Input Voltage = 3.5V to 30V

Vout = 5V @ 3A

Vin
J1
VIN
Cin1 10µF
Cin2 10µF
Cin3 10µF
J4 GND
GND
D1 BAT54HT1G
R5 10
C1 0.1µF
VIN_IC
R6 10
R1 71.5k
3V UVLO with 250mV Hys
R4 46.4k
C11 0.047µF
7.5ms SS
R10 2.49k
C13 0.047µF
C14 0.015µF
R7 0
DNP R11
R12 84.5k
Fsw=300kHz
C8 0.1µF
C9 0
C10 100pF
SLOPE
SYNC
COMP
MODE
VINSNS
EN
SS
U1
VIN 27
VINSNS 28
EN/UVLO 26
SS 5
COMP 6
MODE 1
RT 3
DITH 2
SLOPE 4
VCC 20
BIAS 21
VOSNS 9
BOOT1 23
HDRV1 24
SW1 25
LDRV1 22
FB 8
BOOT2 17
HDRV2 16
SW2 15
LDRV2 18
CS 13
CSG 12
PGOOD 14
ISNS- 10
ISNS+ 11
PGND 19
AGND 7
PAD 29
LM5175RHFR
HDRV1_P
HDRV1_N
LDRV1
RH1 3.0
Q2 BSZ097N04LS G
TP1 SW1
L1 5.6µH
Q4 BSZ097N04LS G
Q1 BSZ097N04LS G
TP2 SW2
Q3 BSZ097N04LS G
RL1 0
HDRV2_P
HDRV2_N
LDRV2
VRS
VCC
C6 1µF
D2 BAS516,115
C4 0.1µF
D3 BAS516,115
C15 0.1µF
DNP D4 MMSZ5237BS-7-F 8.2V
DNP D5 CUS05S40,H3F
CS_P
CS_N
R13 100
C17 220pF
R15 100
R9 20k
PGOOD
FB
BIAS
VOSNS
Co1 22µF
Co2 22µF
Co3 22µF
Co4 100µF
R3 10
VOUT
Vout
J2
J3 GND
C16 0.22µF
C2 0.22µF
NT1 Net-Tie
NT2 Net-Tie
RS1 0.01
R18 47
TP3 Bode
R21 49.9k
R24 9.53k
TP4 GND

Charge pump voltage doubler for VCC bias

HDRV1_N
D6 CUS05S40,H3F
C18 0.22µF
HDRV2_N
D7 CUS05S40,H3F
BIAS
C19 0.1µF
GND

Orderable: N/A	Designed for: Public Release	Mod. Date: 5/27/2016
TID #: PMP20107	Project Title: LM5175 QFN 5V@3A Ultral Small Solution Size	
Number: PMP20107 Rev: A	Sheet Title:	
SVN Rev: Version control disabled	Assembly Variant: 001	Sheet: 1 of 2
Drawn By:	File: PMP20107_REVA.SchDoc	Size: B
Engineer: Xinyu Dai	Contact: http://www.ti.com/support	

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DNP FID1 DNP FID2 DNP FID3

PCB Number: PMP20107
PCB Rev: A

PCB
LOGO
Texas Instruments

Label Table	
Variant	Label Text
001	

ZZ1
Assembly Note
These assemblies are ESD sensitive, ESD precautions shall be observed.

ZZ2
Assembly Note
These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.

ZZ3
Assembly Note
These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.

Orderable: N/A		Designed for: Public Release	Mod. Date: 4/11/2016
TID #: PMP20107		Project Title: LM5175 QFN 5V@3A Ultral Small Solution Size	
Number: PMP20107	Rev: A	Sheet Title:	
SVN Rev: Version control disabled		Assembly Variant: 001	Sheet: 2 of 2
Drawn By:		File: PMP20107_REVA_Hardware.SchDoc	Size: B
Engineer: Xinyu Dai		Contact: http://www.ti.com/support	

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