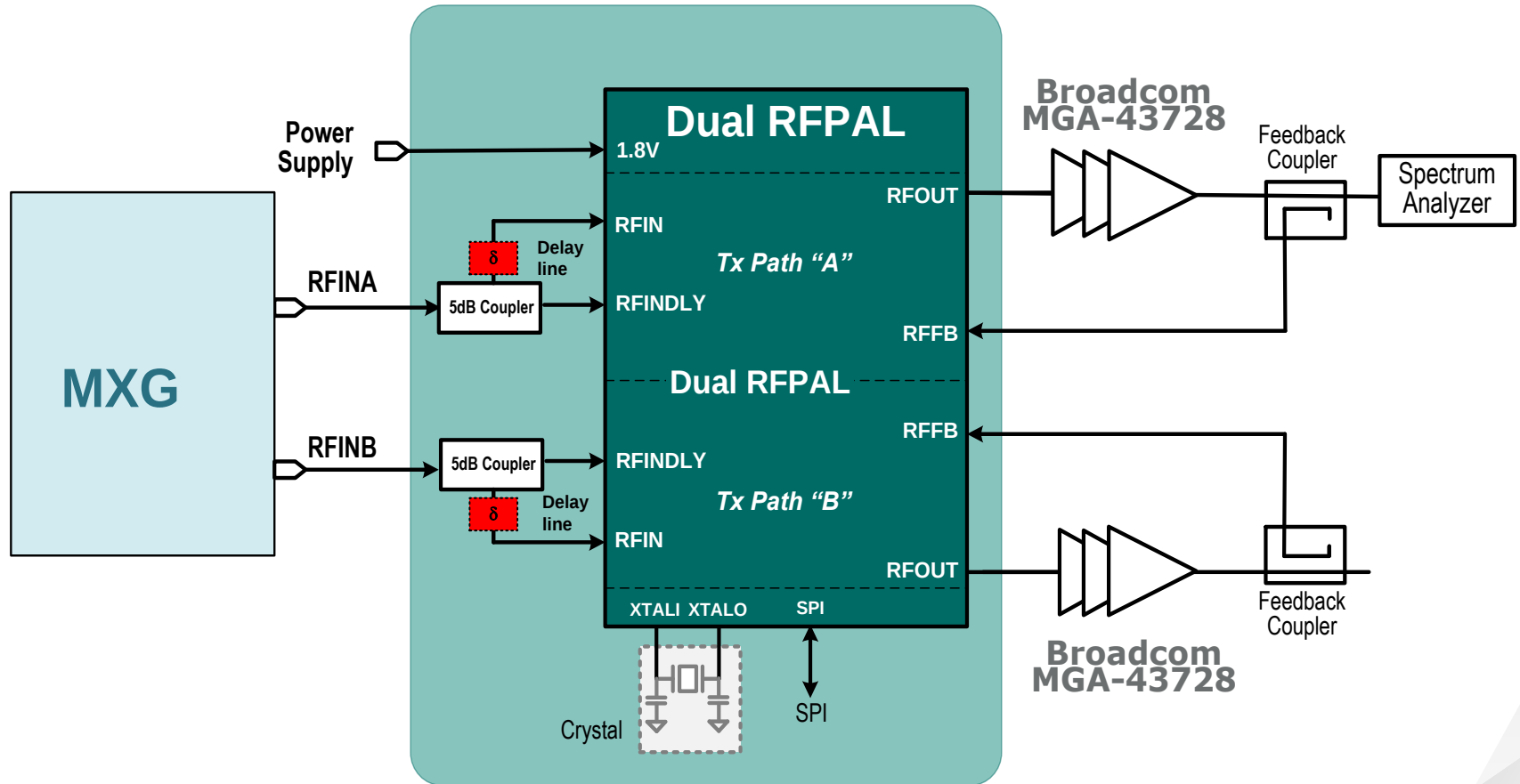
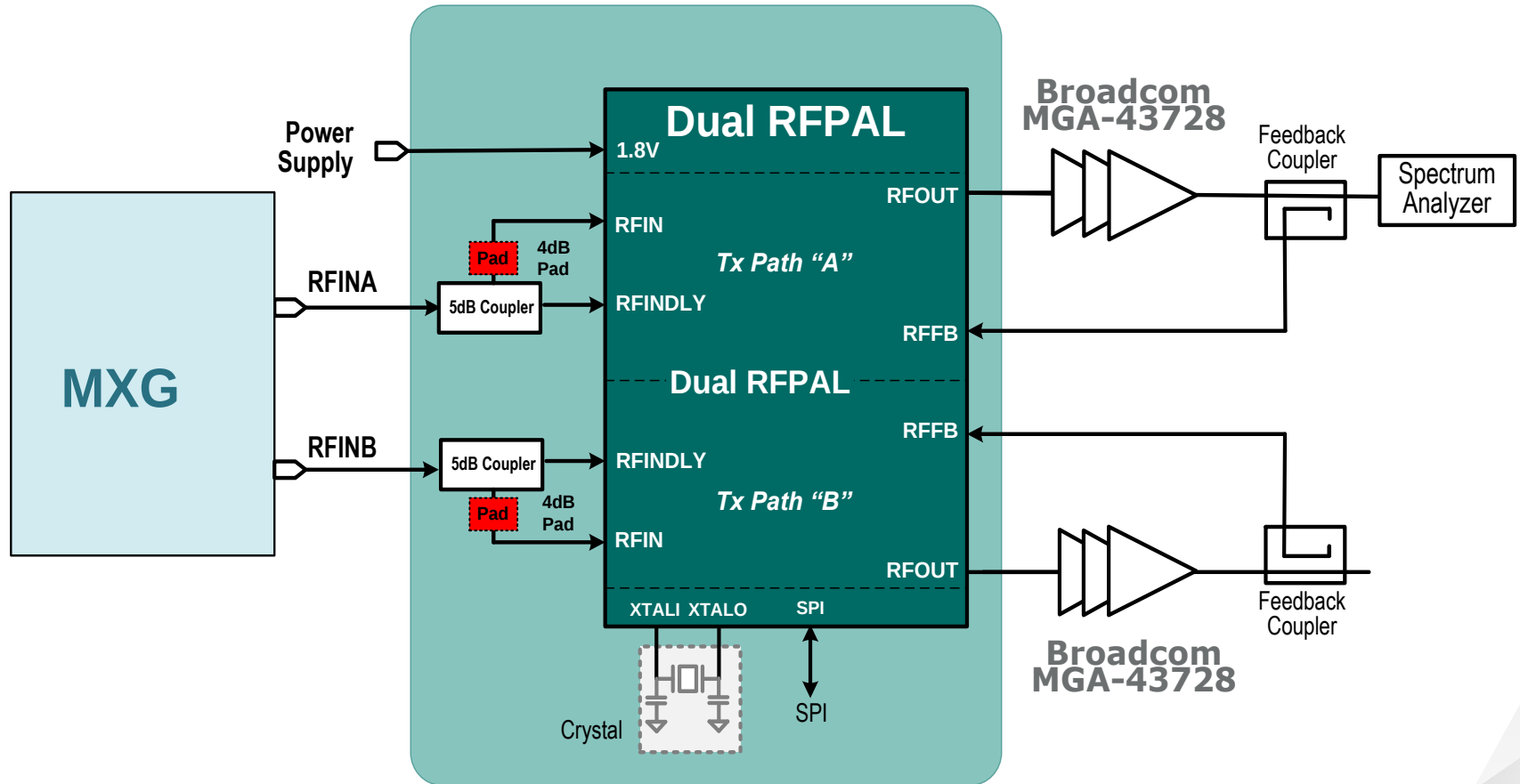


