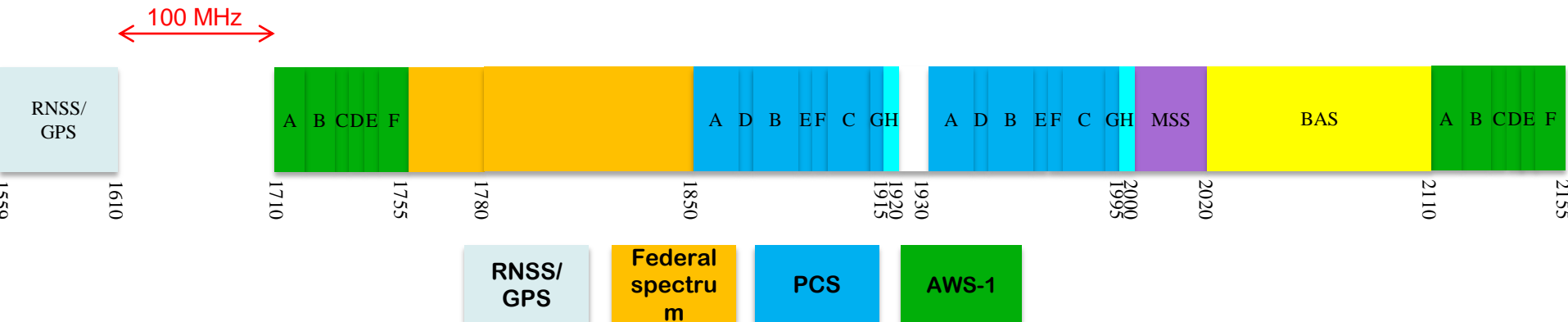


T-Mobile Stays Compatible with Adjacent Allocations

FCC GPS Workshop
June 20, 2014

T-Mobile bands are distant from RNSS/GPS

- T-Mobile bands are 100 MHz or farther away from the RNSS/GPS band, should have little concern to the RNSS/GPS band
- T-Mobile operating bands:
 - The AWS-1 band: 1710-1755; 2110-2155
 - The PCS band: 1850-1910; 1930-1990
 - Band 12: 699-716; 729-746
- The RNSS/GPS band is in 1559-1610
 - GPS receiver centered at 1575.4 MHz

