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HISTORY AND TIMELINE

Ericsson Power Modules

A HISTORY OF SUCCESSFUL DEVELOPMENT (1977–1999)

PKA
Ericsson's first on-board DC/DC power module, elected Product of the Year1983; 5 times smaller and 20 times higher reliability with MTBF>2 million hours.

PKC
First high density, low profile DC/DC power modules. ½ size of conventional products and up to three regulated outputs.

PKF MacroDens™
5-15 W product platform. The first true component SMD DC/DC converter for highly automated manufacturing processes. MTBF>4.9 million hours.

PKG
First standard on-board DC/DC converter to use high power direct die-bounding. Takes power density and thermal performances to an unprecedented level.

PKJ 4000
The result of High Efficiency platform development. Awarded Product of the Year 1999 as "The highest Power Density in the market."

1977
Ericsson Power Division begins research into high frequency switching DC/DC converters.

1981
Power Modules operation established within Ericsson.

1983
World's first high frequency switching DC/DC power modules launched.

1987

1988
Development of first true component power supply starts.

1993
First miniaturized DC/DC converter launched.

1996
Joint venture established in Shanghai, China - Shanghai Ericsson Simtec Electronic Company Ltd.

1997
High efficiency platform develop-ment aiming to break the 90% barrier in an Ultra Low Profile packaging (ULP).

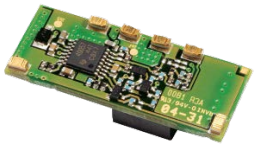
1999
High-power, high density standard brick launched.

A HISTORY OF SUCCESSFUL DEVELOPMENT (2001-2005)

PKD
First 15-50 W lead-free SMD converter meeting market requirement for lead-free soldering and ready for the European RoHS legislation.

PKM-C
First 80 A ¼ brick reaching the highest level of power density combined with improved thermal management and the implementation of “The Double P” footprint.

PKU
Introduction of 1/16 brick DC/DC converter based on highly integrated topology and ultimate miniaturization.



Point of Load (POL)
Complete product offering of DC/DC converters and point-of-load regulators for distributed power architecture.

PKR
Introducing the evolution of the highly successful Macrodens family using open frame technology.

2001
World’s first DC/DC converter intended for lead-free soldering.

2002
Ericsson Power Modules AB formed as an autonomous company.

2003
World’s first 80 A quarter brick launched.

2004
30 millionth MacroDens PKF shipped to market. Membership of DOSA and POLA.

2005
Membership of PMBus Group for development of digital power.

A HISTORY OF SUCCESSFUL DEVELOPMENT (2006-2007)

Intermediate Bus Converters (IBC)
Introduction of ultra high efficiency, high power density IBCs for wide and narrow input voltages applications.

High power drop-in replacement
Introduction of high efficiency, high power density eighth brick for direct replacement of ¼ bricks.

Full Brick Power Amplifier Converter
Introduction of high efficiency, high power density full brick for powering of Power Amplifiers.

MicroTCA power module
Introduction of a new revolutionary power module designed for use in MicroTCA rack systems.

Third-generation POLA™ products.

Introduction of point-of-load modules with TurboTrans™ functionalities.

2006

Driving implementation of Digital Power concept.
60 millionth MacroDens shipped to market from 1983.

2007

Ericsson Power Modules merged into Business Unit Networks.
Divesture of Kalmar plant to the Swedish company Proxy Electronics AB.
Introduction of MicroTCA power module.

A HISTORY OF SUCCESSFUL DEVELOPMENT (2008-2011)

BMR 453 series

Introduction of the first fully digitally controlled and programmable 3E ¼ brick DC/DC converter.

BMR 450 and 451

Introduction of new digitally controlled 3E POL regulators.

Application Specific Solutions
Power Modules offering of application and customer specific products and solutions strengthened.

BMR 454 series

Industry first fully digitally controlled and programmable 1/8 brick DC/DC converter.

BMR 463

Second generation 3E POL regulator introduced.

2008

Introduction of first fully digitally controlled and programmable quarter brick DC/DC converter and 20 A and 40 A digitally controlled regulators.

2009

Received the 2008 ”Product of the year” award of Electronic Products US for the BMR 453.

2010

Introduction of full read and write capability in POL regulators.

2011

Introduction of full read and write capability in POL regulators.

A HISTORY OF SUCCESSFUL DEVELOPMENT (2012-2015)

30th Anniversary

Ericsson Power Modules celebrates 30 years of technology innovations in board power modules

BMR 461

12x12 mm LGA POL digitally controlled with Dynamic Loop Compensation (6A to 18A)

PKM-NH

High power density quarter-brick (864W) built on Hybrid Regulated Ratio topology

BMR 463 25A
BMR 464 50A

Launch of second generation of 3E digital POL with Dynamic Loop Compensation

BMR 465

90A digital POL with enhanced Dynamic Loop Compensation. Easy paralleling up to 360A

2012

Received the 2012 ”Green Electronic Elektra Award” recognizing Ericsson’s innovations reducing energy consumption

2013

Introduction of novel topology (Hybrid Regulated Ratio) in high-power modules – Highly integrated 3E digital POL in 12x12 packaging.

2014

Received the French Electron d’Or for 3E digital POL second generation
Forming the AMP Group with CUI and Murata PS

2015

Portfolio positionning for Software Define Power Architecture

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