**SC2200 Performance results with
Broadcom Power Amplifier MGA-43728 (Band 7)**
With and without RF delay

Test Set-up with SC2200 with Broadcom MGA-43728 and with Delay Line



Test Set-up with SC2200 with Broadcom MGA-43728 and without Delay Line



Summary

- Amplifier Data
 - > Broadcom MGA-43728 (PAM437)
 - > Operating Frequency: 2620 and 2690 MHz
 - > Frequencies Tested: 2625-2655 MHz
 - > Gain = $\sim 37\text{dB}$
 - > Psat, Vcc, Iq = see table next slide
- Predistortion
 - > SC2200-EVK2400 Firmware 5.0.09.04
 - RFINDLY path
 - > 3ns delay line
 - > 0ns delay line + 4dB attenuation
 - Linearizer gain = 3
 - Other settings are default

Psat, Vcc, Iq

PAM437_Broadcom_MGA-43728

WCDMA1 9.99dB CCDF

Vdd, VDC

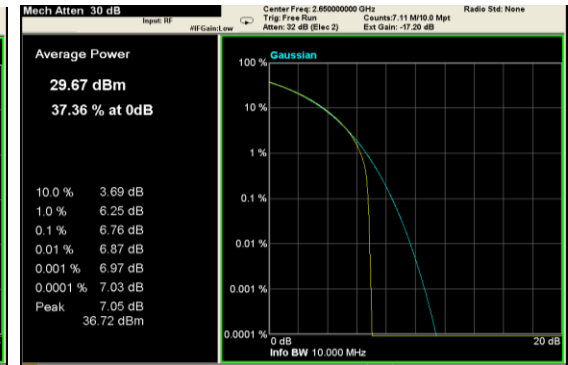
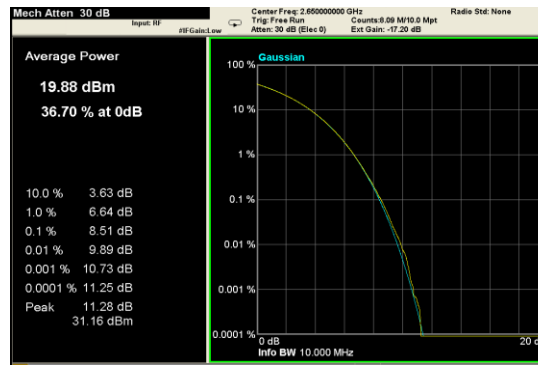
RMS at -3dB compression, dBm

