11 – PoE-Regulator

3 Type2PSE

U5 Opto

VC

LED10 LED0603RED

LED11 LED0603RED

R186 100k

R741 100k

According to TI PMP6812

D5 HD01

D13 HD01

24 CT2

24 CT1

4,24 CT4

4,24 CT3

FB8 600R/1A

FB9 600R/1A

C153 1n/100V

C158 100n/100V

D9 SMAJ58A

VDD

R188 24k9

R191 = 17.25e9 / f_SW
f_SW = 254kHz

U7

R191 68k T2P

R190 68k FRS

R193 0R BLNK

APD

VB

CLS

DT

CLS

PPD

DEN

VDD

VDD1

PwrPd

CTL

VB

CS

COM

GATE

VC

GAT2

ARTN

RTN

Vss

TPS23754

R195 63R4

VSS

D15 (SMAJ58A)

C164 22p

L5 3.3UH RDC=0.2R 15mW@250mA

C148 47uF/63V

C147 100n/100V

C150 1u/100V

C151 1u/100V

C752 1u/100V

C755 100n/100V

R185 39k

D4 MURA120

DIODE SOD-123 D11

R187 3R3

10u/16V C399

10u/16V C159

C751 1000p/2kV

T1 7491195112

41 uH
12V
1.5A

R733 24R

C756 330p

D24 SBR5E60P5

L6 1uH

Uin

C753 10u/16V

C754 10u/16V

C757 (10u/16V)

C758 (10u/16V)

C157 100uF

GATE

R196 0R

Q16 Si4848DY

<=15V=>

<=130V=>

CS

R197 1k

R198 0.22R

VB

100n C165

470R R199

C166 220n

R201 1k5

CTL

PoE: 250mA typ (350mA max)
PoE+: 420mA typ (600mA max)

U9 FOD817ASD

2.09mA

R202 2k2

R203 10k

D23

D16 DIODE SOD-123

DIODE SOD-123 CATHODE

R731 2k2

C167 22n

R205 ()

C168 ()

I_KA=10mA

U21 TL431

Vref 2.5V

I_Ref_MAX=10mA

C169 1u

R200 63R4

R204 10k

R206 2k2

Vout = 2.5 x (1+R_up/R_low) = 13.6V

LAN-Transformer 100BaseT PoE

TR1

D1+ 8

CT1 7

D1- 6

D2+ 3

CT2 2

D2- 1

9 TX+_PHY

10

11 TX-_PHY

14 RX+_PHY

15

16 RX-_PHY

Receive

Transmit

C295 100n

C296 1n

C297 1n

C298 100n

isolation barrier: 1500V
at least 3mm clearance

Modular Jack 8P8C black CON10

RJ45

S1

S2

FB30 ()

FB28 ()

1 D1+ 4

2 D1- 4

3 D2+ 4

5 CT3

6 D2- 4

7

8 CT4

PoE+

4,11 CT3

4,11 CT4

11 CT2

11 CT1

100n/100V C299

C300 100n/100V

100n/100V C302

C303 100n/100V

R320 75R

R321 75R

R322 75R

R323 75R

1000p/2kV C301