ALW POWER ASSERT

Insert AC adapter only, then without press power button

PS_ID

U6, MAX1909 will check AC and battery power

If AC type is un-know or battery can not be charged, you can check PS_ID relate circuit.

PWR_SRC

VCCRTC is generated by U53 MAX1615 through D30

VCCRTC

U49

Macallen 3 will output ALWON to MAX8734A to turn on +3VALW and +5VALW

If no ALW power, what should we do?
A: Check charger MAX1909 ACAV_IN relate circuit.

ALWON

U13,MAX8734A will have +3VALW and +5VALW power output on pin25 and pin 18

+5VALW

+3VALW

32K Hz

Macallen

Go!

When +3VALW is reach 3V,VCC1_PWROK is output high, this signal also reset Macallen3 internally.

Q: If no debug out pulse?
1. Macallen.
2. BIOS ROM.

If Macallen is working. DBG2 pin2 will have 1,2,3,4 pulse when AC adapter attached**(DEBUG_OUT)**

Power Plan:
0. RTC power plane.
1. Always power plane.
2. SUS power plane.
3. RUN power plane.

ACPI Power State:
1. S0: System Full On, All power planes are ON.
2. S3: Suspend to RAM, RUN power off.
3. S4: Suspend to Disk, RTC and Always power ON.(AC)
4. S5: Soft Off, power state like S4.

SUS POWER ASSERT

Insert AC adapter only, then press power button

POWER_SW#

After +3VALW , +5VALW, DEBUG_OUT were all come out. Macallen should assert SUS_ON.

If Macallen do not driven SUS_ON high
1. Re-heat Macallen.
2. Change one new Macallen.
3. Still no SUS_ON, check BIOS ROM.

SUS_ON

SUS_ON will turn on **MAX8734A** producing +5VSUS , +3VSUS.

SUSPWROK_5V

U46,MAX8743 will produce +1.5VSUS

U38,TPS51116 will produce +1.8VSUS.

+1.8VSUS_PG

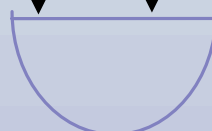+1.5VSUS

Delay 10ms

+1.8VSUS

Check All SUS power planes are in correct voltage level?

SUS_ON

U50 pin 8

SUSPWROK

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RUN POWER ASSERT

If SUSPWROK is OK, it will drive to ICH4

SUSPWROK

When initialized **ICH6-M**, drives SLP_S3#

PM_SLP_S3#

After approximate 10ms soft start delay, **Macallen3** turned on RUN planes with SUS planes
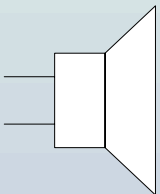
RUN_ON_D

RUN_ON

SUS POWER PLANES

RUN POWER PLANES

+5VSUS

+5VSUS was initial trigger for **TPS793475**.It will produce +5VA

+5VA

4.75V for audio circuit.

RUN_ON_D

TPS51116 will produce +0.9VRUN

+5VSUS   +3VSUS   +1.5VSUS   +1.5VSUS

Q34   Q21   Q13

Q48

MAX8743 will produce +1.05VRUN

+0.9VRUN

+5VRUN   +3VRUN   +1.5VRUN   +1.5VRUN

+1.05VRUN

Make sure all RUN power planes are in correct voltage level.

Delay 10ms

+2.5VRUN_PG

+1.05VRUN_PWRGD

If these three signal assert, then through U50 (AND gate) will produce RUNPWROK

U50 pin 6 RUNPWROK

10ms after +3VRUN power plane comes up

RUNPWROK

RUNPWROK was initial trigger for **ISL6217**. It will produce VCC_CORE

After VCC_CORE came out. **ISL6217** will produce VGATE_PWRGD

VCC_CORE

If no Vcore:
1. Check high/low side MOSFET.
2. Check   .

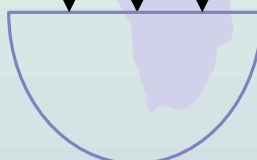When **Macallen** is ready to release the Pentium(receive RUNPWROK), it will drive RESET_OUT#

RESET_OUT#

Delay 10ms

All clocks

XDP_DBRESET#

ICH_PWROK is driven to ICH6 as PWROK allowing release of the Dothan from INIT and deassertion of PCIRST#

ICH_PWROK
U52.11

ICH6-M

Next step should check:
1. PCIRST#
2. CPURST#
3. GTL_ADS#

If CPU power is OK and   CPURST# de-assertion.
1. CPU: re-heat, change one new.
2. Change BIOS ROM.

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