P3dB, dBm

Id_RF, mA

Idq, mA

* Data Sheet Bias Recommendations



2650MHz Vc1=2.2V, Vc2=2.0V, Vc3=2.2V *

5.00

29.60

36.50

953

387

2625MHz Vc1=2.0V, Vc2=1.8V, Vc3=1.8V

Vdd, VDC

5.00

RMS at -3dB compression, dBm

29.22

P3dB, dBm

36.22

Id_RF, mA

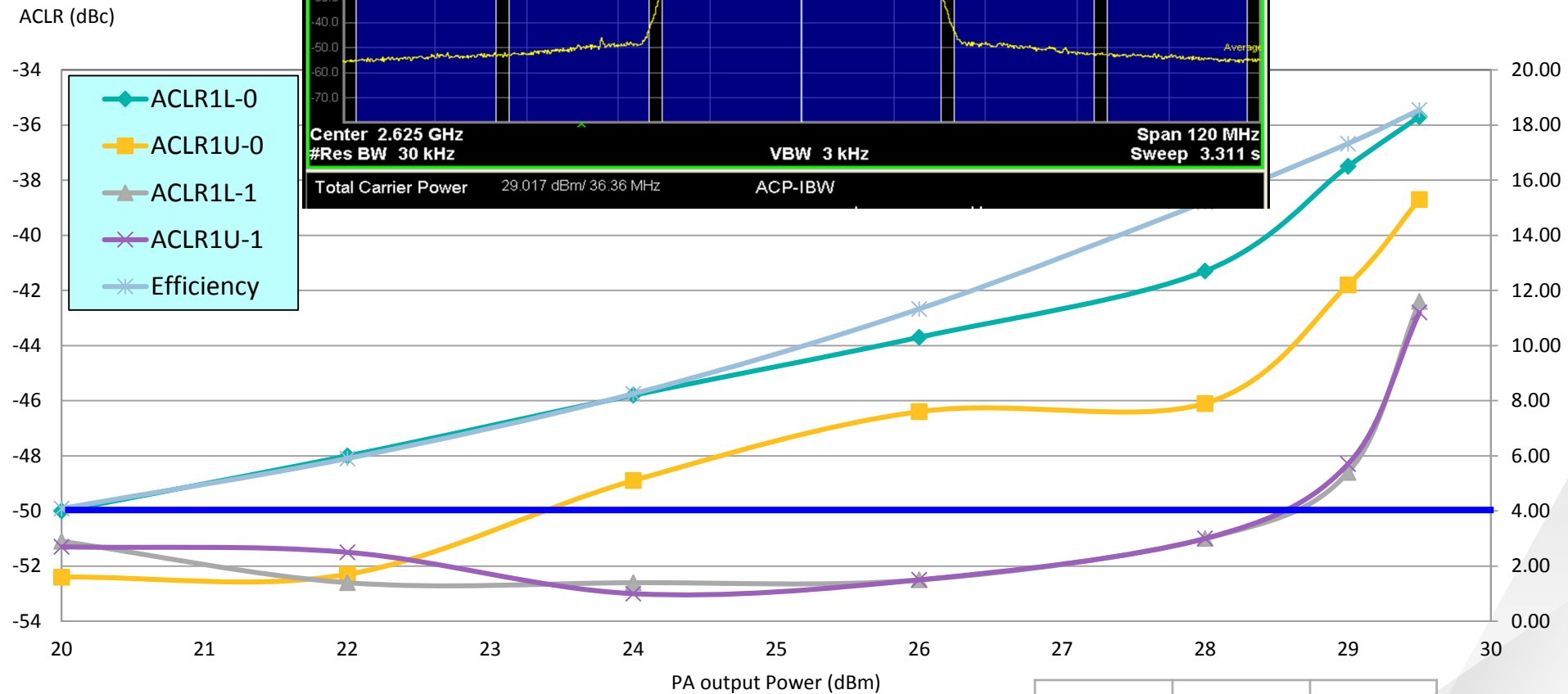
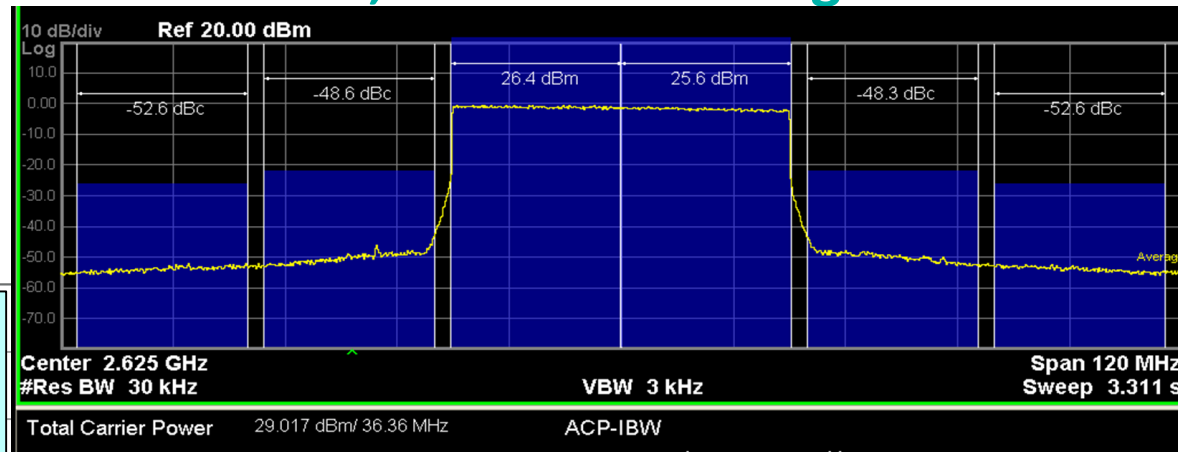
881

