

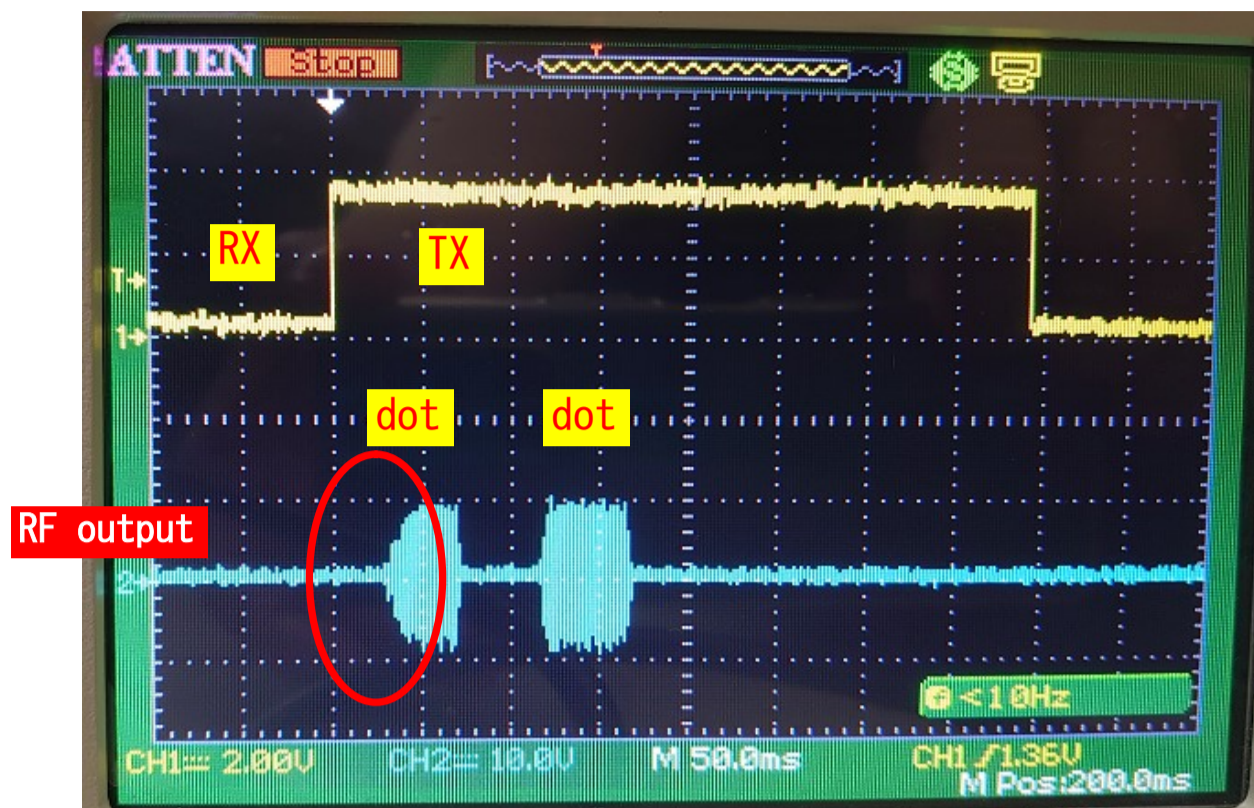
# improvement PA Bias power up time

28 Sep. 2021 J11UDD

Key Down delay is needed to avoid shortened 1st CW code after rx-tx change over.

