

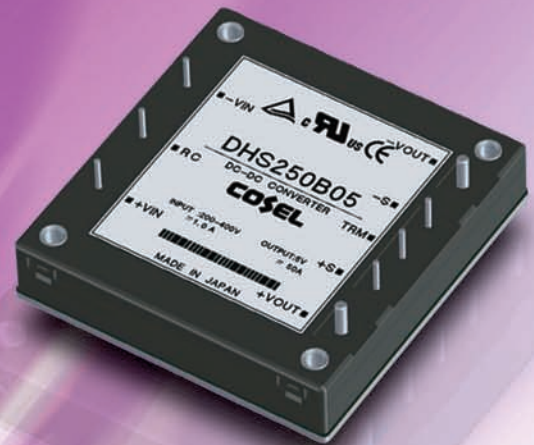
RoHS
Compliant

Power Module Type DC-DC converter
CQHS/CBS series
CES/CQS series
DHS/DBS series

5 Year warranty

COSEL

www.cosel.co.jp/en



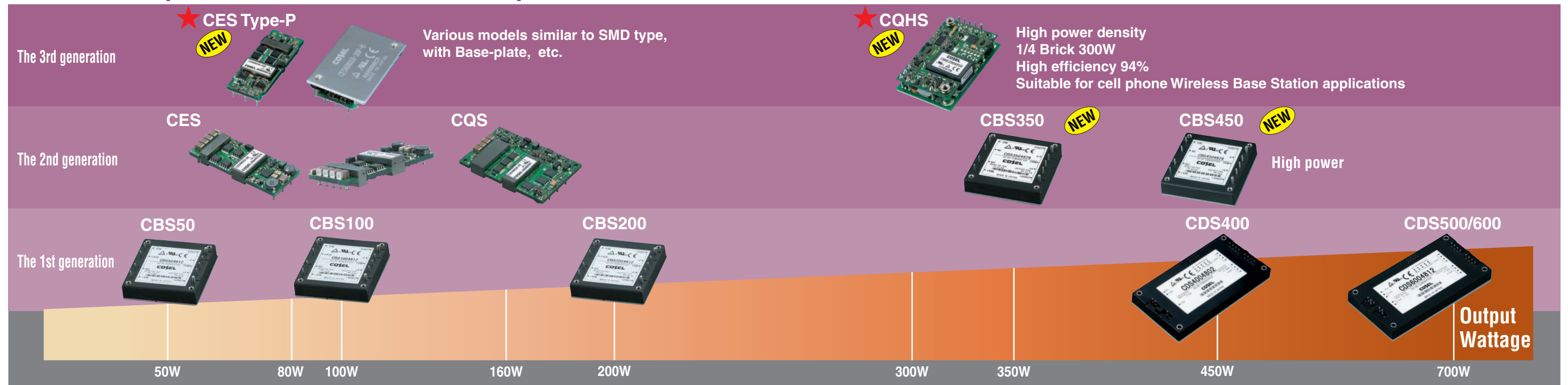
World Standard Brick Size DC/DC Power Modules

Analog-Digital Hybrid Controlled DC/DC Converter with Built-in Microcomputer Digitally Controlled DC/DC Converter Released

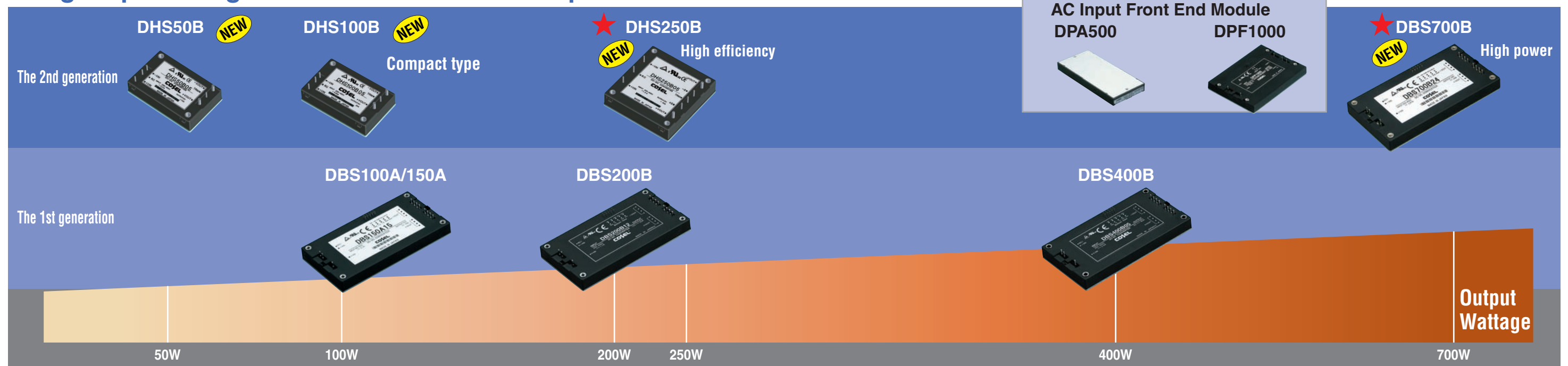
- ◆ Meeting various customer requirements by microcomputer control
- ◆ High efficiency by optimum control
- ◆ Compact size via reduction in number of components