Idq, mA

280

LTE 2x20MHz 7.0dB PAPR Fc = 2625MHz

Smooth Mode Cal., at +29dBm using SPI cmd. PDET = 2



RFIN_dBm	RFOUT_dBm	RFFB_dBm
-6.5	-6	-14.9

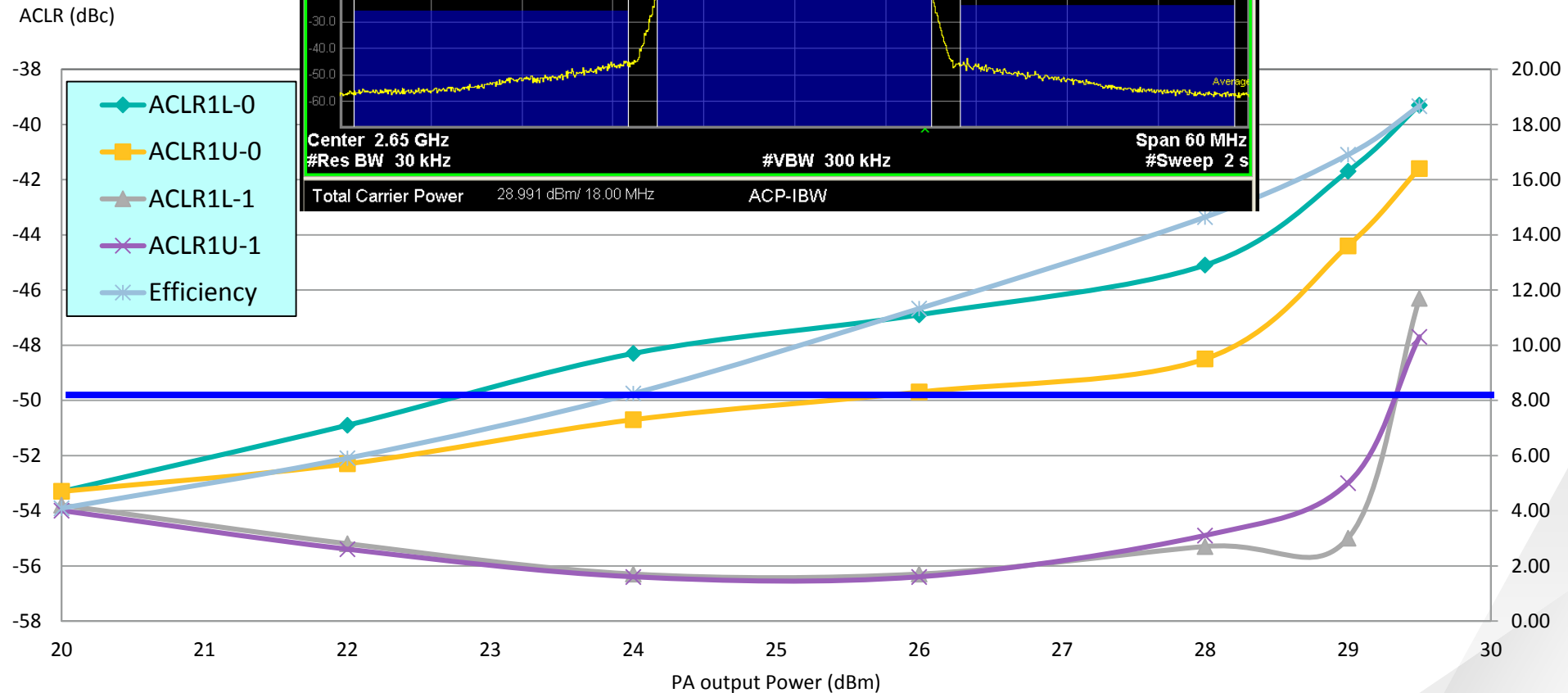
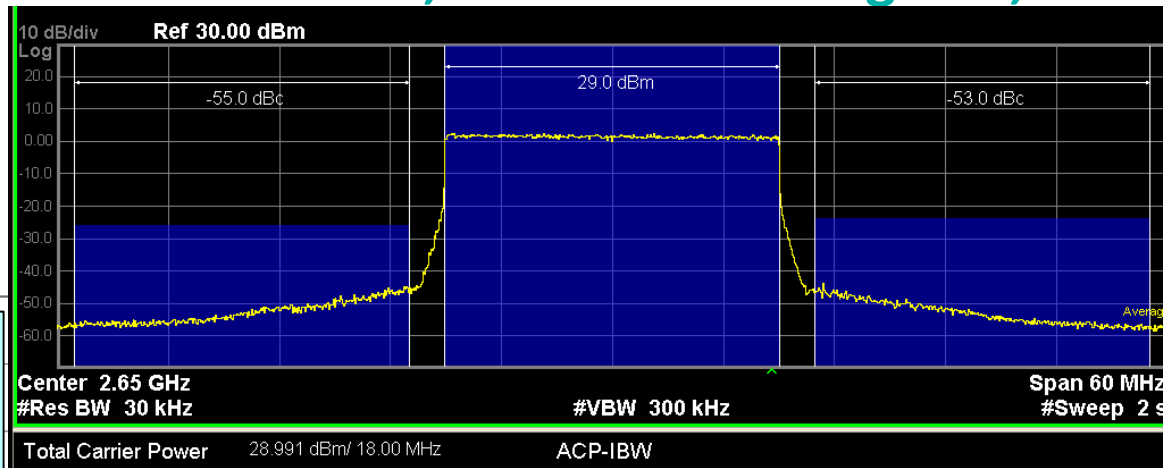
FW5.0.09.04

