

HUAWEI ENTERPRISE **A BETTER WAY**

Consideration on bt PSE MPS to work with legacy PD

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Outlines

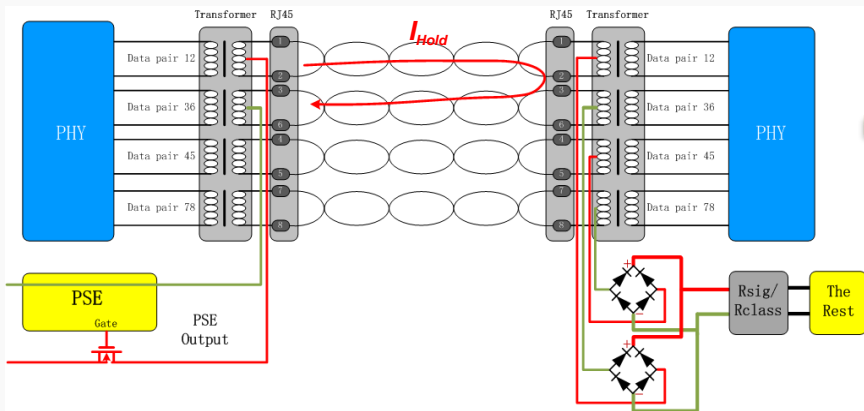
- **What's the challenge when BT PSE work with AT PD?**
- **Propose a solution**
- **Summary**

Challenge when BT PSE work with AT PD?

Type1/2 PSE connects to Type1/2 PD

$I_{Hold} \max = 10\text{mA}$

$I_{Port_MPS} \min = 10\text{mA}$

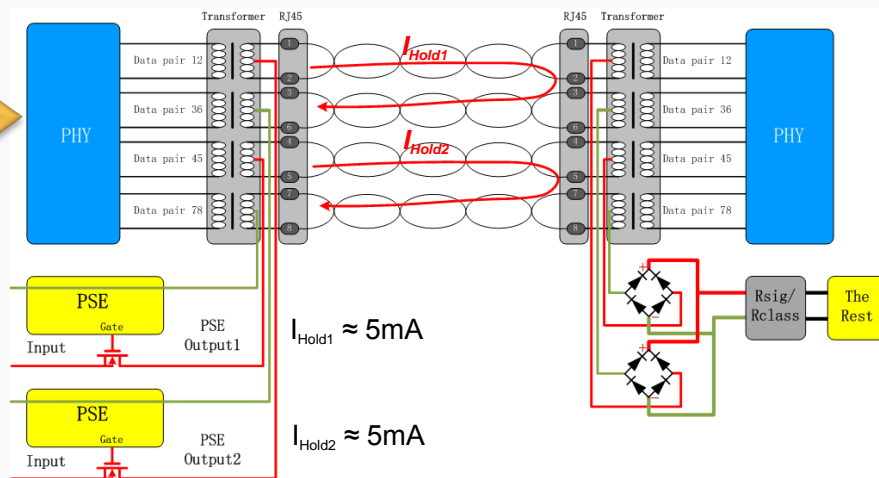


A PSE **shall** consider the DC MPS component to be present if I_{Port} is greater than or equal to $I_{Hold} \max = 10\text{mA}$.

Type3/4 PSE connects to Type1/2 PD

$I_{Hold1} + I_{Hold2} = I_{Hold} \max = 10\text{mA}$

$I_{Port_MPS} \min = 10\text{mA}$



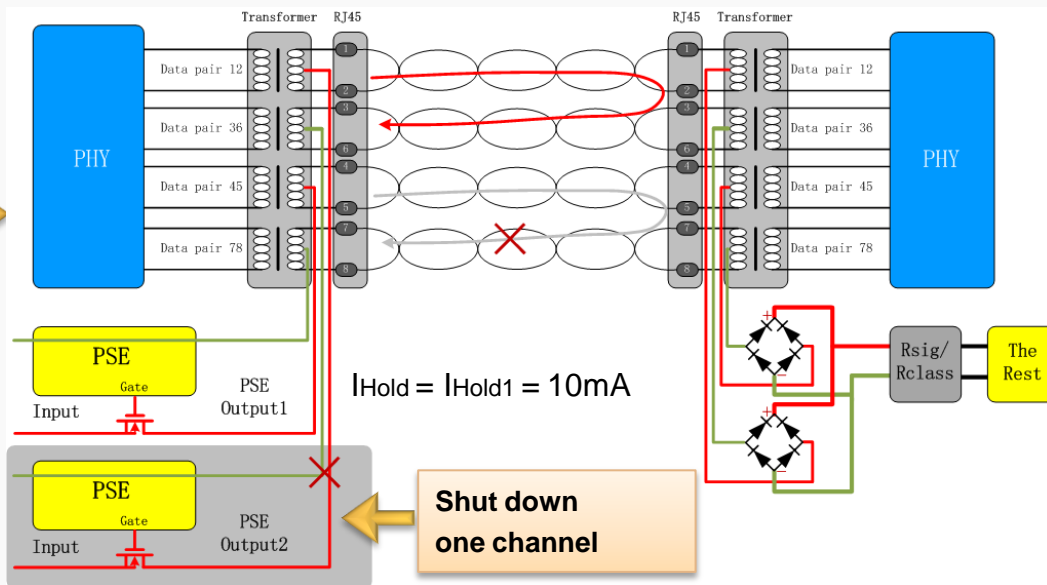
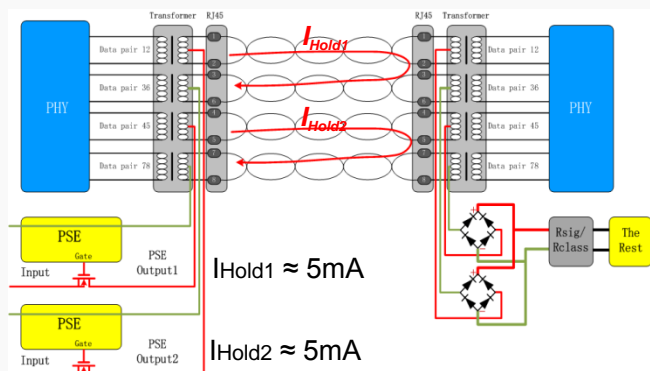
When reuse two AT PSE design to supply BT power as people previously suggested, PSE on each channel **SHALL** consider PD MPS component to be present even if I_{Port} is 5mA or less.

When BT PSE works with AT PD, Type 3/4 PSE **SHALL** guarantee the $I_{hold} \max$ no greater than 10mA.

Solution: shut down one channel on PSE

Type3/4 PSE connects to Type1/2 PD

$$I_{Hold1} + I_{Hold2} = I_{Hold} \text{ max} = 10\text{mA}$$
$$I_{Port_MPS} \text{ min} = 10\text{mA}$$



If shut down one channel when provide power to type1/2 PD, the DC-MPS can work the same as AT.

**To solve the MPS challenge:
Shut down one channel on TYPE 3/4 PSE when work with Type 1/2 PD.**

Summary

- When BT PSE works with AT PD, Type 3/4 PSE SHALL guarantee the $I_{\text{hold,max}}$ no greater than 10mA.
- When reusing two AT PSE design to supply BT power as people previously suggested, PSE on each channel SHALL consider PD MPS component to be present even if I_{Port} is 5mA or less.
- In order to reuse AT PSE chips and avoid the challenge, it's better to shut down one channel when providing power to Type1/2 PD.

Thank you!