24V, 48V Input DC/DC converters Line-up

★mark indicates "Digital Assist Controlled DC/DC Converter"



High Input Voltage DC/DC Converters Line-up



World Standard Brick Size Conduction Cooling Type

DC/DC Converter - Suitable for cell phone Wireless Base Station applications

CQHS Series

NEW

Ultra Compact•High Efficiency DC-DC Converter suitable for Wireless Base Station Amplifier applications



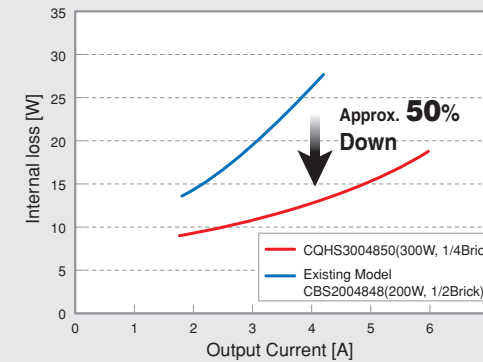
1/4 Brick Output Voltage : 300W
Output 32V/50V
Efficiency 94% (50V Output)

Unique circuitry developed as 32V/50V output synchronous rectification was difficult using FETs
High reliability via low internal heat

Power density greater than 2 times of previous models

Existing Model	Power : 1.5 Times	CQHS
200W	→	300W
1/2 Brick	→	1/4 Brick
4.4W/cc	→	11W/cc

■ The comparison of internal loss at 50V output



CBS Series

350W-48V Output, 450W-24V/28V/32V (New Models) for cell phone Wireless Base Station Amplifier applications. All 62 Models have the same dimensions from 50W to 450W

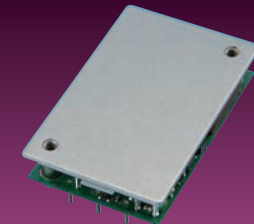


1/2 Brick
Output Wattage : 50 to 450W
Output Voltage : 1.8 to 48V

Products Line-up

CQHS series

Single Output Quarter-brick

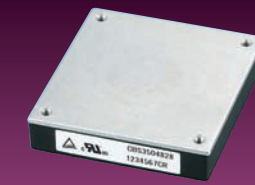


NEW

48V Input	Model Name	CQHS3004832	CQHS3004850
	DC Output	32V 9.4A	50V 6A
	Output Wattage	300.8W	300W

CBS series

Single Output Half-brick



		Output Wattage				
		50W	100W	200W	350W	450W
24V Input	DC Output	1.8V 11.7A	1.8V 23.4A	1.8V 35A	-	-
		2.5V 11.7A	2.5V 23.4A	2.5V 35A	-	-
		3.3V 11.7A	3.3V 23.4A	3.3V 35A	-	-
		5V 10A	5V 20A	5V 30A	-	-
		12V 4.2A	12V 8.4A	12V 16.7A	12V 25A	-
		15V 3.4A	15V 6.7A	15V 13.4A	-	-
		24V 2.1A	24V 4.2A	24V 8.4A	24V 14.5A	-
		28V 1.8A	28V 3.6A	28V 7.2A	28V 12.5A	-
		-	-	-	32V 11A	-
		-	-	-	48V 6.3A NEW	-

