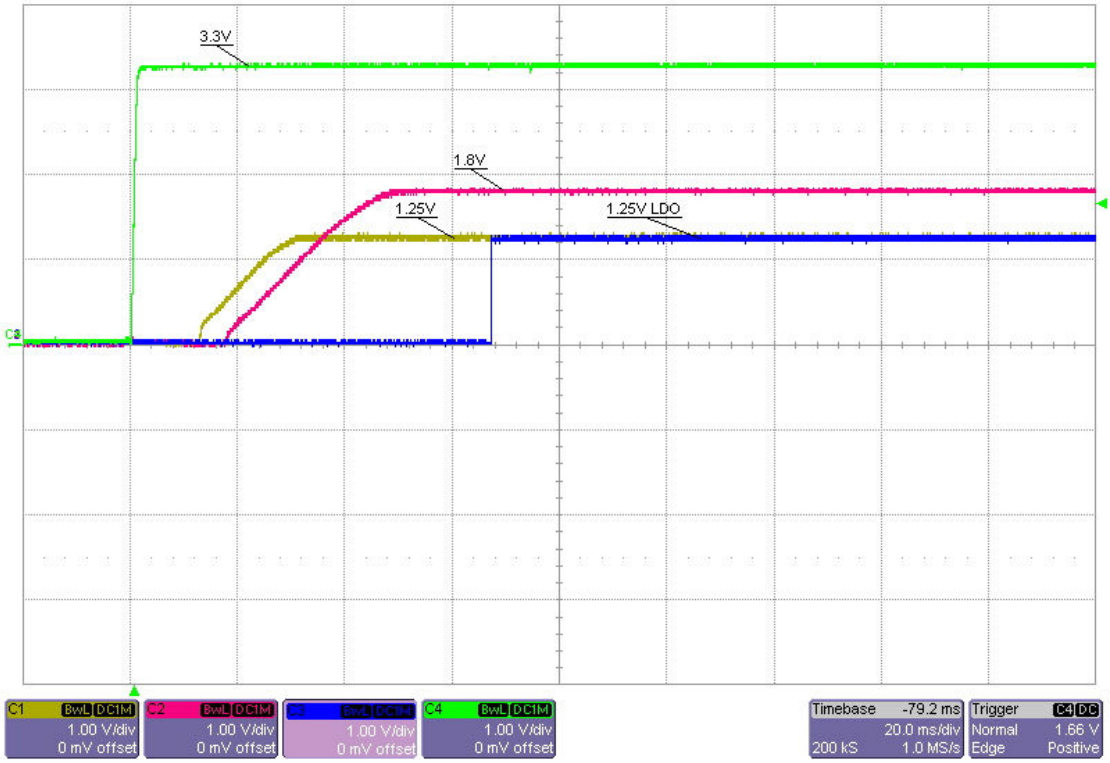
Filename: PMP3044_C6455_12VIN_REVA_FINAL_bom.xls
Date: 12/04/2007

