

## Cosel **DHS250 SERIES**

250 Watt 300Vin DC-DC Converter

2.28 x 0.50"

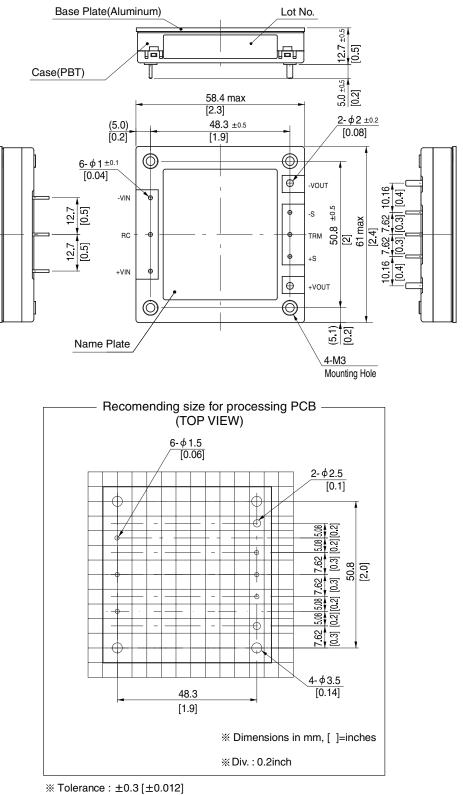
									Mea	sures: 2.40	
<b>CO\$EL</b> DC-DC Converters Power Module type						Ordering information					
	DH	ດຄ									
	DH	<b>SZ</b>	50B			<u> </u>	<u>S 25</u>		05	-	
					1	2	3	4	(5)	(6)	
e <b>RoHS</b>						1	*Providir as optio	ng heat sink n	<ul> <li>①Series name</li> <li>②Single output</li> <li>③Output watta</li> <li>④B: DC200-4</li> <li>⑤Output volta</li> <li>⑥Optional</li> <li>T: with Mou</li> <li>(\$ 3.4 thr</li> </ul>	ut age 00V age inting hole	
MODEL			DHS250B03	DHS250B05	DHS250B07	DHS250B12	DHS250B15	DHS250B24	DHS250B28	DHS250B48	
	PUT WATTAGE[W]		165.0	250.0	247.5	252.0	247.5	252.0	252.0	249.6	
C OUTPU	-		3.3V 50A	5V 50A	7.5V 33A	12V 21A	15V 16.5A	24V 10.5A	28V 9.0A	48V 5.2A	
PECIF	ICATIONS										
	MODEL		DHS250B03	DHS250B05	DHS250B07	DUDDEDDID					
INPUT	VOLTAGE[V]				BIIGEOOBOI	DHS250B12	DHS250B15	DHS250B24	DHS250B28	DHS250B48	
			DC200 - 400		1			1			
IPUT	CURRENT[A]	*1	0.67A	1.0A	1.0A	1.0A	1.0A	1.0A	1.0A	DHS250B48	
	CURRENT[A] EFFICIENCY[%]	*1	0.67A 88.0typ	90.0typ	1.0A 88.0typ	1.0A 88.0typ	1.0A 88.0typ	1.0A 88.0typ	1.0A 88.0typ	1.0A 89.0typ	
IPUT	CURRENT[A] EFFICIENCY[%] VOLTAGE[V]		0.67A 88.0typ 3.3	90.0typ 5	1.0A 88.0typ 7.5	1.0A 88.0typ 12	1.0A 88.0typ 15	1.0A 88.0typ 24	1.0A 88.0typ 28	1.0A 89.0typ 48	
IPUT	CURRENT[A] EFFICIENCY[%] VOLTAGE[V] CURRENT[A]	*1	0.67A 88.0typ 3.3 50	90.0typ 5 50	1.0A 88.0typ 7.5 33	1.0A 88.0typ 12 21	1.0A 88.0typ 15 16.5	1.0A 88.0typ 24 10.5	1.0A 88.0typ 28 9.0	1.0A 89.0typ 48 5.2	
	CURRENT[A] EFFICIENCY[%] VOLTAGE[V] CURRENT[A] LINE REGULATION[	*1 mV]	0.67A 88.0typ 3.3 50 10max	90.0typ 5 50 10max	1.0A 88.0typ 7.5 33 20max	1.0A 88.0typ 12 21 24max	1.0A 88.0typ 15 16.5 30max	1.0A 88.0typ 24 10.5 48max	1.0A 88.0typ 28 9.0 56max	1.0A 89.0typ 48 5.2 96max	
1PUT	CURRENT[A] EFFICIENCY[%] VOLTAGE[V] CURRENT[A]	*1 mV] [mV]	0.67A 88.0typ 3.3 50 10max 10max	90.0typ 5 50 10max 10max	1.0A 88.0typ 7.5 33 20max 20max	1.0A 88.0typ 12 21 24max 24max	1.0A 88.0typ 15 16.5 30max 30max	1.0A 88.0typ 24 10.5 48max 48max	1.0A 88.0typ 28 9.0 56max 56max	1.0A 89.0typ 48 5.2 96max 96max	
IPUT	CURRENT[A] EFFICIENCY[%] VOLTAGE[V] CURRENT[A] LINE REGULATION[ LOAD REGULATION	*1 mV] [mV] 0to+100°C*2	0.67A 88.0typ 3.3 50 10max 10max 80max	90.0typ 5 50 10max 10max 80max	1.0A 88.0typ 7.5 33 20max 20max 100max	1.0A 88.0typ 12 21 24max 24max 120max	1.0A 88.0typ 15 16.5 30max 30max 120max	1.0A 88.0typ 24 10.5 48max 48max 120max	1.0A 88.0typ 28 9.0 56max 56max 120max	1.0A 89.0typ 48 5.2 96max 96max 200max	