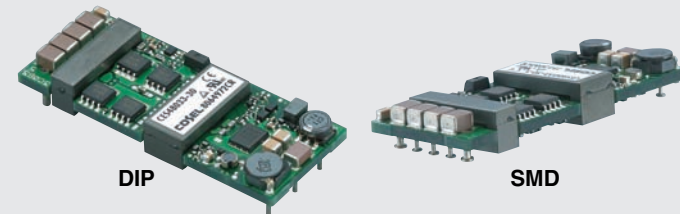
		Output Wattage				
		50W	100W	200W	350W	450W NEW
48V Input	DC Output	1.8V 11.7A	1.8V 23.4A	1.8V 35A	-	-
		2.5V 11.7A	2.5V 23.4A	2.5V 35A	-	-
		3.3V 11.7A	3.3V 23.4A	3.3V 35A	-	-
		5V 10A	5V 20A	5V 30A	-	-
		12V 4.2A	12V 8.4A	12V 16.7A	12V 29A	-
		15V 3.4A	15V 6.7A	15V 13.4A	-	-
		24V 2.1A	24V 4.2A	24V 8.4A	24V 14.5A	24V 19A
		28V 1.8A	28V 3.6A	28V 7.2A	28V 12.5A	28V 16A
		-	-	-	32V 11A	32V 12.5A
		-	-	48V 4.2A	48V 7.3A NEW	-

Features of CQHS/CBS

- Wide Operating Temperature Range
- World Standard Brick Size
- Remote Control, Remote Sensing, Adjustable Output Voltage Function
- OCP(Over Current Protection), OVP(Over Voltage Protection), OTP(Over Thermal Protection)
- 5 Year Warranty

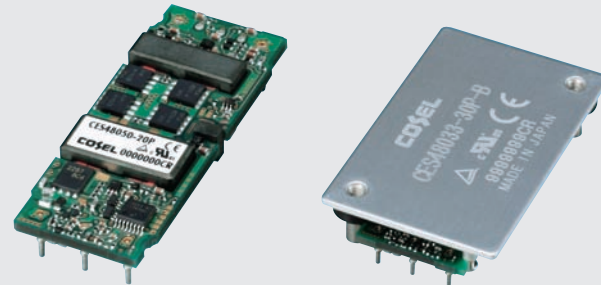
World Standard 1/4, 1/8 Brick Size Forced Air Cooling Type 24V, 48V Input DC-DC Converter

CES Series



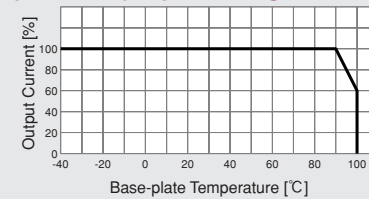
Forced Air Cooling Type
1/8 Brick
Output 1.5 to 15V
SMD Type Line-up

CES Series Type P NEW



Forced Air Cooling Type & Conduction Cooling Type
1/8 Brick
Output 3.3 to 12V
Digitally Controlled by using Microcomputer
Stable operation against dynamic (unstable) input voltage

*Base Plate: Optional
(1/4 Brick Size)



CQS Series



Forced Air Cooling Type
1/4 Brick
Output 1.5 to 15V
High Efficiency 92%

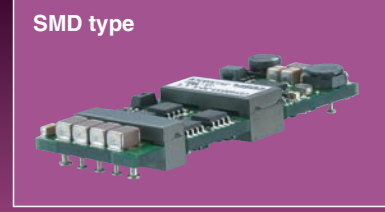
Features of CES/CQS

- Wide Operating Temperature Range
- World Standard Brick Size
- Remote Control, Remote Sensing, Adjustable Output Voltage Function
- OCP(Over Current Protection), OVP(Over Voltage Protection), OTP(Over Thermal Protection)
- 5 Year Warranty

Products Line-up

■ CES series

Single Output Eighth-brick



24V Input	Model Name	CES24033-25	CES24050-16	CES24120-6	CES24150-4
	DC Output	3.3V 25A	5V 16A	12V 6A	15V 4A
	Output Wattage	82.5W	80W	72W	60W

48V Input	Model Name	CES48015-30	CES48018-30	CES48025-25	CES48033-25	CES48050-16	CES48120-6	CES48150-4
	DC Output	1.5V 30A	1.8V 30A	2.5V 25A	3.3V 25A	5V 16A	12V 6A	15V 4A
	Output Wattage	45W	54W	62.5W	82.5W	80W	72W	60W

48V Input 100W Type	Model Name	CES48033-30	CES48050-20	CES48060-17
	DC Output	3.3V 30A	5V 20A	6V 17A
	Output Wattage	99W	100W	102W

■ CES series Type P

Single Output Eighth-brick



Conduction Cooling type
Base Plate option
(Quarter-brick size)



NEW

48V Input	Model Name	CES48033-30P	CES48050-20P	CES48120-7P
	DC Output	3.3V 30A	5V 20A	12V 7A
	Output Wattage	99W	100W	84W