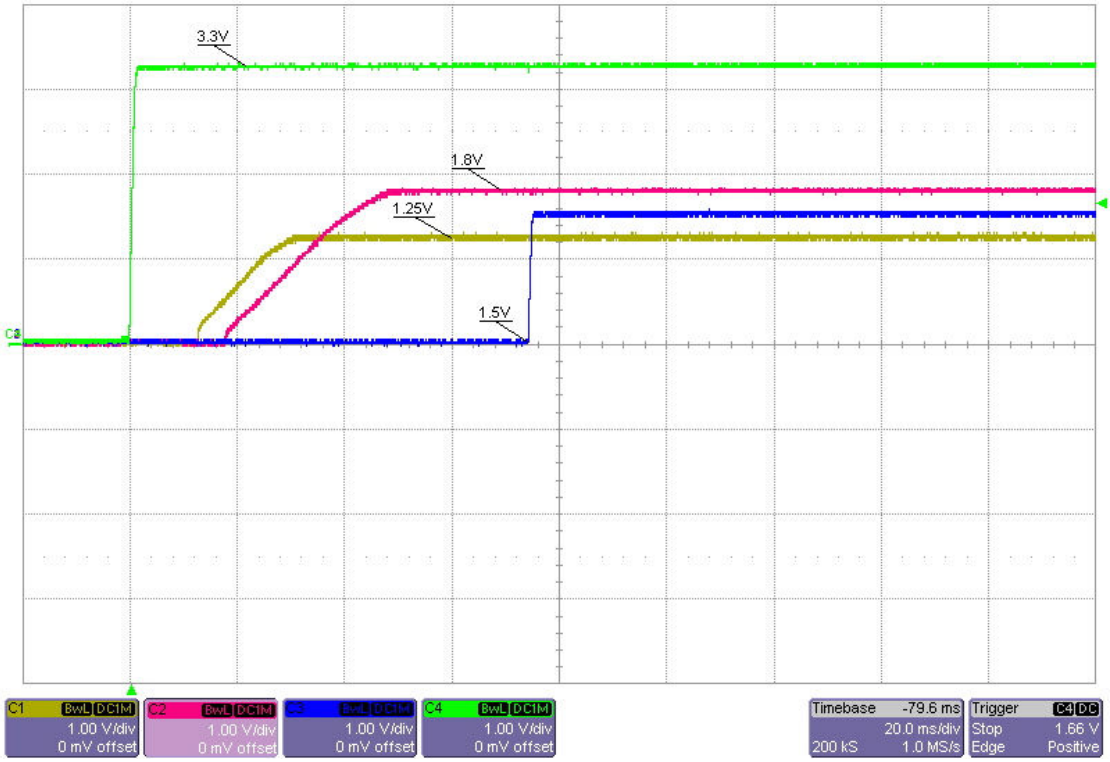
PMP3044_C6455_12VIN_REVA_FINAL BOM

COUNT	RefDes	Value	Description	Size	Part Number	MFR
8	C1, C8, C19, C20, C24, C29, C37, C40	0.1uF	Capacitor, Ceramic, 0.1uF, 16V, X7R	0603	Std	Std
1	C10	3300pF	Capacitor, Ceramic, 3300pF, 25V, X7R	0603	Std	Std
2	C11, C35	6800pF	Capacitor, Ceramic, 6800pF, 25V, X7R	0603	Std	Std
2	C12, C33	68pF	Capacitor, Ceramic, 68pF, 50V, NPO	0603	Std	Std
1	C13	680pF	Capacitor, Ceramic, 680pF, 50V, NPO	0603	Std	Std
2	C15, C34	22uF	Capacitor, Ceramic, 22uF, 6.3V, X5R, 20%	1206	C3216X5R0J226MT	TDK
6	C16, C23, C25, C28, C36, C41	1uF	Capacitor, Ceramic, 1uF, 16V, X7R	0603	Std	Std
1	C17	0.047uF	Capacitor, Ceramic, 0.047uF, 16V, X7R	0603	Std	Std
2	C2, C39	2200pF	Capacitor, Ceramic, 2200pF, 50V, NPO	0603	Std	Std
1	C21	39pF	Capacitor, Ceramic, 39pF, 50V, 5%	0603	Std	Std
2	C26, C38	8200pF	Capacitor, Ceramic, 8200pF, 16V, X7R	0603	Std	Std
1	C27	2700pF	Capacitor, Ceramic, 2700pF, 16V, X7R	0603	Std	Std
1	C3	1000pF	Capacitor, Ceramic, 1000pF, 50V, NPO	0603	Std	Std
1	C32	3300pF	Capacitor, Ceramic, 3300pF, 50V, NPO	0603	Std	Std
4	C4, C5, C18, C30	10uF	Capacitor, Ceramic, 10uF, 16V, X7R, 15%	1206	C3216X7R1C106MT	TDK
1	C6	220uF	Capacitor, POSCAP, 220uF, 2.5V, 18 milliohm, 20%	7343(D)	2R5TPE220MI	Sanyo
1	C7	1uF	Capacitor, Ceramic, 1uF, 6.3V, X7R, 15%	1206	C3216X7R0J105MT	TDK
4	C9, C14, C22, C31	0.01uF	Capacitor, Ceramic, 0.01uF, 16V, X7R	0603	Std	Std
6	D1, D2, D3, D4, D5, D6	MA2J729	Diode, Schottky Barrier, 300mA, 30 V	SC-90A	MA2J729	Panasonic
6	J1, J2, J3, J5, J6, J7	ED1514	Terminal Block, 2-pin, 6-A, 3.5mm	0.27 x 0.25	ED1514	OST
1	J4		Header, 8-pin, 100mil spacing, (36-pin strip)	0.100 x 8"	PTC36SAAN	Sullins
1	L1	6.8uH	Inductor, SMT, 2.55A, 43.5milliohm	0.300 sq"	DR73-6R8-R	Coiltronics
1	L2	100uH	Inductor, SMT, 0.73A, 0.527 ohm	0.300 sq"	DR73-101-R	Coiltronics
1	L3	82uH	Inductor, SMT, 0.86A, 0.384milliohm	0.300 sq"	DR73-820-R	Coiltronics
3	Q1, Q2, Q7	Si9926BDY	MOSFET, Dual Nch, 20V, 8.2A, 20 milliohm	SO8	Si9926BDY	Vishay
3	Q3, Q4, Q6	DTC144EK	Transistor, Digital NPN, 50 V, 100 mA	SOT-323	DTC144EK	ROHM
1	Q5	Si3442BDV	MOSFET, N-ch, 20V, 4.2A, 57 milliOhms	TSOP-6	Si3442BDV	Vishay
3	R1, R2, R33	49.9	Resistor, Chip, 49.9 Ohms, 1/16-W, 1%	0603	Std	Std
