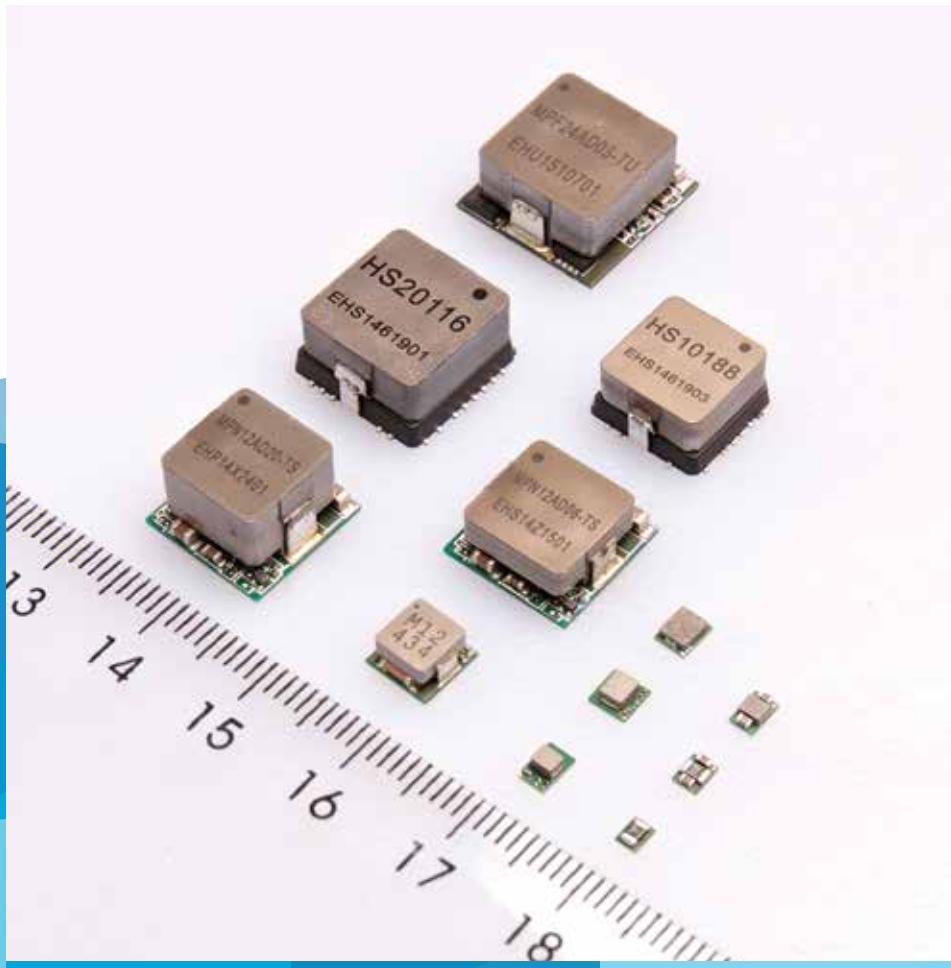




DC-DC Converter Point of Load

Making Things Smaller and Better



Cyntec

Since 1991 Cyntec's team of scientists and engineers has been known to lead the way in the research and development of the miniaturized and highly integrated products.

Using the most advanced design and processing technologies, Cyntec has established the following four technology platforms:

- Passive components
- Sensors
- High frequency RF components
- Power modules

The customers base is widely spread over different industries such as appliance, automotive, computer and communication.

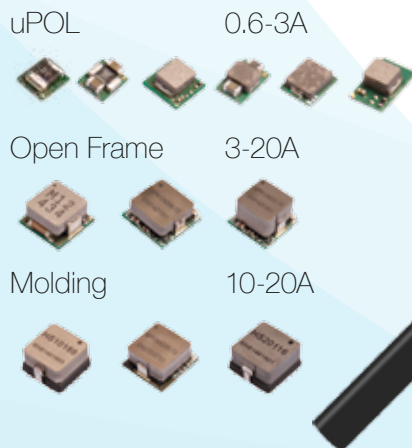
Point of Load

One of the key products of the Cyntec Power Modules are the Point of Load (POL) DC-DC converters. The POL Modules integrate controller chips, chokes and I/O capacitors into a single power management package for step-down or step-up applications.

