

## Power module type



World wide



Low Profile



Isolated



Safety Approvals



OCP



OVP



Remote ON/OFF

# DHS-series



## ■ Feature

- Ideal for distributed power systems
- Thin and small size
- Built-in overcurrent, overvoltage and thermal protection circuits
- Built-in remote ON/OFF
- Mounting hole(M3 tapped)

## ■ CE marking

- Low Voltage Directive

## ■ Safety agency approvals

- UL, C-UL, TUV approved

## ■ 5-year warranty

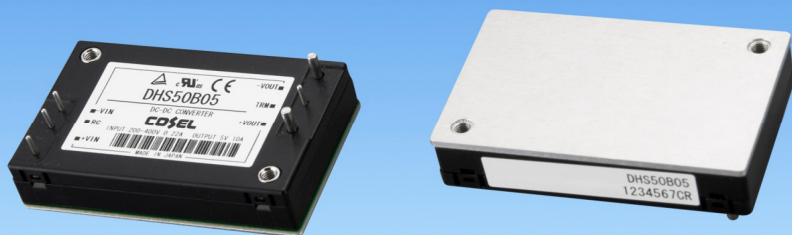
# DHS50B

**DH** **S** **50** **B** **05**  
 ① ② ③ ④ ⑤

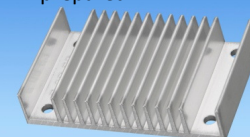
- ① Series name
- ② Single output
- ③ Output wattage
- ④ B: DC200V~400V
- ⑤ Output voltage



Detailed information is in our company HP after release.



Heat sink is prepared.



MODEL	DHS50B03	DHS50B05	DHS50B12	DHS50B15	DHS50B24	DHS50B28
MAX OUTPUT WATTAGE[W]	33.0	50.0	50.4	51.0	50.4	50.4
DC OUTPUT	3.3V 10A	5V 10A	12V 4.2A	15V 3.4A	24V 2.1A	28V 1.8A

## SPECIFICATIONS

	MODEL	DHS50B03	DHS50B05	DHS50B12	DHS50B15	DHS50B24	DHS50B28	
INPUT	VOLTAGE[V]	DC200~400						
	CURRENT[A]	※1 0.15A	0.22A	0.22A	0.22A	0.22A	0.22A	
	EFFICIENCY[%]	※1 77.0 typ	80.0 typ	83.0 typ	83.0 typ	83.0 typ	83.0 typ	
OUTPUT	VOLTAGE[V]	3.3	5	12	15	24	28	
	CURRENT[A]	10	10	4.2	3.4	2.1	1.8	
	LINE REGULATION[mV]	10max	10max	24max	30max	48max	56max	
	LOAD REGULATION[mV]	10max	10max	24max	30max	48max	56max	
	RIPPLE[mVp-p]	0 to 100°C	※2 80max	80max	120max	120max	120max	120max
		-40 to 0°C	※2 120max	120max	150max	150max	150max	150max
		0 to 15%Load	※2 160max	160max	240max	240max	240max	240max
	RIPPLE NOISE[mVp-p]	0 to 100°C	※2 120max	120max	150max	150max	150max	150max
		-40 to 0°C	※2 200max	200max	200max	200max	250max	250max
		0 to 15%Load	※2 240max	240max	300max	300max	300max	300max
	TEMPERATURE REGULATION[mV]	0 to 100°C	35max	50max	120max	150max	240max	280max
-40 to 0°C		66max	100max	240max	300max	480max	560max	
DRIFT[mV]	※3 16max	20max	40max	60max	90max	90max		
START-UP TIME[ms]	200max(DCIN280V, I <sub>o</sub> =100%)							
PROTECTION CIRCUIT AND OTHERS	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]	Fixed (TRM pin open), adjustable by external VR or external voltage						
	OUTPUT VOLTAGE SETTING[V]	3.30 - 3.40	4.97 - 5.13	11.91 - 12.29	14.76 - 15.24	23.62 - 24.38	27.56 - 28.44	
	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically						
ISOLATION	OVERVOLTAGE PROTECTION[V]	4.20 - 5.70	6.30 - 7.60	13.9 - 17.55	17.25 - 21.75	27.60 - 34.83	32.20 - 40.60	
	REMOTE SENSING	nothing						
	REMOTE ON/OFF	Provided (Negative logic L:ON, H:OFF)						
ENVIRONMENT	INPUT-OUTPUT	AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15°C)						
	INPUT-FG	AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15°C)						
	OUTPUT-FG	AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (20±15°C)						
SAFETY	OPERATING TEMP., HUMID. AND ALTITUDE	-40 to +100°C(On aluminum base plate), 20 - 95%RH(Non condensing) (Refer to DERATING CURVE), 3,000m(10,000feet)max						
	STORAGE TEMP., HUMID. AND ALTITUDE	-40 to +100°C, 20 - 95%RH(Non condensing), 9,000m(30,000feet)max						
	VIBRATION	10 - 55Hz, 49.0m/s <sup>2</sup> (5G), 3minutes period, 60 minutes each along X,Y and Z axis						
OTHERS	IMPACT	196.1m/s <sup>2</sup> (20G), 11ms once each along X,Y and Z axis						
	AGENCY APPROVALS	UL60950-1, C-UL(CSA60950-1), EN60950-1						
OTHERS	CASE SIZE/WEIGHT	58.4 × 12.7 × 37.3mm (WXHXD) / 100g max						
	COOLING METHOD	Conduction cooling (e.g. heat radiation from the aluminum base plate to the attached heat sink)						