Freq= 2625 MHz

Vdd = 5.0 VDC, Vc1=2.2V, Vc2=2.0V, Vc3=2.2V

LTE 20MHz 7.0dB PAPR Fc = 2650MHz

Smooth Mode Cal., at +29dBm using GUI, PDET = 3



RFIN_dBm	RFOUT_dBm	RFFB_dBm
-6.7	-6.3	-14.9

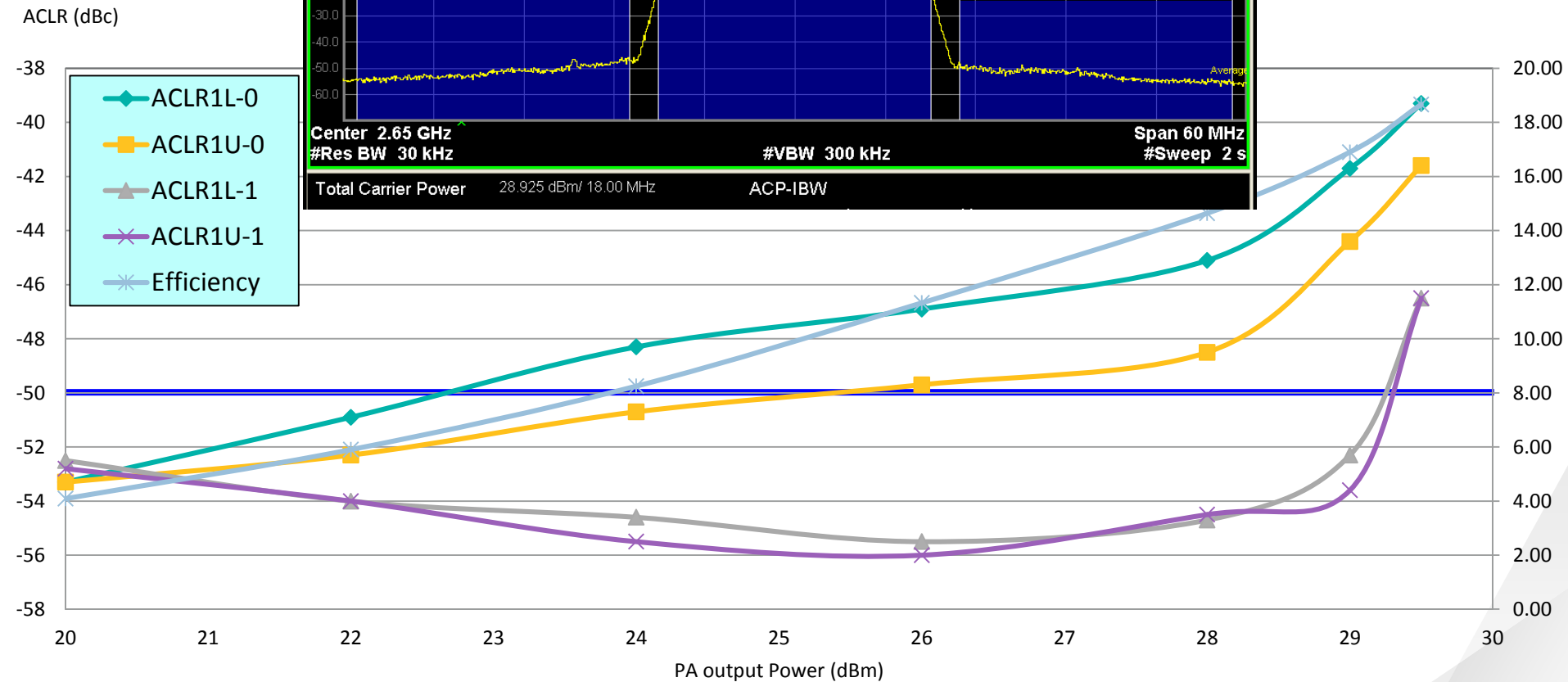
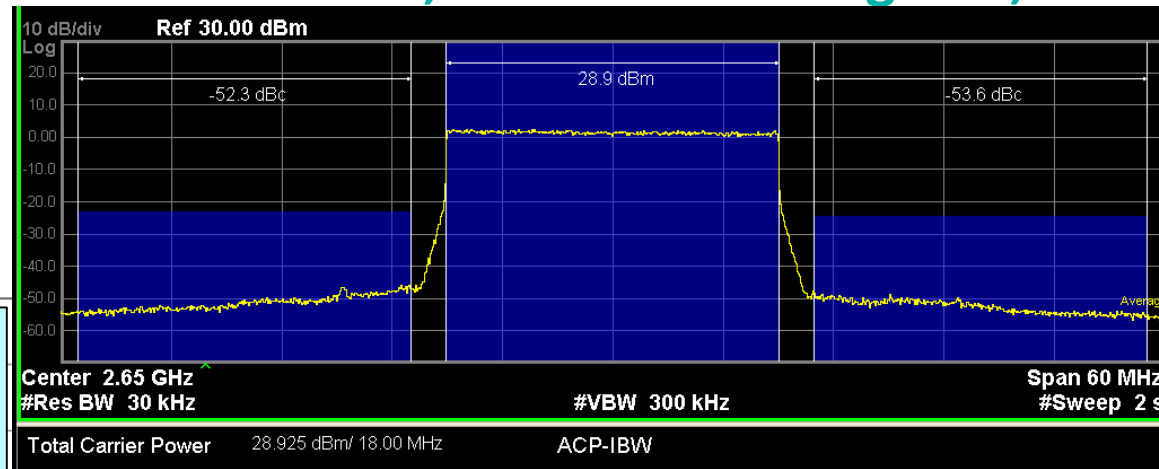
FW5.0.09.04

