### *145.2.8.6 Output current during power up*

*First specify $I_{Inrush\text{-}2P}$ then $I_{Inrush}$*

*Page 161 Line 40*

The PSE shall limit $I_{Inrush\text{-}2P}$ ~~and $I_{Inrush}$~~ during POWER_UP per the requirements of Table 145–16. The maximum inrush current sourced by the PSE per pairset shall not exceed the per pairset inrush template in Figure 145–23 and Equation (145–18). The PSE inrush maximum limit, $I_{PSEIT\text{-}2P}$, is defined by the following segments:

$$I_{PSEIT\text{-}2P}(t) = \begin{cases} I_{Inrush\text{-}2P} & \text{for } 0 < t < t_0 \\ 50 & \text{for } t_0 < t < (t_0 + 10\times10^{-6}) \\ I_{Inrush\text{-}2P} + \dfrac{(50 - I_{Inrush\text{-}2P}) \times (0.001 + t_0 - t)}{99\times10^{-5}} & \text{for } (t_0 + 10\times10^{-6}) \le t < (t_0 + 0.001) \\ I_{Inrush\text{-}2P} & \text{for } (t_0 + 0.001) \le t < 0.075 \end{cases}_{A} \qquad (145\text{–}18)$$

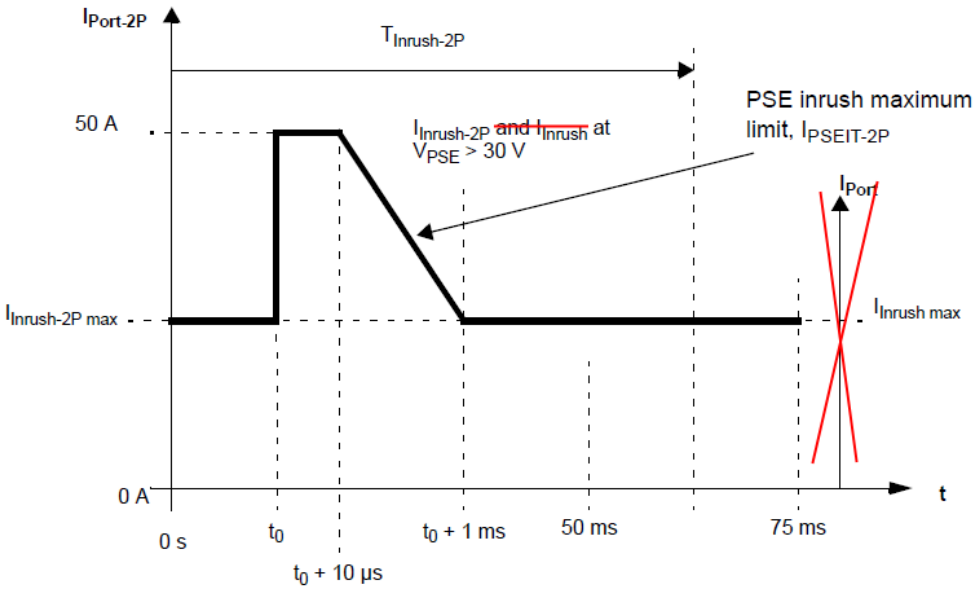


**Figure 145–23—$I_{Inrush\text{-}2P}$ ~~and $I_{Inrush}$~~ current and timing limits, per pairset in POWER_UP state**

where

| | | |
|---|---|---|
| | $t$ | is the time in seconds |
| $I_{Inrush\text{-}2P}$ | ~~$I_{max}$~~ | is the maximum value of $I_{Inrush\text{-}2P}$ ~~or $I_{Inrush}$~~ as defined in Table 145–16 |
| | $t_0$ | is the time when $I_{Port\text{-}2P}$ exceeds $I_{Inrush\text{-}2P}$ max for the first time during POWER_UP. The range for $t_0$ is $0 \le t_0 \le 49$ ms. |

**Append following text for $I_{Inrush}$**

The PSE shall limit ~~$I_{Inrush-2P}$ and~~ $I_{Inrush}$ during POWER_UP per the requirements of Table 145–16. The maximum inrush current sourced by the PSE ~~per pairset~~ shall not exceed the ~~per pairset~~ inrush template in Figure 145–XX and Equation (145–YY). The PSE inrush maximum limit, $I_{PSEIT-2P}$, is defined by the following segments:

$$I_{PSEIT-2P}(t) = \begin{cases} I_{Inrush-2P} & \text{for } 0 < t < t_0 \\ 50 & \text{for } t_0 < t < (t_0 + 10\times10^{-6}) \\ I_{Inrush-2P} + \dfrac{(50 - I_{Inrush-2P}) \times (0.001 + t_0 - t)}{99\times10^{-5}} & \text{for } (t_0 + 10\times10^{-6}) \le t < (t_0 + 0.001) \\ I_{Inrush-2P} & \text{for } (t_0 + 0.001) \le t < 0.075 \end{cases}_{A} \quad (145–18)\ YY$$

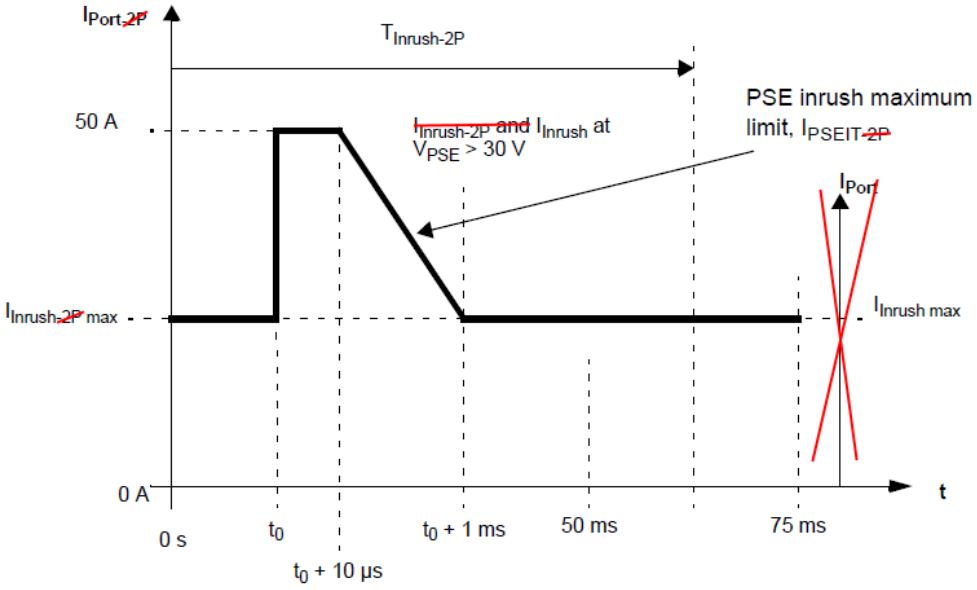


**Figure 145–23—~~$I_{Inrush-2P}$ and~~ $I_{Inrush}$ current and timing limits, ~~per pairset~~ in POWER_UP state**

where

$t$ is the time in seconds

$I_{Inrush}$ ~~$I_{max}$~~ is the maximum value of ~~$I_{Inrush-2P}$ or~~ $I_{Inrush}$ as defined in Table 145–16

$t_0$ is the time when $I_{Port-2P}$ exceeds $I_{Inrush-2P}$ max for the first time during POWER_UP. The range for $t_0$ is $0 \le t_0 \le 49$ ms.