\*1 At rated input(DC280V) and rated load, and aluminum base plate temperature 25°C.

\*2 Ripple and ripple noise is measured by using measuring board with recommended capacitor Co & the film capacitor 0.1 μF. Refer to manual.

\*3 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C, with the input voltage held constant at the rated input/output.

# DHS100B

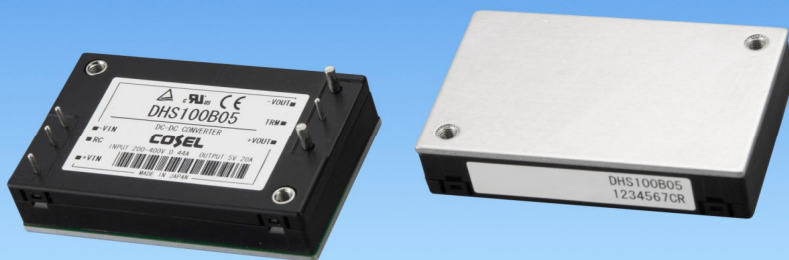
**DH S 100 B 05**  
 ① ② ③ ④ ⑤

- ① Series name
- ② Single output
- ③ Output wattage
- ④ B: DC200V~400V
- ⑤ Output voltage



RoHS

Detailed information is in our company HP after release.



Heat sink is prepared.



MODEL	DHS100B03	DHS100B05	DHS100B12	DHS100B15	DHS100B24	DHS100B28
MAX OUTPUT WATTAGE[W]	66.0	100.0	100.8	100.5	100.8	100.8
DC OUTPUT	3.3V 20A	5V 20A	12V 8.4A	15V 6.7A	24V 4.2A	28V 3.6A