Freq= 2650 MHz

Vdd = 5.0 VDC, Vc1=2.2V, Vc2=2.0V, Vc3=2.2V

LTE 20MHz 7.0dB PAPR $F_c = 2650\text{MHz}$

Smooth Mode Cal., at +29dBm using GUI, $\text{PDET} = 1$



RFIN_dBm	RFOUT_dBm	RFFB_dBm
-8.4	-8.1	-14.9

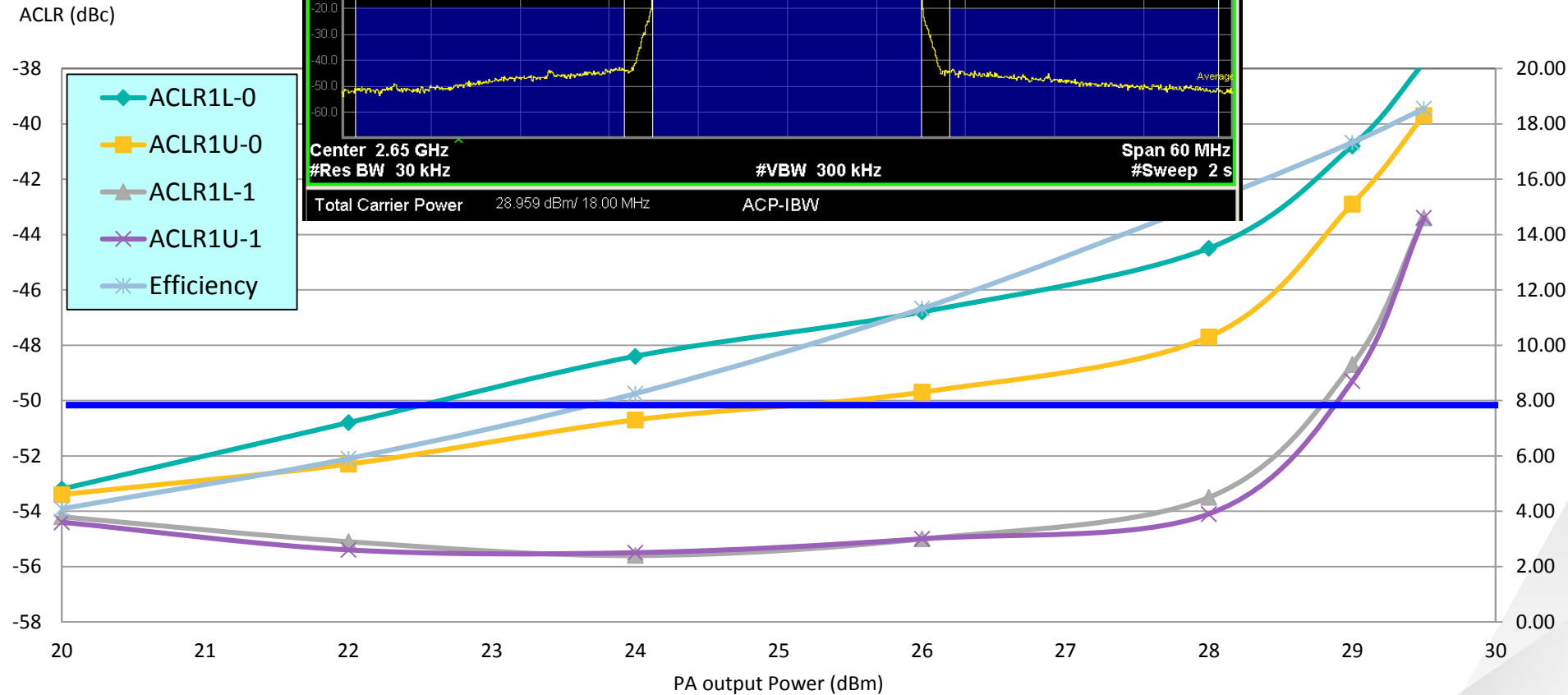
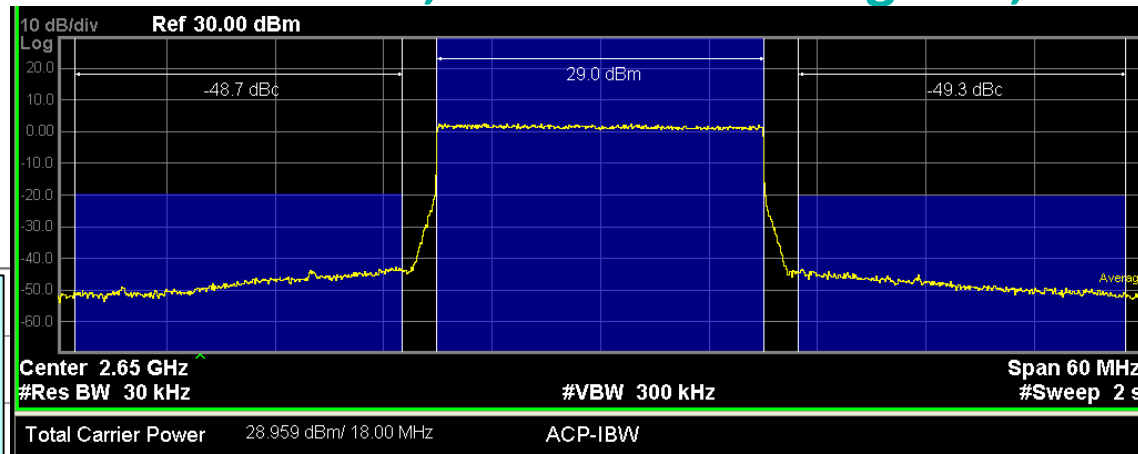
FW5.0.09.04