The low profile and compact size of the converters enable significant saving of board space. The high efficiency enhances application performance and the design structure allows automated assembly by standard surface mount equipment.

Cyntec stands for strong and timely design, as well as development support for customized products and packages.

Module Overview



Less Waste

75% Space Saving

Plug 'n Play

High Efficiency Performing

Easy Usage

Technology & Knowledge



Magnetics

In house development of raw material and processes. Excellent performance by using high frequency core and low AC-copper materials.



Semiconductors

Utilizing low FOM Silicon and GaN MOSFETS, which enables the development of high power/small sized products.



Packaging

Availability of advanced packing technologies as SIP, open frame, stacking and molding.



Topology

Usage of high frequency low loss components and substrate level connections.

Advantages & Benefits



Time saving

Simple and flexible power design. Easily adjustable when a power requirements change is needed.



Miniaturization

Modular design, combining IC, magnetics and other passives into a single component. Up to 75% space reduction.



Efficiency

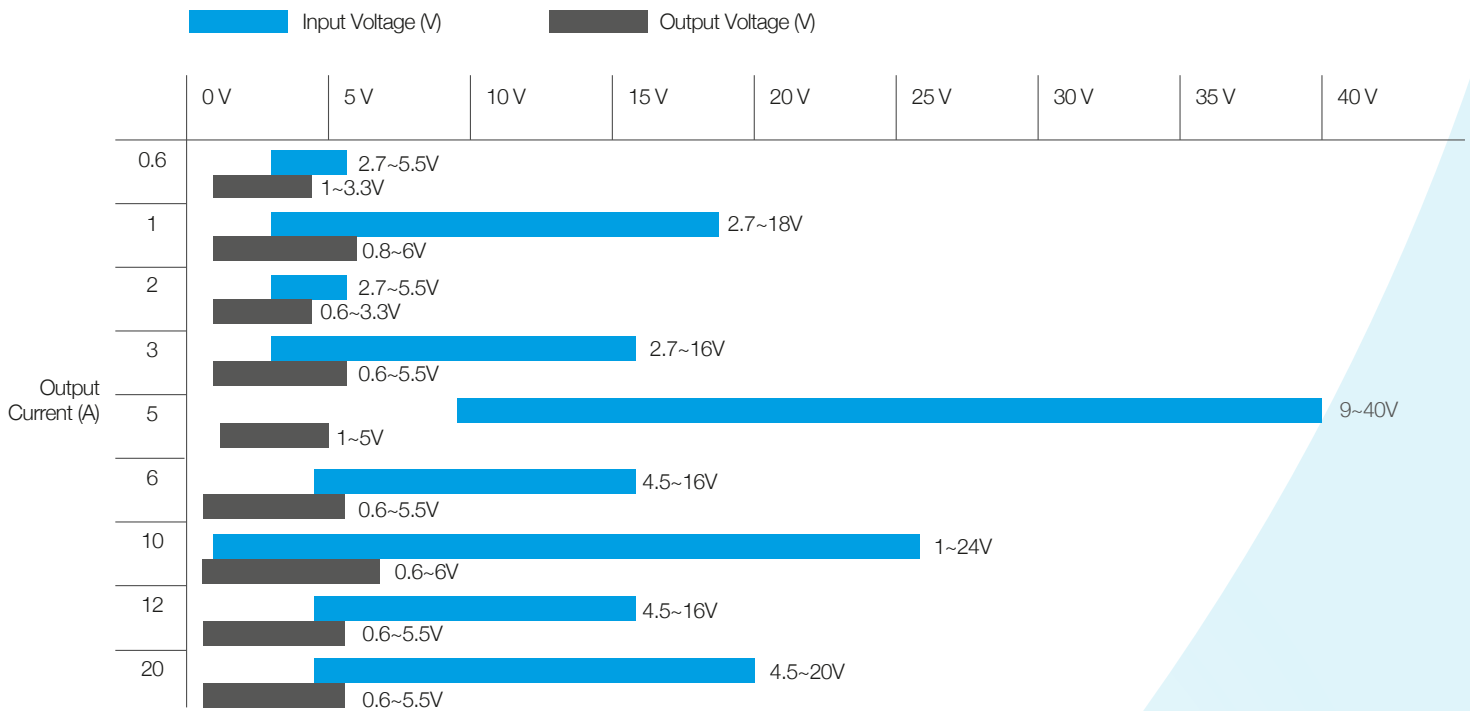
High efficiency - up to 95%, and extremely low standby current. Resulting in low power consumption and long battery life.