1	R10	88.7K	Resistor, Chip, 88.7K Ohms, 1/16-W, 1%	0603	Std	Std
2	R11, R37	1K	Resistor, Chip, 1K Ohms, 1/16-W, 1%	0603	Std	Std
1	R12	210K	Resistor, Chip, 210K Ohms, 1/16-W, 1%	0603	Std	Std
2	R13, R31	4.99K	Resistor, Chip, 4.99K Ohms, 1/16-W, 1%	0603	Std	Std
1	R14	15K	Resistor, Chip, 15K Ohms, 1/16-W, 1%	0603	Std	Std
2	R15, R21	10	Resistor, Chip, 10 Ohms, 1/16-W, 1%	0603	Std	Std
1	R20	0.1	Resistor, Chip, 0.1 Ohm, 1/10W	0805	Std	Std
1	R24	19.6K	Resistor, Chip, 19.6K Ohms, 1/16-W, 1%	0603	Std	Std
1	R25	0	Resistor, Chip, 0 Ohms, 1/16-W, 1%	0603	Std	Std
1	R26	24.9K	Resistor, Chip, 24.9K Ohms, 1/16-W, 1%	0603	Std	Std
1	R29	650	Resistor, Chip, 1K Ohms, 1/16-W, 1%	0603	Std	Std
2	R3, R4	100K	Resistor, Chip, 100K Ohms, 1/16-W, 1%	0603	Std	Std
1	R32	100K	Resistor, Chip, 100KOhms, 1/16-W, 1%	0603	Std	Std
1	R34	49.9K	Resistor, Chip, 49.9K Ohms, 1/16-W, 1%	0603	Std	Std
1	R36	34.8K	Resistor, Chip, 34.8K Ohms, 1/16-W, 1%	0603	Std	Std
4	R5, R17, R18, R27	0	Resistor, Chip, 0 Ohms	0603	Std	Std
3	R6, R7, R35	100	Resistor, Chip, 100 Ohms, 1/16-W, 1%	0603	Std	Std
3	R8, R16, R28	3.3	Resistor, Chip, 3.3 Ohms, 1/16-W, 1%	0603	Std	Std
5	R9, R19, R22, R23, R30	10K	Resistor, Chip, 10K Ohms, 1/16-W, 1%	0603	Std	Std
19	TP1, TP2, TP3, TP4, TP5, TP6, TP7, TP8, TP9, TP10, TP11, TP12, TP13, TP14, TP15, TP16, TP17, TP18, TP19		Test Point, Black, 1mm	0.038	240-333	Farnell
1	U1	TPS5130PT	IC, Triple Sync Buck Controller w/LDO	PT-48	TPS5130PT	Texas Instruments
2	U2, U3	TPS3808G01DBVR	IC, Low Quiescent Current, Programmable vv-V, Delay Time: 1.25ms to10s	SOT23-6	TPS3808G01DBVR	Texas Instruments
1	U4	TPS79501DCQ	IC, LDO Linear Regulator Ultralow-Noise High PSRR Fast RF, 500mA, xxV	SOT223-6	TPS79501DCQ	Texas Instruments

Notes:
1. These assemblies are ESD sensitive, ESD precautions shall be observed.
2. These assemblies must be clean and free from flux and all contaminants.
   Use of no clean flux is not acceptable.
3. These assemblies must comply with workmanship standards IPC-A-610 Class 2.
4. Ref designators marked with an asterisk ('**') cannot be substituted.
   All other components can be substituted with equivalent MFG's components.

DM6455 : 12V-Input Startup Waveforms





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