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**HUAWEI ENTERPRISE A BETTER WAY**

# Backfeed in a 4-pair context

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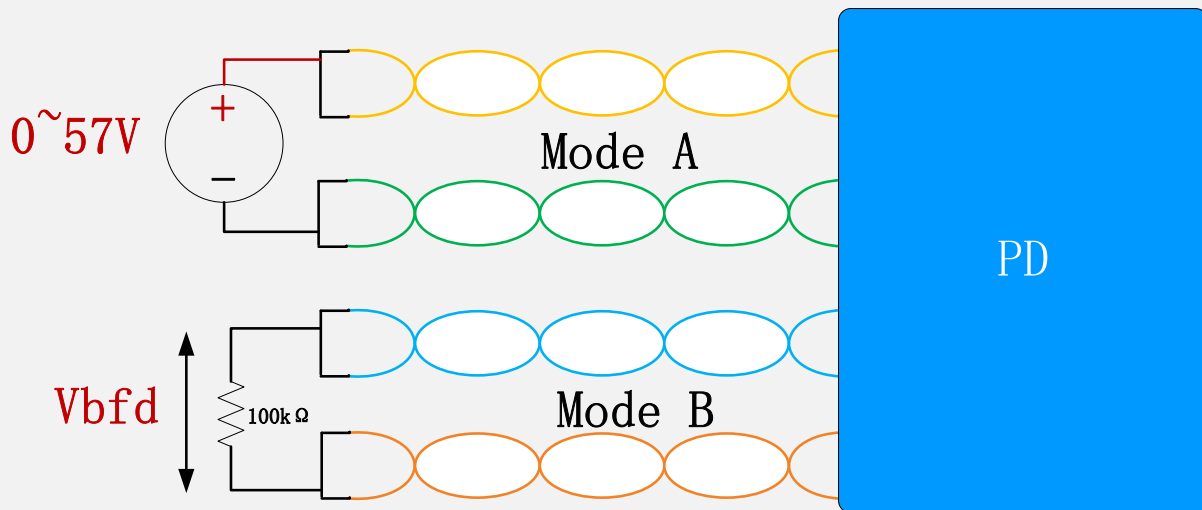
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# Overview of Backfeed

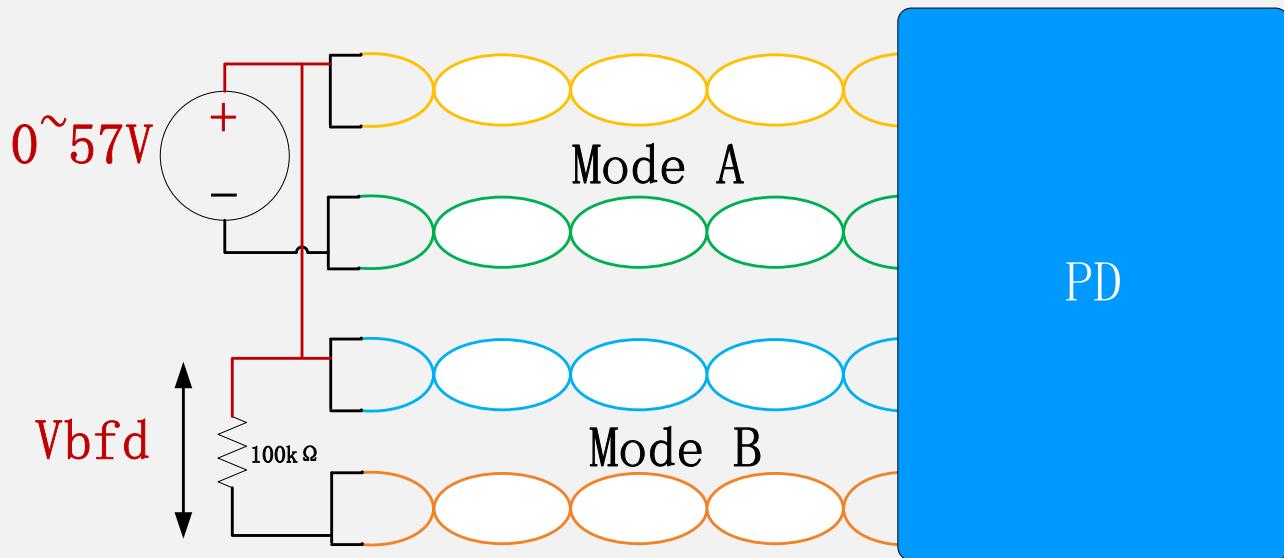
## IEEE\_P8023bt\_DRAFT\_3p4 145.3.8.8 Backfeed voltage

