

# SmartSpiceRF

Release Notes

12/07/11

## **RELEASE NOTES**

### **VERSION 1.9.1**

#### **ALTERATIONS AND ENHANCEMENTS**

- SPECTRE compatibility: Enhance PSF writer functionality on Windows platform

### **VERSION 1.7.17**

#### **NEW FEATURES**

- Memory-efficient Shooting method algorithm for full chip RC-extracted netlists simulation

#### **ALTERATIONS AND ENHANCEMENTS**

- SPECTRE compatibility: Output HAC and HTF analysis results relatively to sideband number
- Improve simulation run-time statistics to be compatible with HSPICE

### **VERSION 1.7.16**

#### **NEW FEATURES**

- Evaluation of time-domain defined sources for Harmonic Balance based analyses over given harmonics number

#### **ALTERATIONS AND ENHANCEMENTS**

- Upgrade model versions of independent sources for harmonic balance analysis:
  - ISRC from version 1.8.5
  - PORT from version 1.8.4
  - VSRC from version 1.8.7
- Enhance time-frequency domain conversion for low duty cycle pulses

### **VERSION 1.7.15**

## NEW FEATURES

- Periodic stability analysis of feedback circuits

## ALTERATIONS AND ENHANCEMENTS

- SPECTRE compatibility:
  - Enhance PSF data reader/writer to support SPECTRE MMSIM 5.0/7.0/10.0 formats
  - Support of PSS loaded data output as OP plots for small-signal analysis

## VERSION 1.7.14

### NEW FEATURES

- Sideband phase noise simulation for forced oscillators and non-autonomous circuits

### ALTERATIONS AND ENHANCEMENTS

- SPECTRE compatibility: Add writing/loading of analysis statements created in GUI

## VERSION 1.7.12

### NEW FEATURES

- Output S-parameters simulated data from periodic network analysis as Touchstone file

### ALTERATIONS AND ENHANCEMENTS

- Enhance phase noise simulation flow for frequency dividers with single and differential outputs

## VERSION 1.7.10

### ALTERATIONS AND ENHANCEMENTS

- Support one-time evaluation of non-linear C, L, and R devices over PSS for small-signal analysis
- Enhance behavior device model for Harmonic Balance analysis
- Upgrade model versions of nonlinear devices:

- ASRC from version 1.8.7
- CAP from version 1.8.7
- IND from version 1.8.2
- RES from version 1.8.10

## **VERSION 1.7.8**

### **NEW FEATURES**

- Multidimensional tuning curve of VCO with shift registers calculation

### **ALTERATIONS AND ENHANCEMENTS**

- Remove unconnected voltage sources in netlist for harmonic balance analysis

## **VERSION 1.7.6**

### **ALTERATIONS AND ENHANCEMENTS**

- Enable phase noise evaluation at the differential output in Harmonic Balance based HOSCIL analysis

## **VERSION 1.7.4**

### **NEW FEATURES**

- Parametric sweep with .ST analysis for Periodic Steady-State by Shooting method

## **VERSIONS 1.7.1**

### **NEW FEATURES**

- Multidimensional parametric sweep for Periodic Steady-State analysis by Shooting method

### **ALTERATIONS AND ENHANCEMENTS**

- Enhance parametric sweep for Harmonic Balance based HOSCIL analysis with Transient Initial Guess