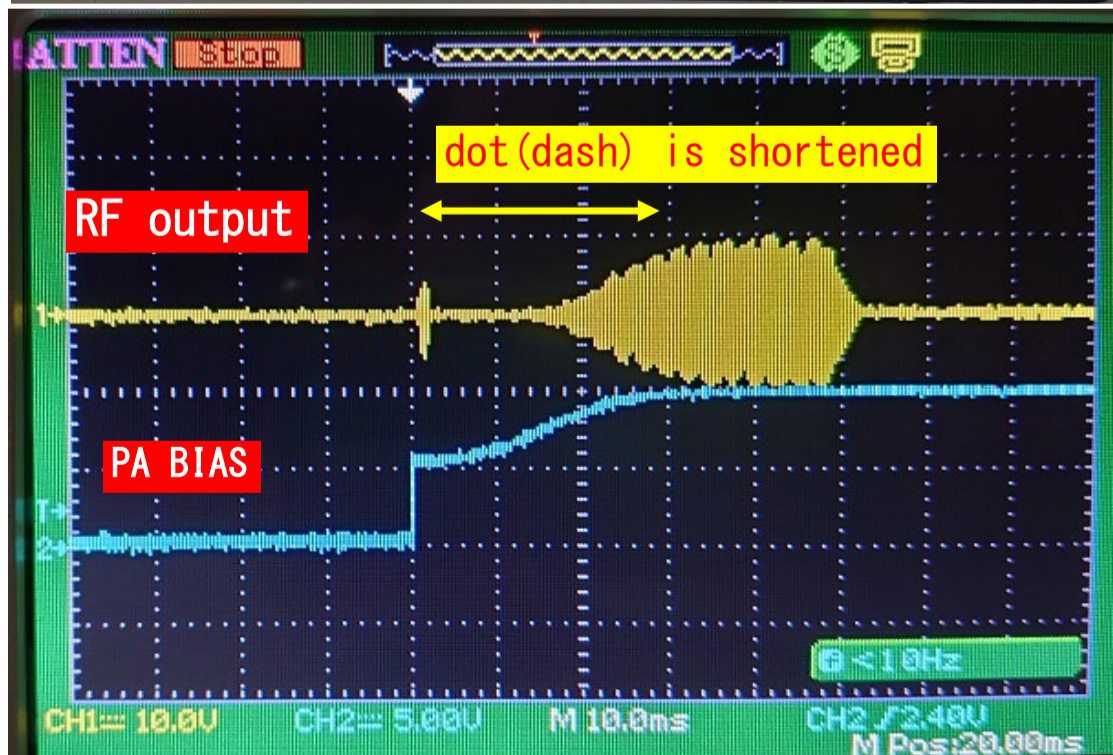
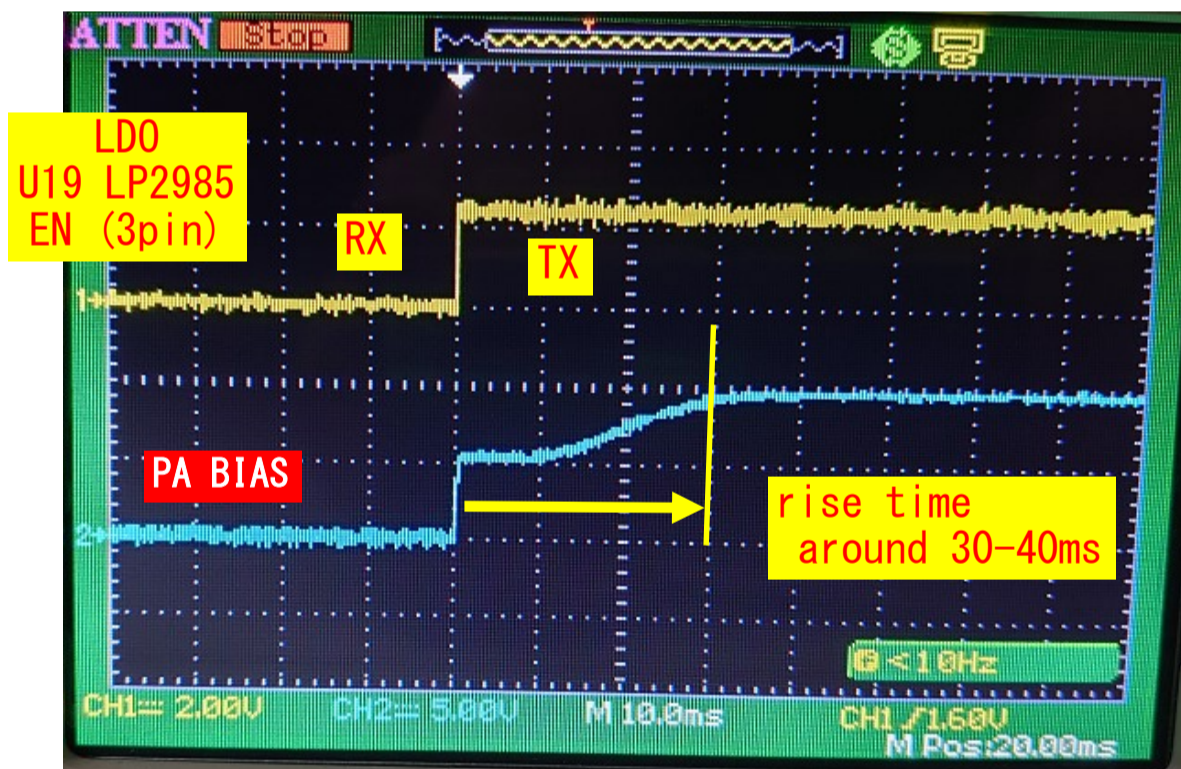
But most CW operators want to minimize Key Down delay.

I found **slow PA Bias power up**. The power up time is wanted to be as short as possible to minimize Key Down delay.