“When any voltage in the range of 0 V to  $V_{Port\_PD-2P}$  max is applied across the PI at either polarity specified on the conductors of either Mode A or Mode B according to Table 145–20, the voltage measured across the PI for the other Mode with a 100 k $\Omega$  load resistor connected across that other Mode shall not exceed  $V_{bfd}$  as defined in Table 145–29.”



## 4-pair backfeed

A 4-pair capable PSE typically ties the positive lines together at the PSE end. Even in “2-pair” mode, there are two pairs connected to the positive VPSE.



***Change 145.3.8.8 (backfeed\_d3baselinep4.pdf , version v212)as follows:***

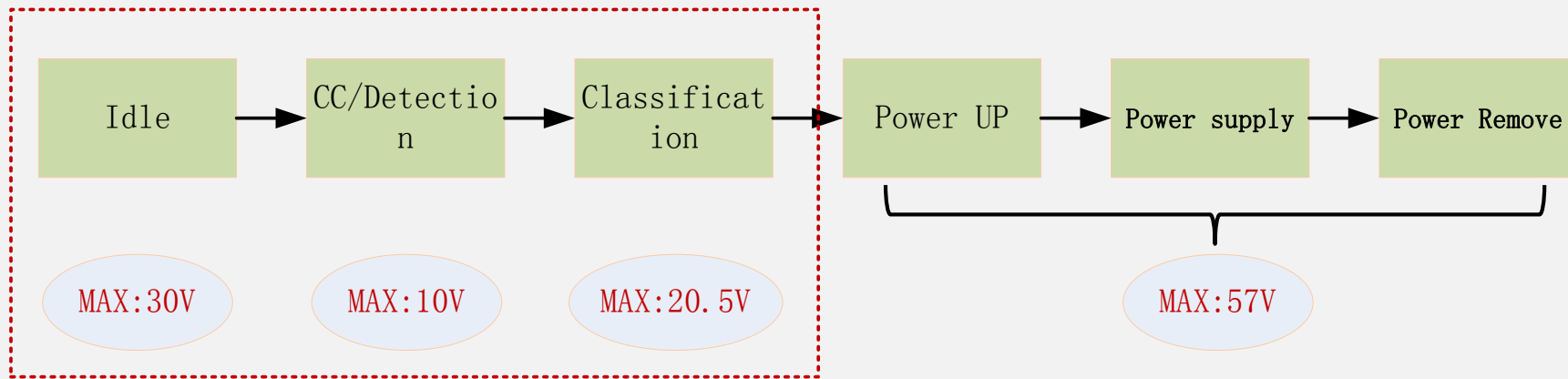
For a single-signature PD, when any voltage in the range of 0V to VPort PD-2P max is applied per any of the valid 2-pair configurations, defined in Table 145–20, that have only a single pair connected to positive VPSE, the voltage on the Mode not connected to the voltage source, with a 100 kΩ resistor connected across that Mode, shall not exceed Vrefl as defined in Table 145–29.

For a single-signature PD, when any voltage in the range of 0V to ~~10.1V~~ 30V is applied per any of the valid 2-pair configurations, defined in Table 145–20, including those with two pairs connected to positive VPSE, the voltage on the Mode with at least one pair not connected to the voltage source, with a 100 kΩ resistor connected across that Mode, shall not exceed Vrefl as defined in Table 145–29.

For a dual-signature PD, when any voltage in the range of 0V to VPort PD-2P max is applied per any of the valid 2-pair configurations, defined in Table 145–20, including those with two pairs connected to positive VPSE, the voltage on the Mode with at least one pair not connected to the voltage source, with a 100 kΩ resistor connected across that Mode, shall not exceed Vrefl as defined in Table 145–29.

# The reason to change to 30V

Vrefl cannot affect processes before power up



# Thank you!