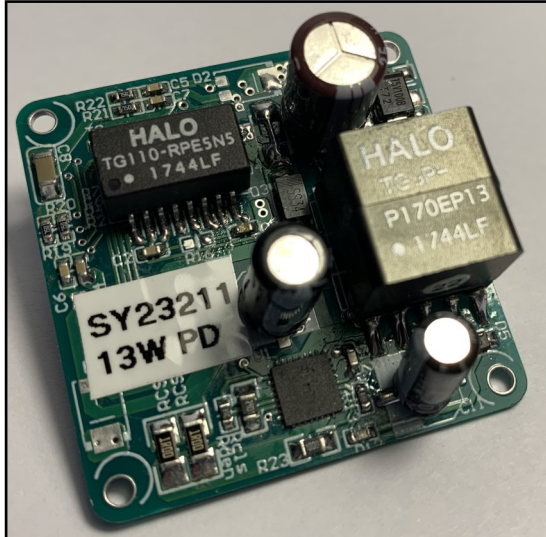




# SY23211A

*Fully integrated Primary Side Convertor for Connected IoT combined with a PoE PD interface supporting IEEE802.3af*



Supports the IEEE 802.3af standard Type 1 PDs

Power up to 13W(input) PDs

Primary Side Control - lowers cost

Integrated 150V, 0.15Ω MOSFET for converter

Integrated 100V, 0.7Ω Hot-swap MOSFET

Quasi-Resonant for improved efficiency and EMI

Compact package: QFN5\*5-32L

The SY23211A is a combined PoE PD interface and QR-mode DC-DC convertor optimised for isolated designs requiring support for IEEE 802.3af. The SY23211A uses Primary Side Regulation, removing the need for additional Secondary Side sensing and isolation components. The SY23211A also integrates both MOSFETs for the Hot-Swap function and DCDC convertor, ensuring a low external BOM cost and smaller solution size.

## Performance Evaluation

V <sub>in</sub> [Vdc]	P <sub>in</sub> No load [mW]	V <sub>out</sub> No load [V]	ΔV <sub>out</sub> No load [mV]	V <sub>out</sub> Full load [V]	ΔV <sub>out</sub> Full load [mV]	Average Eff.
37	74.78	11.94	36.0	11.87	170	84.296%
48	75.87	11.97	48.0	11.91	156	85.758%
57	77.00	11.98	58.0	11.91	154	86.318%

**HALO Electronics** have designed optimised 3.3V/5V/12V DCDC output transformers for the SY23211A and a newly released Evaluation Board using [HALO TG110-RPE5N5LF](#) 10/100 data transformer and [HALO TGSP-P170EP13LF EP13](#) power transformer demonstrates excellent line & load regulation and high average efficiency (as shown above) and is available for immediate evaluation. [\[WEBLINK:HALO\]](#)

**Silergy's range of PoE Convertors simplify power for Connected IoT**