## SPECIFICATIONS

	MODEL	DHS100B03	DHS100B05	DHS100B12	DHS100B15	DHS100B24	DHS100B28	
INPUT	VOLTAGE[V]	DC200~400						
	CURRENT[A]	※1 0.30A	0.44A	0.42A	0.42A	0.42A	0.42A	
	EFFICIENCY[%]	※1 79.0 typ	82.0 typ	85.0 typ	85.0 typ	85.0 typ	85.0 typ	
OUTPUT	VOLTAGE[V]	3.3	5	12	15	24	28	
	CURRENT[A]	20	20	8.4	6.7	4.2	3.6	
	LINE REGULATION[mV]	10max	10max	24max	30max	48max	56max	
	LOAD REGULATION[mV]	10max	10max	24max	30max	48max	56max	
	RIPPLE[mVp-p]	0 to 100°C	※2 80max	80max	120max	120max	120max	120max
		-40 to 0°C	※2 120max	120max	150max	150max	150max	150max
		0 to 15%Load	※2 160max	160max	240max	240max	240max	240max
	RIPPLE NOISE[mVp-p]	0 to 100°C	※2 120max	120max	150max	150max	150max	150max
		-40 to 0°C	※2 200max	200max	200max	200max	250max	250max
		0 to 15%Load	※2 240max	240max	300max	300max	300max	300max
	TEMPERATURE	0 to 100°C	35max	50max	120max	150max	240max	280max
REGULATION[mV]	-40 to 0°C	66max	100max	240max	300max	480max	560max	
DRIFT[mV]	※3	16max	20max	40max	60max	90max	90max	
START-UP TIME[ms]	200max(DCIN280V, Io=100%)							
OUTPUT VOLTAGE ADJUSTMENT RANGE	Fixed (TRM pin open), adjustable by external VR or external voltage							
		2.97 - 3.96	4.50 - 6.00	10.80 - 13.20	13.50 - 16.50	21.60 - 26.40	25.20 - 30.80	
OUTPUT VOLTAGE SETTING[V]		3.30 - 3.40	4.97 - 5.13	11.91 - 12.29	14.76 - 15.24	23.62 - 24.38	27.56 - 28.44	
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically						
	OVERVOLTAGE PROTECTION[V]	4.20 - 5.70	6.30 - 7.60	13.9 - 17.55	17.25 - 21.75	27.60 - 34.83	32.20 - 40.60	
	REMOTE SENSING	nothing						
	REMOTE ON/OFF	Provided (Negative logic L:ON, H:OFF)						
ISOLATION	INPUT-OUTPUT	AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15°C)						
	INPUT-FG	AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15°C)						
	OUTPUT-FG	AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (20±15°C)						
ENVIRONMENT	OPERATING TEMP., HUMID. AND ALTITUDE	-40 to +100°C(On aluminum base plate), 20 - 95%RH(Non condensing) (Refer to DERATING CURVE), 3,000m(10,000feet)max						
	STORAGE TEMP., HUMID. AND ALTITUDE	-40 to +100°C, 20 - 95%RH(Non condensing), 9,000m(30,000feet)max						
	VIBRATION	10 - 55Hz, 49.0m/s <sup>2</sup> (5G), 3minutes period, 60 minutes each along X,Y and Z axis						
	IMPACT	196.1m/s <sup>2</sup> (20G), 11ms once each along X,Y and Z axis						
SAFETY	AGENCY APPROVALS	UL60950-1, C-UL(CSA60950-1), EN60950-1						
OTHERS	CASE SIZE/WEIGHT	58.4 × 12.7 × 37.3mm (WXHxD) / 100g max						
	COOLING METHOD	Conduction cooling (e.g. heat radiation from the aluminum base plate to the attached heat sink)						

\*1 At rated input(DC280V) and rated load, and aluminium base plate temperature 25°C.

\*2 Ripple and ripple noise is measured by using measuring board with recommended capacitor Co & the film capacitor 0.1 μF. Refer to manual.

\*3 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C, with the input voltage held constant at the rated input/output.

# DHS250B

**DH S 250 B 05**  
 ① ② ③ ④ ⑤

- ① Series name
- ② Single output
- ③ Output wattage
- ④ B: DC200V~400V
- ⑤ Output voltage



RoHS

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Heat sink is prepared.



