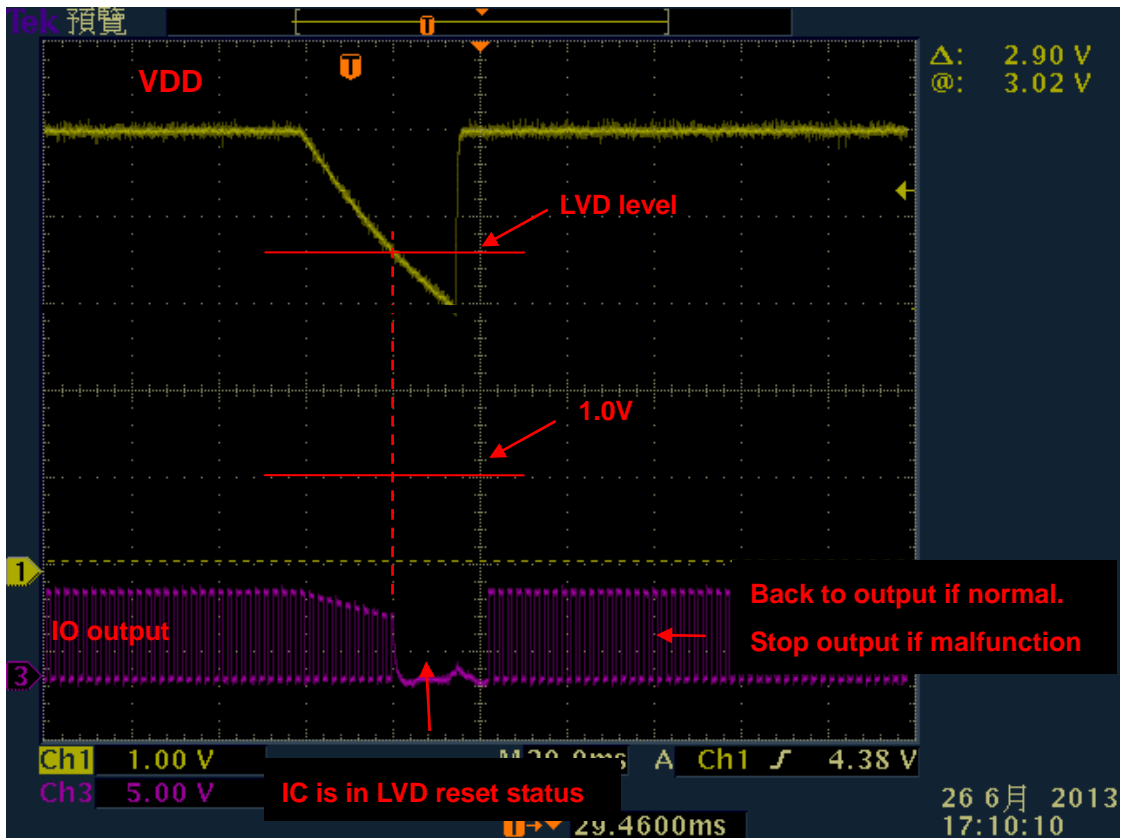


PMC150/153/156/166 against rapid change in power

Important application note

Applied for: PMx150 / PMx153 / PMx156 / PMx166

In some applications of PMC150/PMC153/PMC156/PMC166 series MCU, the power VDD may change rapidly because of quick switching the power source manually or strong power noise. In case, when the power VDD drops to the level that is lower than the LVD level but higher than 1.0V, if at this time the power VDD is pulled up again to be over LVD level (just see the diagram below), there may be some chances that cause the MCU malfunction or hanged.



To avoid the above problem, please follow the below steps in your program:

1. Insert the below two instructions just after the `.ADJUST_IC` instruction

```
SET1 inten.7
```

Notice: IDE 0.57 or above version will insert this instruction automatically.

```
Intrq = 0;
```

Notice: IDE 0.59 or above version will insert this instruction automatically.

- Never clear the **inten.7** through out the whole program. Please pay special attention in accidental clear **inten.7** by writing operation to the whole **inten** register. Please consider using **set1/set0** instruction to change other interrupt enable flags.

Notice: IDE 0.57 or above version will block the reset operation of **inten.7** automatically.

- When **wdreset** instruction is being used:

Please modify the **wdreset** instruction inside the main loop of the program:

C language: ***If (inten.7==0) reset; else {wdreset;}***

Assembly language: ***t1sn inten.7;***
reset
wdreset

or use as below :

.wdreset (for IDE 0.57 or above version only)

- When **clkmd** is being used:

When **clkmd** instruction is set inside the main loop of the program and **clkmd.1 = 0**, please insert below instructions afterward.

C language: ***If (inten.7==0) reset;***

Assembly language: ***t1sn inten.7;***
reset

or use as below to set **clkmd**:

.clkmd = 0x hh;

(" hh" is the value of the 16 carry bit. For IDE 0.59 or above version only)

Special Announcement:

- The above problem is only caused by a little logically flaw inside PMC150/PMC153/PMC156/PMC166 IC. Their abilities of anti-interference are still very good and strong. But we will still fix the flaws in their new version in short future.
- There is no such problem in other PMC series IC.

If you have further questions to the application, please consult to our agent at your nearest location or contact us at fae@padauk.com.tw