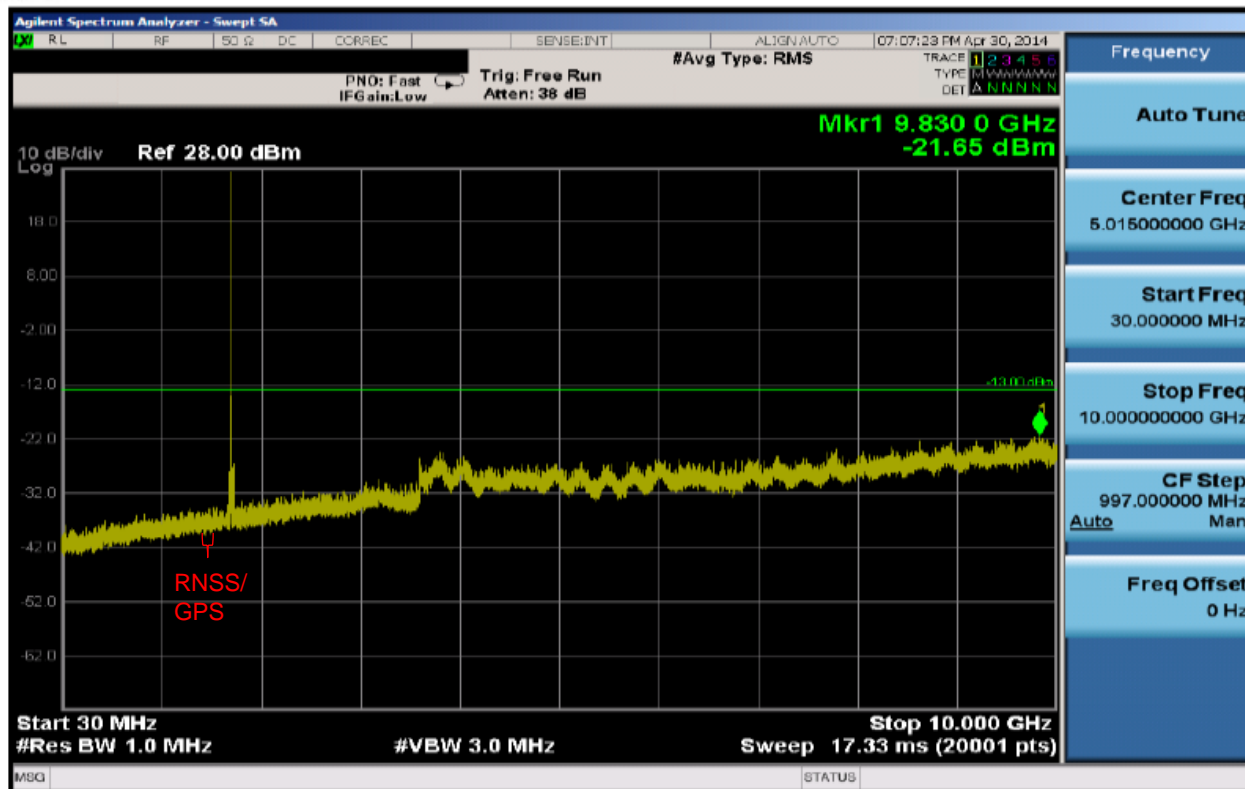


T-Mobile compatible with adjacent allocations

- T-Mobile manages interference and stays compatible with adjacent allocations, compliant with the FCC rules and 3GPP standards
- FCC OOBE rule
 - $43 + 10 \cdot \log(P)$,
 - or -13 dBm/MHz
- 3GPP requirements
 - Out of band emissions
 - Spurious emissions

T-Mobile Band 4 LTE UE Compliant with FCC OOB

- Source: Measurement Report, FCC part 22, 24, & 27 LTE
 - EUT: Samsung portable handset, FCC ID: A3SLMG386T

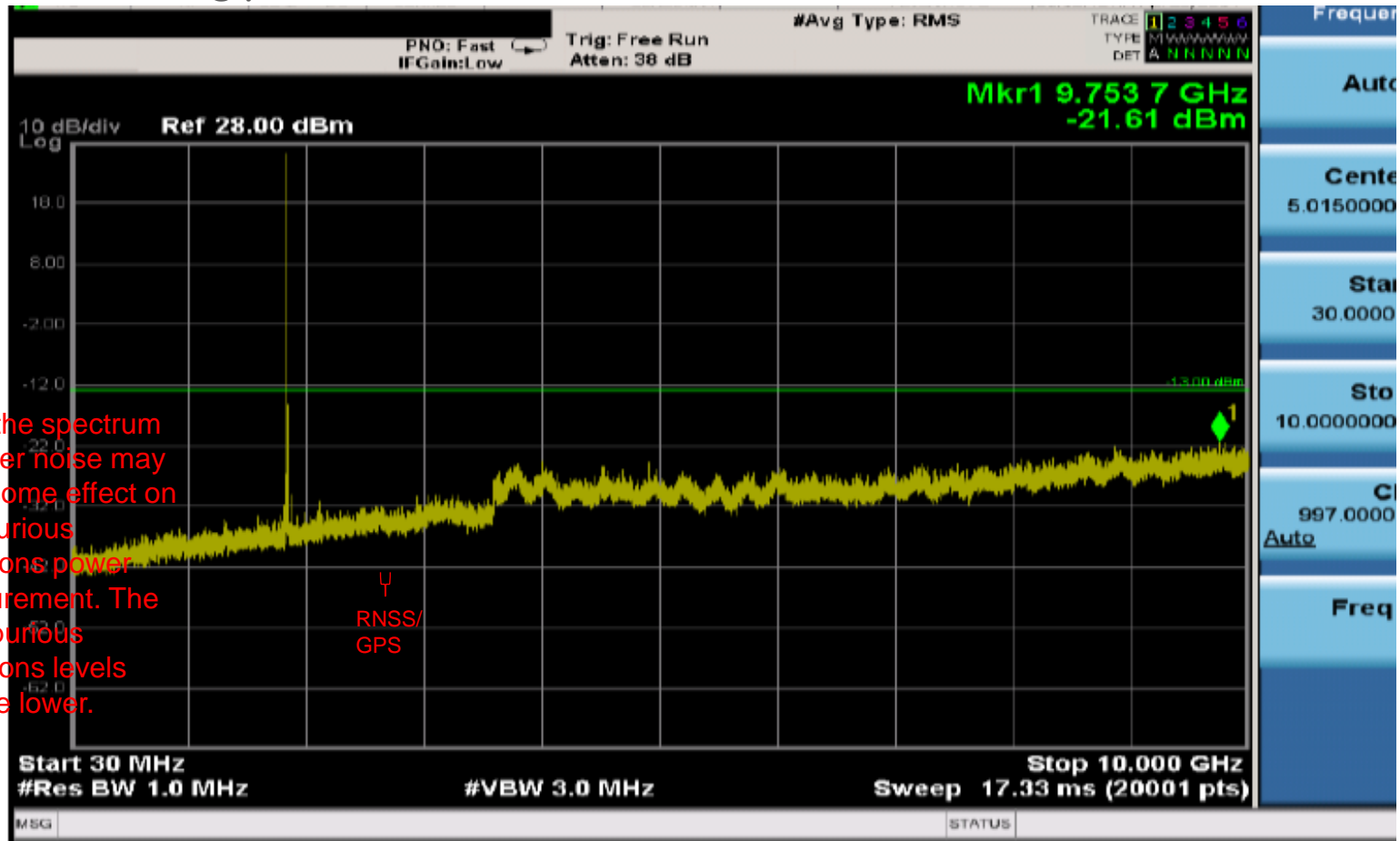


Note: the spectrum analyzer noise may have some effect on the spurious emissions power measurement. The true spurious emissions levels may be lower.