MODEL	DHS250B03	DHS250B05	DHS250B07	DHS250B12	DHS250B15	DHS250B24	DHS250B28	DHS250B48
MAX OUTPUT WATTAGE[W]	165.0	250.0	247.5	252.0	247.5	252.0	252.0	249.6
DC OUTPUT	3.3V 50A	5V 50A	7.5V 33A	12V 21A	15V 16.5A	24V 10.5A	28V 9.0A	48V 5.2A

## SPECIFICATIONS

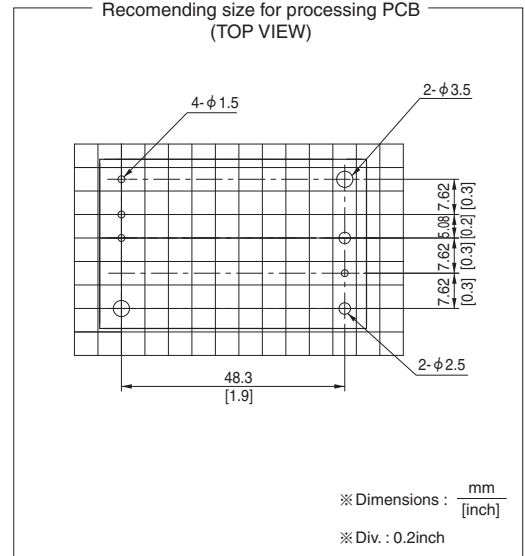
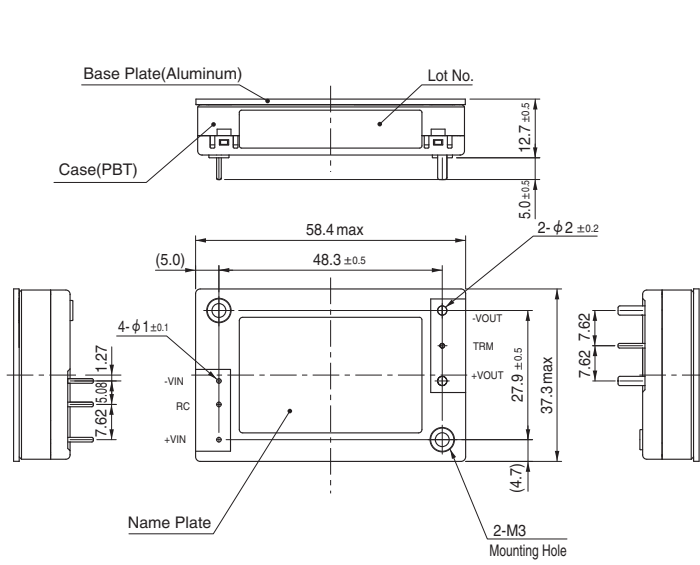
	MODEL	DHS250B03	DHS250B05	DHS250B07	DHS250B12	DHS250B15	DHS250B24	DHS250B28	DHS250B48	
INPUT	VOLTAGE[V]	DC200~400								
	CURRENT[A]	※1 0.67A	1.0A	1.0A	1.0A	1.0A	1.0A	1.0A	1.0A	
	EFFICIENCY[%]	※1 88.0 typ	90.0 typ	88.0 typ	89.0 typ	89.0 typ	89.0 typ	89.0 typ	89.0 typ	
OUTPUT	VOLTAGE[V]	3.3	5	7.5	12	15	24	28	48	
	CURRENT[A]	50	50	33	21	16.5	10.5	9.0	5.2	
	LINE REGULATION[mV]	10max	10max	20max	24max	30max	48max	56max	96max	
	LOAD REGULATION[mV]	10max	10max	20max	24max	30max	48max	56max	96max	
	RIPPLE[mVp-p]	0 to 100°C	※2 80max	80max	100max	120max	120max	120max	120max	200max
		-40 to 0°C	※2 120max	120max	130max	150max	150max	150max	150max	250max
		0 to 15%Load	※2 160max	160max	200max	240max	240max	240max	240max	400max
	RIPPLE NOISE[mVp-p]	0 to 100°C	※2 120max	120max	130max	150max	150max	150max	150max	250max
		-40 to 0°C	※2 200max	200max	200max	200max	200max	250max	250max	400max
		0 to 15%Load	※2 240max	240max	260max	300max	300max	300max	300max	500max
TEMPERATURE REGULATION[mV]	0 to 100°C	35max	50max	70max	120max	150max	240max	280max	480max	
	-40 to 0°C	66max	100max	140max	240max	300max	480max	560max	960max	
DRIFT[mV]	※3	16max	20max	30max	40max	60max	90max	90max	180max	
START-UP TIME[ms]	200max(DCIN280V, I <sub>o</sub> =100%)									
OUTPUT VOLTAGE ADJUSTMENT RANGE	Fixed (TRM pin open), adjustable by external VR or external voltage									
		1.98 - 3.96	3.00 - 6.00	4.50 - 8.25	7.20 - 13.20	9.00 - 16.50	14.40 - 26.40	16.80 - 30.80	28.80 - 52.80	
OUTPUT VOLTAGE SETTING[V]		3.30 - 3.40	4.97 - 5.13	7.43 - 7.67	11.91 - 12.29	14.76 - 15.24	23.62 - 24.38	27.56 - 28.44	47.24 - 48.76	
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically								
	OVERVOLTAGE PROTECTION[V]	4.20 - 4.85	6.30 - 7.30	8.70 - 10.20	13.90 - 16.35	17.25 - 20.25	27.60 - 32.40	32.20 - 37.80	55.20 - 64.80	
	REMOTE SENSING	Provided								
	REMOTE ON/OFF	Provided (Negative logic L:ON, H:OFF)								
ISOLATION	INPUT-OUTPUT	AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15°C)								
	INPUT-FG	AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15°C)								
	OUTPUT-FG	AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (20±15°C)								
ENVIRONMENT	OPERATING TEMP., HUMID. AND ALTITUDE	-40 to +100°C(On aluminum base plate), 20 - 95%RH(Non condensing) (Refer to DERATING CURVE), 3,000m(10,000feet)max								
	STORAGE TEMP., HUMID. AND ALTITUDE	-40 to +100°C, 20 - 95%RH(Non condensing), 9,000m(30,000feet)max								
	VIBRATION	10 - 55Hz, 49.0m/s <sup>2</sup> (5G), 3minutes period, 60 minutes each along X,Y and Z axis								
	IMPACT	196.1m/s <sup>2</sup> (20G), 11ms once each along X,Y and Z axis								
SAFETY	AGENCY APPROVALS	UL60950-1, C-UL(CSA60950-1), EN60950-1								
OTHERS	CASE SIZE/WEIGHT	58.4 × 12.7 × 61.0mm (WXHXD) / 150g max								
	COOLING METHOD	Conduction cooling (e.g. heat radiation from the aluminum base plate to the attached heat sink)								