IPUT	CURRENT[A] EFFICIENCY[%] VOLTAGE[V] CURRENT[A] LINE REGULATION[	*1 mV] [mV] 0 to +100 <sup>°</sup> C *2 -40 to 0 <sup>°</sup> C *2	0.67A 88.0typ 3.3 50 10max 10max 80max 120max	90.0typ 5 50 10max 10max 80max 120max	1.0A 88.0typ 7.5 33 20max 20max 100max 130max	1.0A 88.0typ 12 21 24max 24max 120max 150max	1.0A 88.0typ 15 16.5 30max 30max 120max 150max	1.0A 88.0typ 24 10.5 48max 48max 120max 150max	1.0A 88.0typ 28 9.0 56max 56max 120max 150max	1.0A 89.0typ 48 5.2 96max 96max 200max 250max	
	CURRENT[A] EFFICIENCY[%] VOLTAGE[V] CURRENT[A] LINE REGULATION[ LOAD REGULATION	*1 mV] [mV] 0 to +100°C*2 -40 to 0°C *2 0 to 15% Load*2	0.67A 88.0typ 3.3 50 10max 10max 80max 120max 160max	90.0typ 5 50 10max 10max 80max 120max 160max	1.0A 88.0typ 7.5 33 20max 20max 100max 130max 200max	1.0A 88.0typ 12 21 24max 24max 120max 150max 240max	1.0A 88.0typ 15 16.5 30max 30max 120max 150max 240max	1.0A 88.0typ 24 10.5 48max 48max 120max 150max 240max	1.0A 88.0typ 28 9.0 56max 56max 120max 150max 240max	1.0A 89.0typ 48 5.2 96max 96max 200max 250max 400max	
	CURRENT[A] EFFICIENCY[%] VOLTAGE[V] CURRENT[A] LINE REGULATION[ LOAD REGULATION RIPPLE[mVp-p]	*1 <b>mV]</b> [ <b>mV]</b> 0 to +100°C*2 -40 to 0°C*2 0 to 15% Load*2 0 to +100°C*2	0.67A 88.0typ 3.3 50 10max 10max 80max 120max 160max 120max	90.0typ 5 50 10max 10max 80max 120max 160max 120max	1.0A 88.0typ 7.5 33 20max 20max 100max 130max 200max 130max	1.0A 88.0typ 12 21 24max 24max 120max 150max 240max 150max	1.0A 88.0typ 15 16.5 30max 30max 120max 150max 240max 150max	1.0A 88.0typ 24 10.5 48max 48max 120max 150max 240max 150max	1.0A 88.0typ 28 9.0 56max 56max 120max 150max 240max 150max	1.0A 89.0typ 48 5.2 96max 96max 200max 250max 400max 250max	
	CURRENT[A] EFFICIENCY[%] VOLTAGE[V] CURRENT[A] LINE REGULATION[ LOAD REGULATION	*1 <b>mV]</b> [ <b>mV]</b> 0 to +100C *2 40 to 0C *2 0 to 5% Load *2 0 to +100C *2 40 to 0C *2	0.67A 88.0typ 3.3 50 10max 10max 80max 120max 120max 120max 200max	90.0typ 5 50 10max 10max 80max 120max 160max 120max 200max	1.0A 88.0typ 7.5 33 20max 20max 100max 130max 200max 130max 200max	1.0A 88.0typ 12 21 24max 24max 120max 150max 240max 150max 200max	1.0A 88.0typ 15 16.5 30max 30max 120max 150max 240max 150max 200max	1.0A 88.0typ 24 10.5 48max 48max 120max 150max 240max 150max 250max	1.0A 88.0typ 28 9.0 56max 56max 120max 150max 240max 150max 250max	1.0A 89.0typ 48 5.2 96max 96max 200max 250max 400max 250max 400max	
	CURRENT[A] EFFICIENCY[%] VOLTAGE[V] CURRENT[A] LINE REGULATION[ LOAD REGULATION RIPPLE[mVp-p]	*1 <b>TV</b> <b>(TVV)</b> 0 to +100C *2 40 to 0°C *2 0 to +100C *2 40 to 0°C *2 40 to 0°C *2 40 to 0°C *2	0.67A 88.0typ 3.3 50 10max 10max 10max 120max 120max 120max 200max 240max	90.0typ 5 50 10max 10max 80max 120max 120max 120max 200max 240max	1.0A 88.0typ 7.5 33 20max 20max 100max 130max 200max 130max 200max 200max 200max	1.0A 88.0typ 12 21 24max 24max 120max 150max 240max 150max 200max 300max	1.0A 88.0typ 15 16.5 30max 30max 120max 150max 240max 150max 200max 300max	1.0A 88.0typ 24 10.5 48max 48max 120max 150max 240max 150max 250max 300max	1.0A 88.0typ 28 9.0 56max 56max 120max 150max 240max 150max 250max 300max	1.0A 89.0typ 48 5.2 96max 96max 200max 250max 400max 250max 400max 500max	