Freq= 2650 MHz

Vdd = 5.0 VDC, Vc1=2.2V, Vc2=2.0V, Vc3=2.2V

LTE 20MHz 7.5dB PAPR $F_c = 2650\text{MHz}$

Smooth Mode Cal., at +29dBm using GUI, PDET = 3



RFIN_dBm	RFOUT_dBm	RFFB_dBm
-6.6	-6.2	-14.9

FW5.0.09.04

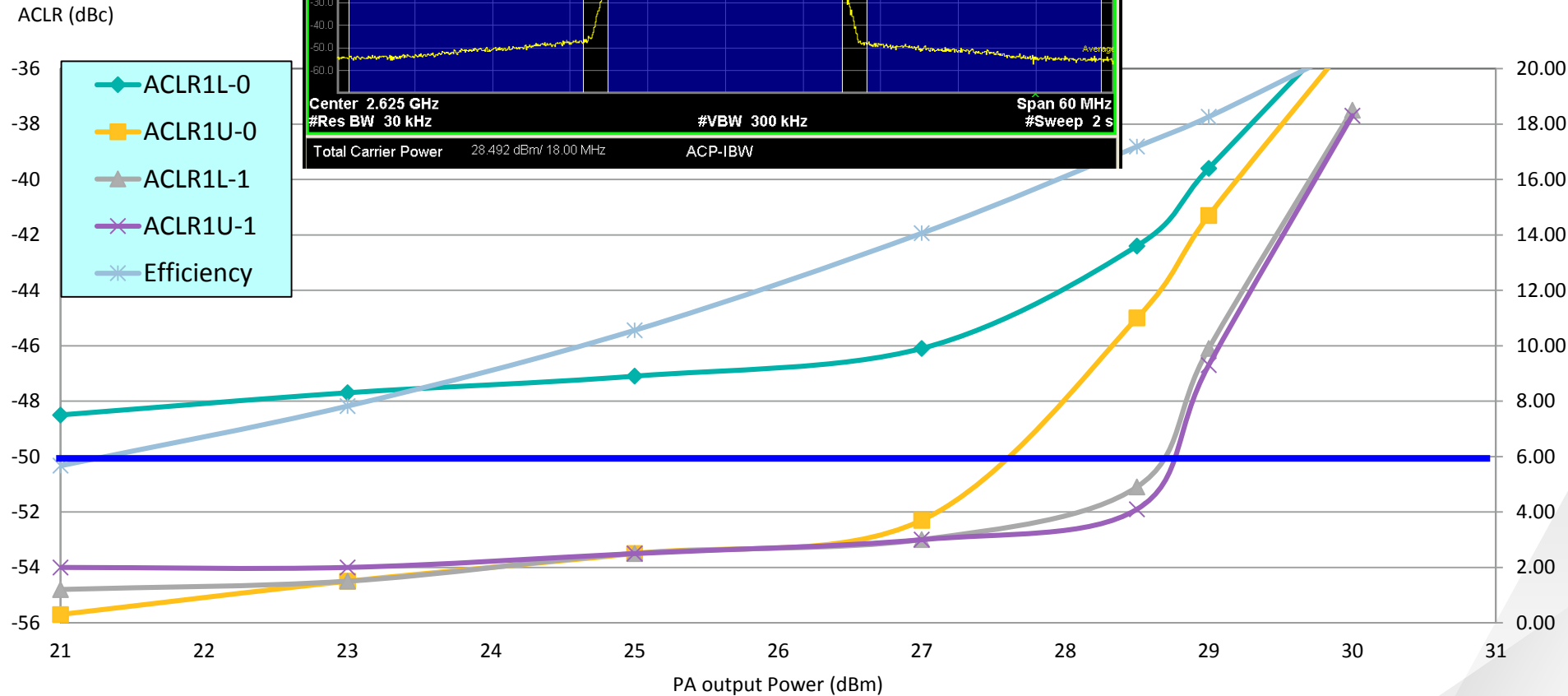
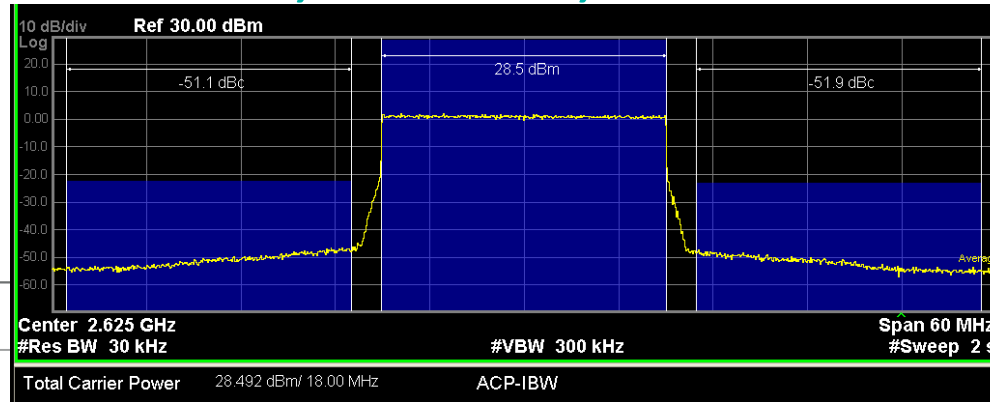
Freq= 2650 MHz