■ CQS series

Single Output Quarter-brick



24V Input	Model Name	CQS24033-40	CQS24050-28	CQS24120-12	CQS24150-8
	DC Output	3.3V 40A	5V 28A	12V 12A	15V 8A
	Output Wattage	132W	140W	144W	120W

48V Input	Model Name	CQS48015-50	CQS48018-50	CQS48025-45	CQS48033-45	CQS48050-28	CQS48120-14	CQS48150-8
	DC Output	1.5V 50A	1.8V 50A	2.5V 45A	3.3V 45A	5V 28A	12V 14A	15V 8A
	Output Wattage	75W	90W	112.5W	148.5W	140W	168W	120W

World Standard Brick Size Conduction Cooling Type High Voltage(DC200 to 400V) Input Power Supply Type

2 Types for Each Applications

Add DHS Series, Low Power•Compact Size DC/DC Converter

DHS Series

NEW 1/2 Brick
1/4 Brick

Compact Type
Simple Functions

DBS Series

Full Brick

Multi-function
High Wattage

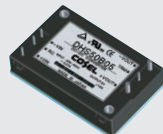
Many Variations

Numerous models with output wattage 50W to 700W and output voltage 3.3V to 48V. Available for providing power with optimum efficiency.



Feature

DHS50/100



1/4 Brick

Specialized in footprint downsizing by simple function

- Output voltage adjustment range -10% to +10%
- Remote control (Input side)

DHS250



1/2 Brick

Digitally Controlled DC/DC Converter with Built-in Microcomputer

- Meeting various customer requirements with built-in microcomputer
- High efficiency by synchronous rectification circuitry
- Remote sensing
- Output voltage adjustment range -40% to +10%

DBS200/400



Full Brick

Multi Functions•High Power

- Remote control on both input and output sides
- Parallel operation available
- Various alarm functions

DBS700



Full Brick

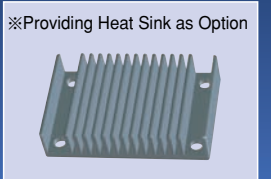
Digitally Controlled Power Supply with Built-in Microcomputer

- Meeting various customer requirements with built-in microcomputer
- High power 700W
- Beat-noise reduction via crystal oscillator
- Various alarm functions

Products Line-up

DHS50B/100B series

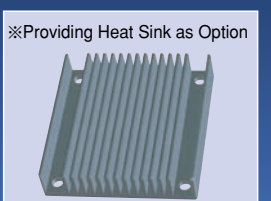
Single Output Quarter-brick



DHS50B 50W Output	Model Name	DHS50B03	DHS50B05	DHS50B12	DHS50B15	DHS50B24	DHS50B28
	DC Output	3.3V 10A	5V 10A	12V 4.2A	15V 3.4A	24V 2.1A	28V 1.8A
	Output Wattage	33W	50W	50.4W	51.0W	50.4W	50.4W
DHS100B 100W Output	Model Name	DHS100B03	DHS100B05	DHS100B12	DHS100B15	DHS100B24	DHS100B28
	DC Output	3.3V 20A	5V 20A	12V 8.4A	15V 6.7A	24V 4.2A	28V 3.6A
	Output Wattage	66W	100W	100.8W	100.5W	100.8W	100.8W

DHS250B series

Single Output Half-brick



DHS250B 250W Output	Model Name	DHS250B03	DHS250B05	DHS250B07	DHS250B12	DHS250B15	DHS250B24	DHS250B28	DHS250B48
	DC Output	3.3V 50A	5V 50A	7.5V 33A	12V 21A	15V 16.5A	24V 10.5A	28V 9A	48V 5.2A
	Output Wattage	165W	250W	247.5W	252W	247.5W	252W	252W	249.6W

DBS100A/150A/200B/400B/700B series

Single Output Full-brick



Output Wattage	100W ※1	150W ※1	200W	400W	700W NEW
DC Output	-	-	3.3V 50A	3.3V 80A	-
	5V 20A	-	5V 40A	5V 80A	-
	-	-	7.5V 28A	7.5V 54A	-
	-	12V 12.5A	12V 20A	12V 34A	-
	13.8V 7.3A	-	-	-	-
	-	15V 10A	-	15V 27A	-
	-	-	-	18V 22A	-
	-	24V 6.3A	-	24V 17A	24V 29A
	-	-	-	28V 14.5A	28V 25A
	-	-	-	-	36V 19.5A
-	-	-	-	48V 14.5A	

※1 DBS100A/150A model is different in Input Voltage range