	CURRENT[A] EFFICIENCY[%] VOLTAGE[V] CURRENT[A] LINE REGULATION[ LOAD REGULATION RIPPLE[mVp-p]	*1 <b>TV</b> <b>[TVV]</b> 0 to +100C*2 40 to 0°C*2 0 to +100C*2 40 to 0°C*2 0 to +100C*2 0 to 5% Load*2 0 to 5% Load*2 0 to +65C	0.67A 88.0typ 3.3 50 10max 10max 10max 120max 120max 120max 200max 240max 35max	90.0typ 5 50 10max 10max 80max 120max 120max 120max 200max 240max 50max	1.0A 88.0typ 7.5 33 20max 20max 100max 130max 200max 130max 200max 200max 260max 70max	1.0A 88.0typ 12 21 24max 24max 120max 150max 240max 150max 200max 300max 120max	1.0A 88.0typ 15 16.5 30max 30max 120max 150max 240max 150max 200max 300max 150max	1.0A 88.0typ 24 10.5 48max 48max 120max 150max 240max 250max 300max 240max	1.0A 88.0typ 28 9.0 56max 56max 120max 150max 240max 150max 250max 300max 280max	1.0A 89.0typ 48 5.2 96max 96max 200max 250max 400max 250max 400max 500max 480max	
	CURRENT[A] EFFICIENCY[%] VOLTAGE[V] CURRENT[A] LINE REGULATION[ LOAD REGULATION[ RIPPLE[mVp-p] RIPPLE NOISE[mVp-p] TEMPERATURE REGULATION[mV]	*1 <b>TV</b> <b>(TVV)</b> 0 to +100C *2 40 to 0°C *2 0 to +100C *2 40 to 0°C *2 40 to 0°C *2 40 to 0°C *2	0.67A 88.0typ 3.3 50 10max 10max 10max 120max 120max 120max 200max 240max 35max 66max	90.0typ 5 50 10max 10max 80max 120max 120max 120max 200max 240max 50max 100max	1.0A 88.0typ 7.5 33 20max 20max 100max 130max 200max 130max 200max 200max 260max 70max 140max	1.0A 88.0typ 12 21 24max 24max 120max 150max 240max 150max 200max 300max 120max 240max	1.0A 88.0typ 15 16.5 30max 30max 120max 150max 240max 150max 200max 300max 150max 300max	1.0A 88.0typ 24 10.5 48max 48max 120max 120max 150max 240max 250max 300max 240max 480max	1.0A 88.0typ 28 9.0 56max 56max 120max 150max 240max 150max 250max 300max 280max 560max	1.0A 89.0typ 48 5.2 96max 96max 200max 250max 400max 250max 400max 500max 480max 960max	
	CURRENT[A] EFFICIENCY[%] VOLTAGE[V] CURRENT[A] LINE REGULATION[ LOAD REGULATION RIPPLE[mVp-p]	*1 <b>TV</b> <b>[TVV]</b> 0 to +100C*2 40 to 0°C*2 0 to +100C*2 40 to 0°C*2 0 to +100C*2 0 to 5% Load*2 0 to 5% Load*2 0 to +65C	0.67A 88.0typ 3.3 50 10max 10max 10max 120max 120max 120max 200max 240max 35max	90.0typ 5 50 10max 10max 80max 120max 120max 120max 200max 240max 50max	1.0A 88.0typ 7.5 33 20max 20max 100max 130max 200max 130max 200max 200max 260max 70max	1.0A 88.0typ 12 21 24max 24max 120max 150max 240max 150max 200max 300max 120max	1.0A 88.0typ 15 16.5 30max 30max 120max 150max 240max 150max 200max 300max 150max	1.0A 88.0typ 24 10.5 48max 48max 120max 150max 240max 250max 300max 240max	1.0A 88.0typ 28 9.0 56max 56max 120max 150max 240max 150max 250max 300max 280max	1.0A 89.0typ 48 5.2 96max 96max 200max 250max 400max 250max 400max 500max 480max	