\*1 At rated input(DC280V) and rated load, and aluminium base plate temperature 25°C.

\*2 Ripple and ripple noise is measured by using measuring board with recommended capacitor Co & the film capacitor 0.1 μF. Refer to manual.

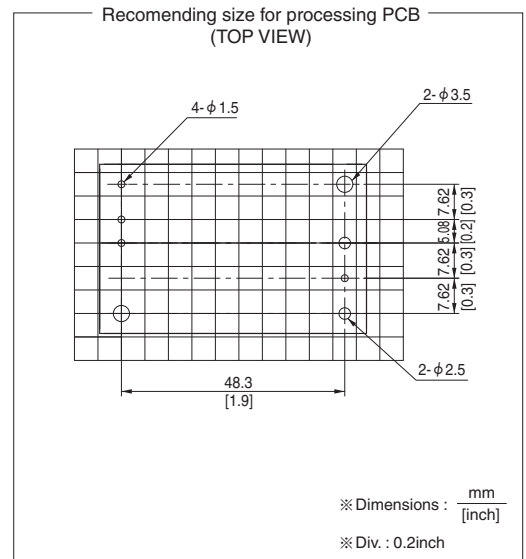
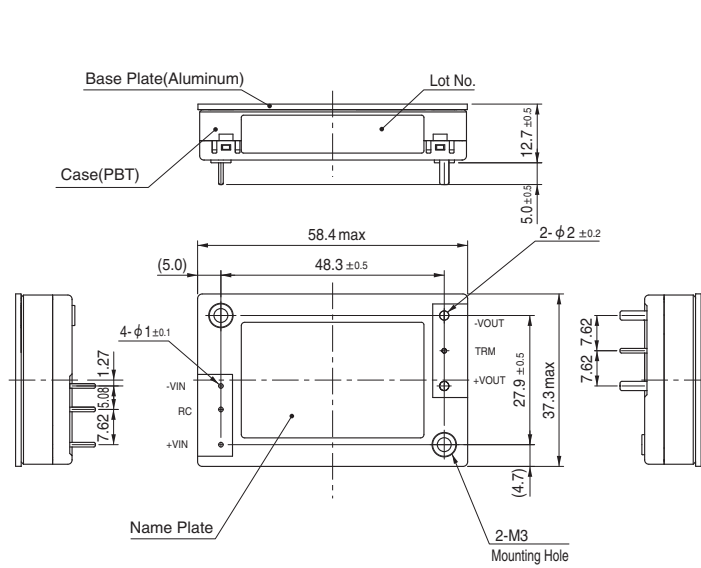
\*3 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C, with the input voltage held constant at the rated input/output

