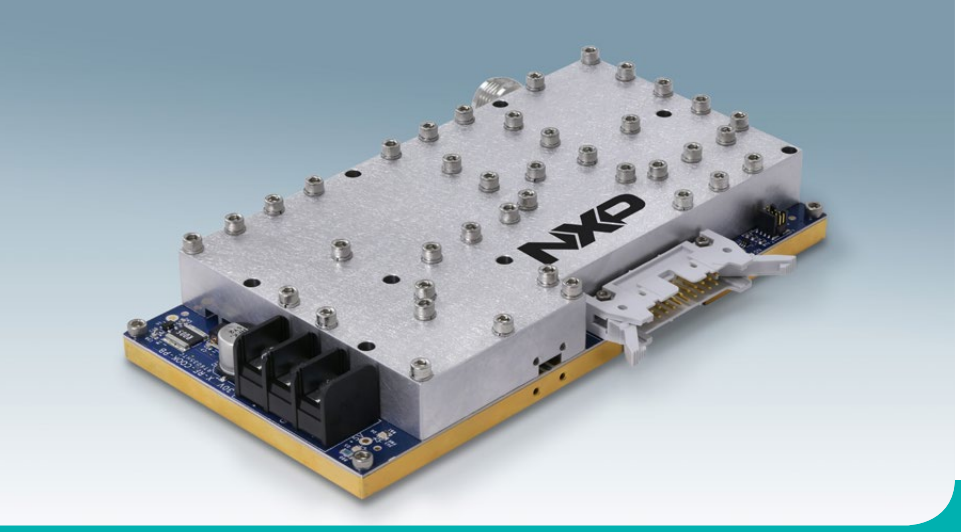


Module subsystem for solid-state energy

RFEM24-250 2.45 GHz RF Energy Module

The RFEM24-250 is a fully integrated 2.45 GHz, 250 W RF generator module that includes full measurement capabilities. Its microcontroller includes an RF source that drives a 3-stage RF amplifier lineup. Its comprehensive command set controls parameters such as frequency, phase and power. The extensive measurement system provides calibrated data from multiple internal sensors and supports closed loop operations.

FEATURES

- RF module subsystem with integrated RF source
- 50 ohm output port
- I^2C communications interface
- Comprehensive sensing includes:
  - forward and reflected RF power
  - current and voltage
  - temperature
- Integrated hardware-based fault protection
- Up to 4 modules can be combined and synchronized

TYPICAL PERFORMANCE

Frequency	2400-2500 MHz
RF power output	250 W @ 30 V
Efficiency	57%
Output amplifier power	24-32 V, 15 A Max
VSWR	Unlimited
RF power measurement	± 5%
Control power	5 V, 0.5 A Max

CHOOSING A SOLUTION

Which Solution Works Best for Me?

- RFEL24-500
- RFEM24-250
- RFEP24-300



RFEM24-250 RF energy module includes:

- I²C controlled module
- Interface documentation for module runtime software

User needs to supply:

- Cooling system (heatsink, fans), 30-32 V, 500 W power supply unit, USB to I²C interface
- Software for interacting with the module



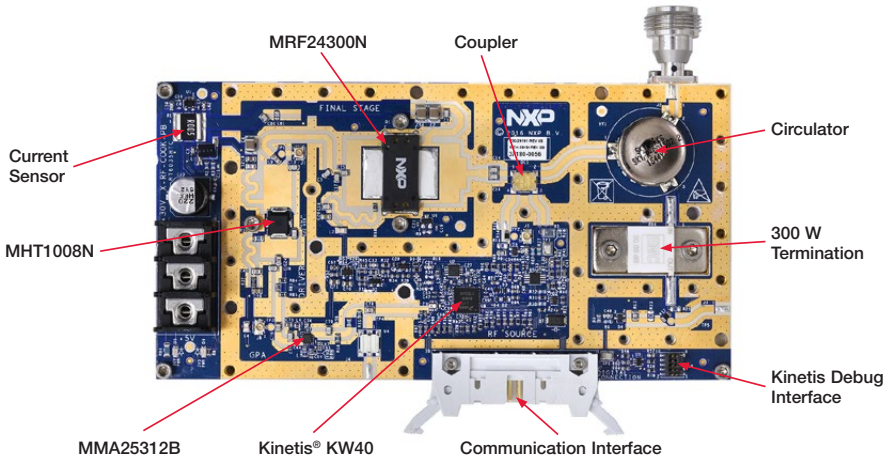
RFEL24-500 RF energy lab box is a complete turnkey solution including two modules and hardware peripherals as well as a PC-based GUI and API (object code only).



RFEP24-300 RF energy pallet is a reference design that includes pre-driver, driver and final-stage amplifiers.

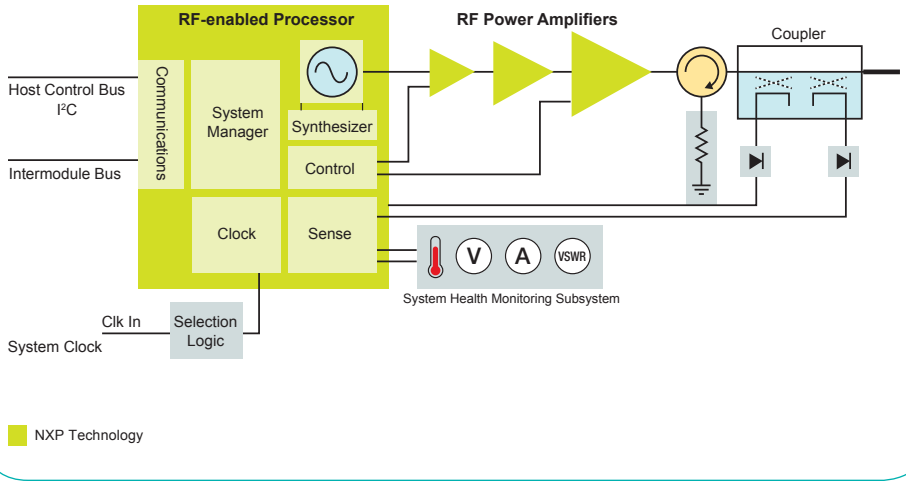
Note: Schematics and layout of the hardware are not included (module is not a reference design)

HARDWARE OVERVIEW



Size: 5.5" x 3.2" x 1"
(14 cm x 8 cm x 2.5 cm)

BLOCK DIAGRAM



www.nxp.com/RFenergy

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RFEM24-250FS Rev. 1
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