	CURRENT[A] EFFICIENCY[%] VOLTAGE[V] CURRENT[A] LINE REGULATION[ LOAD REGULATION[ RIPPLE[mVp-p] RIPPLE NOISE[mVp-p] TEMPERATURE REGULATION[mV]	*1 <b>mV]</b> <b>[mV]</b> <b>0</b> to +100C *2 40 to 0C *2 <b>0</b> to +100C *2 <b>0</b> to +100C *2 <b>0</b> to +100C *2 <b>0</b> to ±00C *2 <b>0</b> to ±00C *2 <b>0</b> to ±00C *2 <b>0</b> to ±05C <b>40</b> to ±00C *2 <b>*3</b>	0.67A 88.0typ 3.3 50 10max 10max 10max 120max 120max 120max 200max 240max 35max 66max 16max	90.0typ 5 50 10max 10max 80max 120max 120max 120max 200max 240max 50max 100max	1.0A 88.0typ 7.5 33 20max 20max 100max 130max 200max 130max 200max 200max 200max 130max 200max 140max 30max	1.0A 88.0typ 12 21 24max 24max 120max 150max 240max 150max 200max 300max 120max 240max	1.0A 88.0typ 15 16.5 30max 30max 120max 150max 240max 150max 200max 300max 150max 300max	1.0A 88.0typ 24 10.5 48max 48max 120max 120max 150max 240max 250max 300max 240max 480max	1.0A 88.0typ 28 9.0 56max 56max 120max 150max 240max 150max 250max 300max 280max 560max	1.0A 89.0typ 48 5.2 96max 96max 200max 250max 400max 250max 400max 500max 480max 960max	
	CURRENT[A] EFFICIENCY[%] VOLTAGE[V] CURRENT[A] LINE REGULATION[ LOAD REGULATION[ RIPPLE[mVp-p] RIPPLE NOISE[mVp-p] TEMPERATURE REGULATION[mV] DRIFT[mV] START-UP TIME[ms]	*1 <b>mV]</b> <b>[mV]</b> 0 to +100C *2 40 to 0C *2 0 to +100C *2 0 to 15% Load*2 0 to 5% Load*2 0 to 5% Coad*2 *3	0.67A 88.0typ 3.3 50 10max 10max 10max 120max 120max 120max 200max 240max 35max 66max 16max 200max (DCI	90.0typ 5 50 10max 10max 80max 120max 120max 120max 200max 240max 50max 100max 20max 100max 20max 100max 20max	1.0A 88.0typ 7.5 33 20max 20max 100max 130max 200max 130max 200max 200max 200max 130max 200max 140max 30max 2%)	1.0A 88.0typ 12 21 24max 24max 120max 150max 240max 150max 200max 300max 120max 240max	1.0A 88.0typ 15 16.5 30max 30max 120max 120max 150max 240max 200max 300max 150max 300max 60max	1.0A 88.0typ 24 10.5 48max 48max 120max 120max 150max 240max 250max 300max 240max 480max	1.0A 88.0typ 28 9.0 56max 56max 120max 150max 240max 150max 250max 300max 280max 560max	1.0A 89.0typ 48 5.2 96max 96max 200max 250max 400max 250max 400max 500max 480max 960max	
UTPUT	CURRENT[A] EFFICIENCY[%] VOLTAGE[V] CURRENT[A] LINE REGULATION[ LOAD REGULATION[ RIPPLE[mVp-p] RIPPLE NOISE[mVp-p] TEMPERATURE REGULATION[mV] DRIFT[mV]	*1 <b>mV]</b> <b>[mV]</b> 0 to +100C *2 40 to 0C *2 0 to +100C *2 0 to 15% Load*2 0 to 5% Load*2 0 to 5% Coad*2 *3	0.67A 88.0typ 3.3 50 10max 10max 10max 120max 120max 120max 200max 240max 35max 66max 16max 200max (DCI	90.0typ 5 50 10max 10max 80max 120max 120max 120max 200max 240max 50max 100max 20max 100max 20max 100max 20max	1.0A 88.0typ 7.5 33 20max 20max 100max 130max 200max 130max 200max 200max 200max 130max 200max 140max 30max 2%)	1.0A 88.0typ 12 21 24max 24max 120max 150max 240max 200max 300max 120max 240max 40max	1.0A 88.0typ 15 16.5 30max 30max 120max 120max 150max 240max 200max 300max 150max 300max 60max	1.0A 88.0typ 24 10.5 48max 48max 120max 120max 150max 240max 250max 300max 240max 480max	1.0A 88.0typ 28 9.0 56max 56max 120max 150max 240max 150max 250max 300max 280max 560max	1.0A 89.0typ 48 5.2 96max 96max 200max 250max 400max 250max 400max 500max 480max 960max	