Environmentally friendly

Sustainable products with less waste and low energy consumption.

Voltage Ranges



Selection Guide

Iout (A)	Partnumber	Vin (V)		Vout (V)		Efficiency (%)	Dimensions (mm)		
		Min	Max	Min	Max		L	W	H
0.6	MUN3CADR6-EC	2.7	5.5	1	3.3	93% @ 3.3Vin	2.9	2.3	1.2
0.6	MUN3C1BR6-EB	2.7	5.5	1.2	Fixed	85% @ 3.3Vin	2.5	2	1
0.6	HU415610	2.7	5.5	1.5	Fixed	93% @ 3.3Vin	2.9	2.3	1.2
0.6	MUN3C1HR6-EB	2.7	5.5	1.8	Fixed	85% @ 3.3Vin	2.5	2	1
0.6	HU425610	2.7	5.5	2.5	Fixed	93% @ 3.3Vin	2.9	2.3	1.2
1	MUN3CAD01-EE	2.7	5.5	0.8	4	95% @ 3.3Vin	3.5	2.3	1.3
1	MUN12AD01-SH	4.5	17	1	5	95% Peak Efficiency @ 12Vin	3.5	3.5	1.7
1	MUN12AD01-SG	4.5	18	0.8	6	94% @ 5 Vin to 3.3 Vout	3.9	2.6	1.7
2	MUN3CAD02-MG	2.7	5.5	0.6	3.3	95% Peak Efficiency @ 5Vin	3	3.7	1.2
3	MUN3CAD03-MG	2.7	5.5	0.6	3.3	95% Peak Efficiency @ 5Vin	3	3.7	1.2
3	MUN12AD03-SM	4.5	16	0.6	5.5	95%	6	6	3.5
3	MPC03DEF00	8	15	2.5	5.5	95%	6	6	3.3
5	MPF24AD05-TU	9	40	1	5	94%	15	15	7.4
6	MPN12AD06-TS	4.5	16	0.6	5.5	97% Peak Efficiency	12.2	12.2	5
10	HS10188	4.5	24	1	6	96% Peak Efficiency	12	12	6
10	HM10107B	1	15	0.6	5.5	96% Peak Efficiency	15	15	3.5
12	MPN12AD12-TS	4.5	16	0.6	5.5	97% Peak Efficiency	12.2	12.2	8.4
20	MPN12AD20-TU	4.5	15	1	5	97% Peak Efficiency	15	15	7.4
20	MPN12AD20-TS	4.5	14.5	0.6	5	97% Peak Efficiency	12.2	12.2	8.4
20	HS20116	4.5	20	0.8	5.5	96% Peak Efficiency	14.5	14.5	7.5

Please check the Cyntec website for new products, updates and releases. E.g. 24V/2A item is coming soon.

Cyntec Products

Power Choke



High Performance Power Choke
Sealed Power Choke
Molded Power Choke
Assembly Power Choke

RF Component



Chip Inductor
BPF/Diplexer
Balun/ Balance Filter
Attenuator

Thin & Thick Film R/RN



Chip Resistor
Resistor Network

Current Sensing resistors



Series of current censoring resistors for different field applications

PT Sensor



The Platinum Resistance Temperature Detector Chip (Pt-RTD)

Protector



Fuse-Resistance Protector

Brand of Delta

Cyntec is part of the Delta Group. The Delta Group is the world's largest provider of switching power supplies and DC brushless fans. Delta has developed power management solutions, components, visual displays, industrial automation, networking products and renewable energy solutions.

www.deltaww.com

For datasheet, application notes and design guides, please visit www.cyntec.com

