The **UHF Solid State Power Amplifier** is the UHF version of Thales Alenia Space Spain’s HPA product suite, building on a comprehensive portfolio of data transmitters with built-in SSPA’s and stand-alone HPA’s in several frequency bands (UHF, S, C, X, Ku) for all types of space missions and applications: telecommunication, navigation, Earth observation, science, exploration, space vehicles and orbital infrastructure.

/// 100W RF output power

/// High efficiency

/// Compact GaN technology

/// Flexible output power and Fixed Gain mode available

/// Overdrive protection

### COMPETITIVE ADVANTAGES

/// High efficiency

/// Cost effective solution

/// Space qualified HiRel GaN technology with flight heritage

/// High power SSPA with commandable 100W power

/// Flexible product with in-flight configurability

/// Compatible with most of the main satellite platforms: available in 22…50V and 70…100V versions

/// Compatible with all type of orbits: LEO, MEO, GEO, Near Earth
MAIN FEATURES

GENERAL

/// HPA mass: 4 kg
/// HPA size: 245 x 325 x 57 mm3
/// Primary bus voltage: 100V (other available)
/// FGM closed loop and OLC modes
/// Overdrive control
/// SMA input / TNC output
/// Output built-in isolator
/// TM/TC housekeeping interface options:
///   Pulse high level command

OPTIONAL CONFIGURATIONS

/// UHF Filter/Diplexer
/// Several interface options
/// ALC mode
/// Flexible output power by command

MAIN PERFORMANCES

/// RF power 50dBm
/// Intermods 3 carriers with C/I3 of 17 dB (90W)
/// Consumption: 225W EOL for 100W RF output
/// Gain and RF power variation over temperature <0.2dB
/// Gain variation over frequency <0.4dB
/// Harmonic generation > 55dBC

EXPERIENCE

/// UHF SSPA for SPAINSAT NG telecom mission
/// Extensive heritage in S, C, X and Ku band product suite, with more than 500 units delivered:
/// 360 TT&C transponders in S-Band over the last 30 years for all type of missions: Sentinel, Cygnus, ATV, GEOKOPMSAT-2...
/// 12 transmitters and transponders in X-Band: Herschel, Planck, Syracuse, GK2
/// 22 QPSK modulators in VHF, L and C bands: MetOp, Meteosat SG, COMS...
/// 170 TM transmitters and beacons in C and Ku bands

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