	CURRENT[A] EFFICIENCY[%] VOLTAGE[V] CURRENT[A] LINE REGULATION[ LOAD REGULATION[ RIPPLE[mVp-p] RIPPLE NOISE[mVp-p] TEMPERATURE REGULATION[mV] DRIFT[mV] START-UP TIME[ms]	*1 <b>mV]</b> <b>[mV]</b> <b>0</b> to +100C *2 40 to 0C *2 <b>0</b> to +100C *2 <b>0</b> to +100C *2 <b>0</b> to +100C *2 <b>0</b> to +00C *2 <b>0</b> to +65°C <b>0</b> to +65°C <b>*3</b> <b>RANGE[V]</b> *4 <b>TING[V]</b>	0.67A 88.0typ 3.3 50 10max 10max 80max 120max 120max 120max 200max 240max 35max 66max 16max 200max (DCI Fixed (TRM p 1.98 - 3.96 3.30 - 3.40	90.0typ 5 50 10max 10max 80max 120max 120max 120max 200max 240max 50max 100max 20max N 280V, Io=100 in open), adjus 3.00 - 6.00 4.97 - 5.13	1.0A 88.0typ 7.5 33 20max 20max 100max 130max 200max 130max 200max 200max 130max 200max 140max 30max 30max 200max	1.0A 88.0typ 12 21 24max 24max 120max 150max 240max 300max 300max 120max 240max 40max	1.0A 88.0typ 15 16.5 30max 30max 120max 150max 240max 150max 200max 300max 150max 300max 60max	1.0A 88.0typ 24 10.5 48max 48max 120max 150max 240max 150max 250max 300max 240max 480max 90max	1.0A 88.0typ 28 9.0 56max 56max 120max 120max 150max 240max 150max 250max 300max 280max 560max 90max	1.0A 89.0typ 48 5.2 96max 96max 200max 250max 400max 250max 400max 500max 480max 960max 180max	

PROTECTION CIRCUIT AND OTHERS		Tomo otor roove or raing and roootore datematically									
		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 (Neqative Logic L : ON, H :OFF)									
ISOLATION	INPUT-OUTPUT	AC3,000V 1minute, Cutoff current = 10mA, DC500V 50M $\Omega$ min (20±15°C)									
	INPUT-FG	AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15℃)									
	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 (10,000 feet) max									
	STORAGE TEMP., HUMID. AND ALTITUDE	-40 to +100°C, 20 - 95%RH (Non condensing), 9,000m (30,000 feet) max									
	VIBRATION	10 - 55Hz, 49.0m/s <sup>2</sup> (5G), 3minutes period, 60minutes 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, EN60950-1									
OTHERS	CASE SIZE/WEIGHT	58.4×12.7×61mm [2.3×0.5×2.4 inches](W×H×D) / 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.
\*2 Ripple and ripple noise is measured by using measuring board. Refer to the 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.
\*4 Refer to the manual for input range.



Cosel DHS250 SERIES 250 Watt 300Vin DC-DC Converter Measures: 2.40 x 2.28 x 0.50"



% Weight : 100g max

% Dimensions in mm, []=inches

\* Mounting hole screwing torque : 0.49N · m (5.0kgf · cm) max