Vdd = 5.0 VDC, Vc1=2.2V, Vc2=2.0V, Vc3=2.2V

LTE 20MHz 7.5dB PAPR Fc = 2625MHz

0ns delay, 0dB atten., Smth Cal., at +28.5dBm using GUI, PDET = 1

Vdd = 5.0V



RFIN_dBm	RFOUT_dBm	RFFB_dBm
-9.1	-4.4	-15.3

FW5.0.09.04

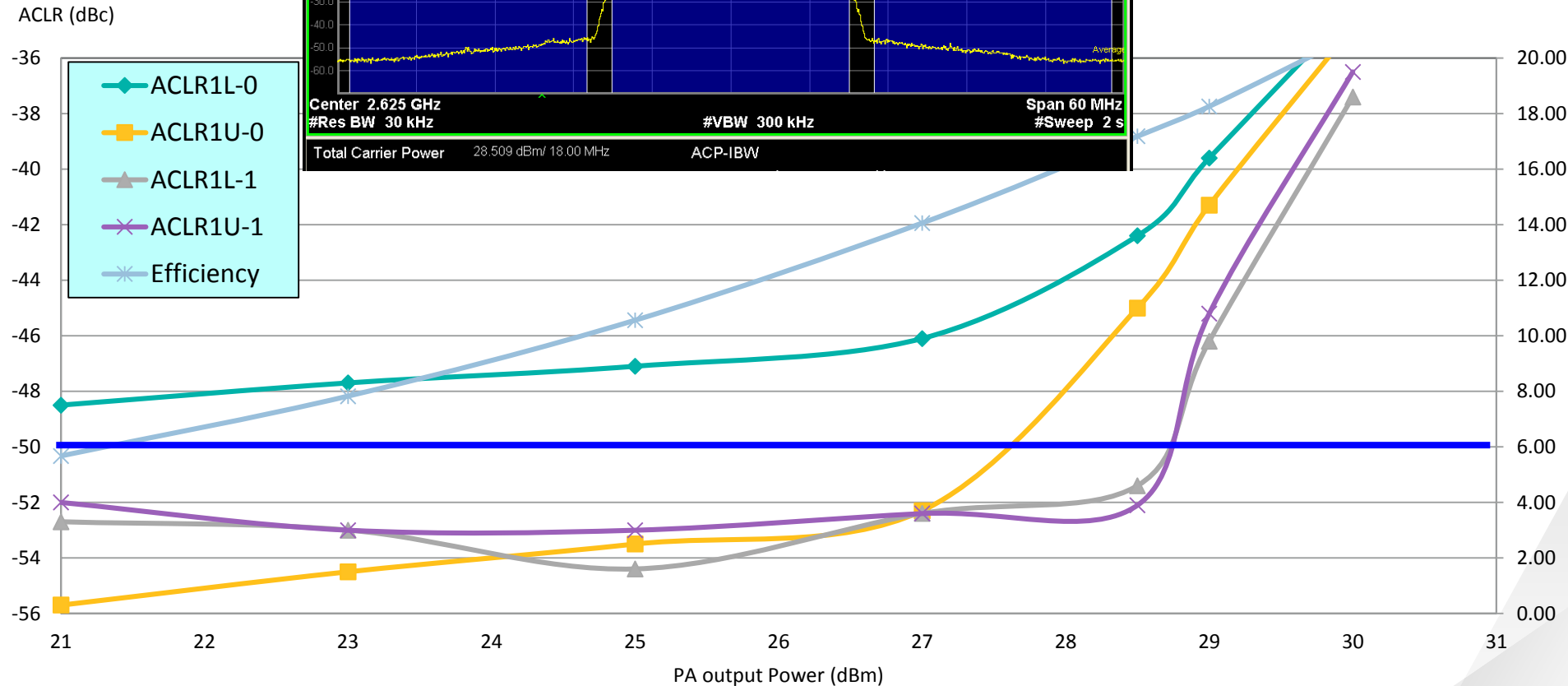
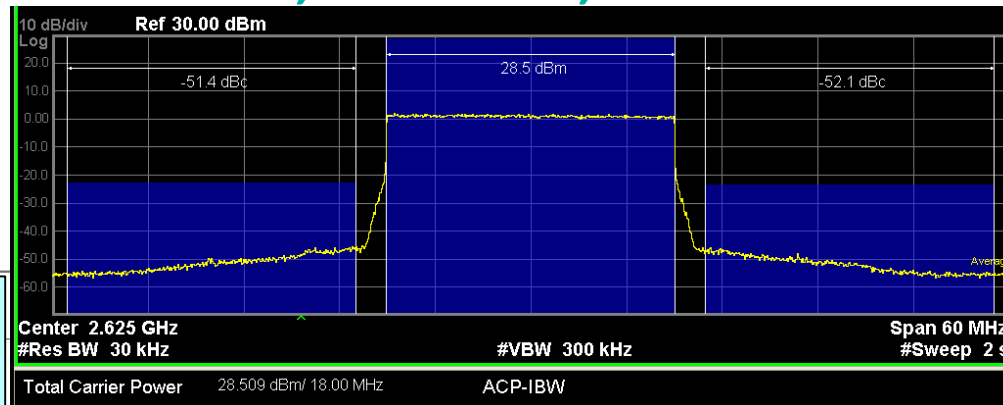
Freq= 2625 MHz

Vdd = 5.0 VDC, Vc1=2.0V, Vc2=1.8V, Vc3=1.8V

LTE 20MHz 7.5dB PAPR Fc = 2625MHz

0ns delay, **5dB atten.**, Smth Cal., at +28.5dBm using GUI, PDET = 1

Vdd = 5.0V



RFIN_dBm	RFOUT_dBm	RFFB_dBm
-9.0	-9.3	-15.3

FW5.0.09.04

Freq= 2625 MHz

Vdd = 5.0 VDC, Vc1=2.0V, Vc2=1.8V, Vc3=1.8V