External view



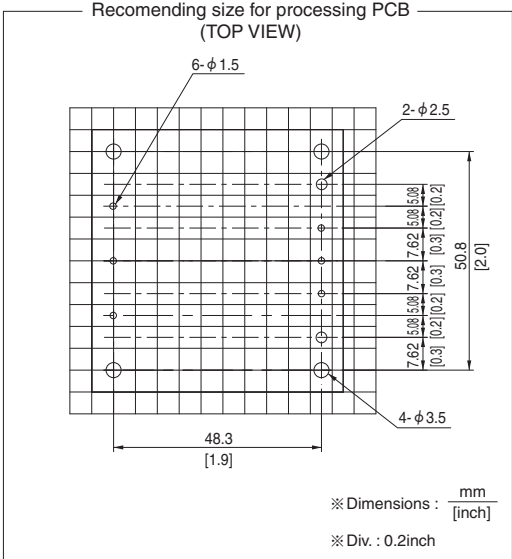
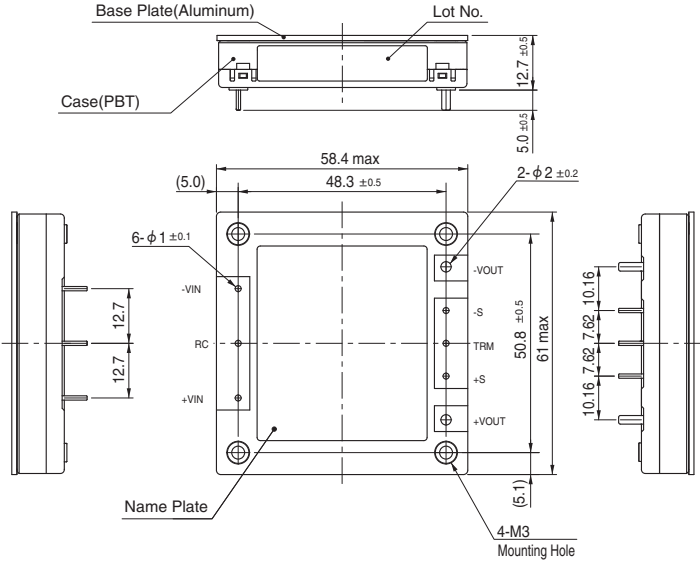
- ※ Dimensions :  $\frac{\text{mm}}{\text{[inch]}}$
- ※ Div. : 0.2inch
- ※ Tolerance :  $\pm 0.3$
- ※ Weight : 100g or less
- ※ Dimensions in mm
- ※ Mounting hole screwing torque :  $0.49\text{N} \cdot \text{m}$  (5.0kgf · cm) max

## External view



- ※ Tolerance :  $\pm 0.3$
- ※ Weight : 100g or less
- ※ Dimensions in mm
- ※ Mounting hole screwing torque :  $0.49\text{N} \cdot \text{m}$  (5.0kgf · cm) max

External view



- ※ Tolerance : ±0.3
- ※ Weight : 150g or less
- ※ Dimensions in mm
- ※ Mounting hole screwing torque : 0.49N · m (5.0kgf · cm) max