## Cause: Slow PA Bias power up

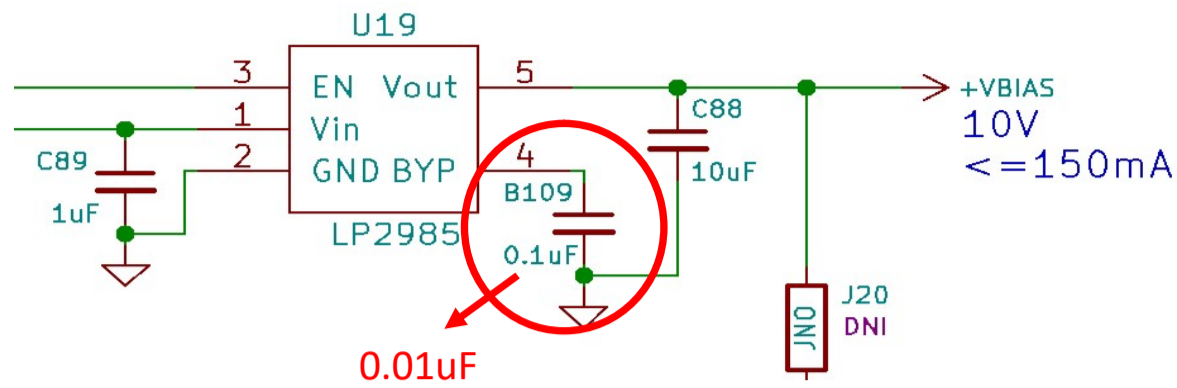
Note : The rise time of PA Bias depends on the individual characteristics of U19 and B109.



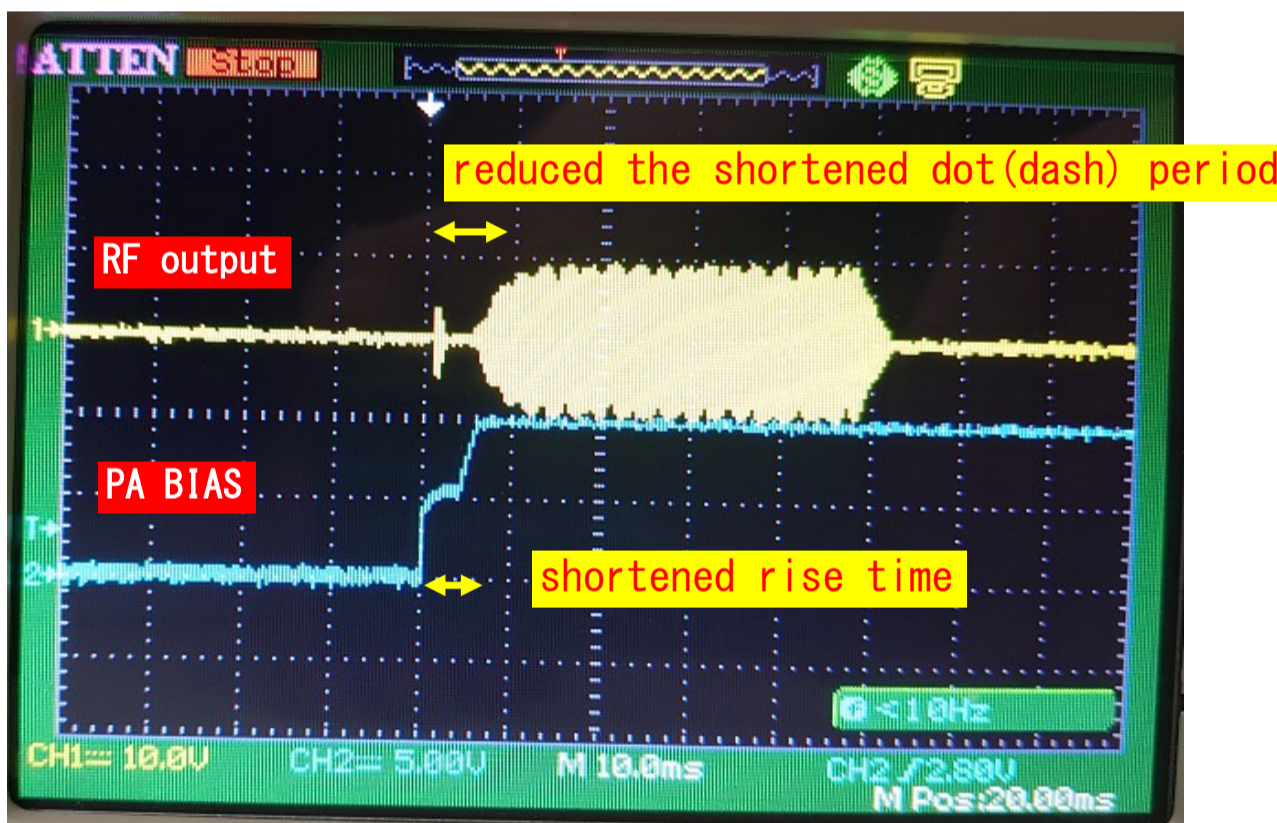
## PA Bias circuit improvement

Replace 0.1uF with 0.01uF at B109.

According to TI LP2985 datasheet, 0.01uF(=10nF) is recommended for the BYPASS capacitor.  
In my test, TDK C1608C0G2A103J080AC is used as the new component.



## After replacement



After replacement, if Key Down Delay is set to 10ms or more, the waveform is perfect !