Plot 6-53. Conducted Spurious Plot (Band 4 – 20.0MHz QPSK – RB Size 1, RB Offset 0– Low Channel)

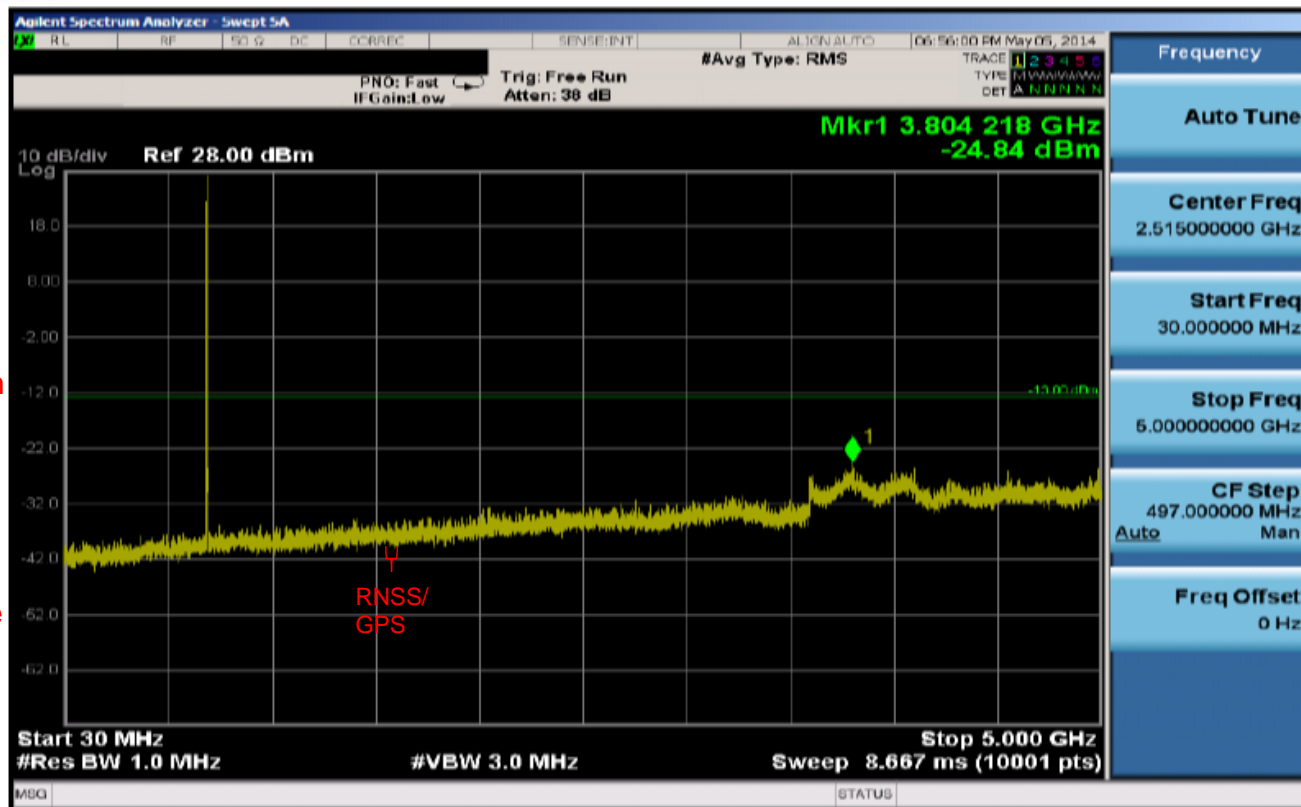
T-Mobile Band 2 LTE UE Compliant with FCC OOB

- Source: Measurement Report, FCC part 22, 24, & 27 LTE
 - EUT: Samsung portable handset, FCC ID: A3SLMG386T



T-Mobile Band 12 LTE UE Compliant with FCC OOB

- Source: Measurement Report, FCC part 22, 24, & 27 LTE
 - EUT: Samsung portable handset, FCC ID: A3SLMG386T



Note: the spectrum analyzer noise may have some effect on the spurious emissions power measurement. The true spurious emissions levels may be lower.

Plot 6-45. Conducted Spurious Plot (Band 12 – 10.0MHz QPSK – RB Size 1, RB Offset 0 – High Channel)