



ETA-USA

HIGH QUALITY SWITCHING POWER SUPPLIES

DC/DC SWITCHING POWER SUPPLY
SINGLE CHANNEL OUTPUT
20 WATTS

OCH20S SERIES



General Description

Features

1. High Efficiency
2. Smallest dimensions in market
3. 2:1 input range
4. Regulated Output
5. Low ripple and Noise

Options

- Remote ON/OFF (add suffix "-R")
- Screw Terminal (add suffix "-S")

Application

Broad needs

Input

Input Voltage Range: DC9~18V OCH20S12-XX
 DC18~36V OCH20S24-XX
 DC36~75V OCH20S48-XX

Switching frequency: 450kHz for <12V
 300kHz (typ.) for 12V out and higher

Filter: LC Type





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Output Characteristic	Unit	Models			
		OCH20S12-3.3	OCH20S12-5	OCH20S12-12	OCH20S12-15
Output Voltage	Vdc	3.3	5	12	15
Output Current	mA	4500	4000	1660	1330
Ripple		75mV max		100mV max	
Noise(max)		100 mV max		125 mV max	
Voltage Accuracy	V	±2%			
Capacitor Load (max.)	uF	2000	2000	470	330
Regulation					
a. Line Regulation [max]	mV	± 0.5%			
b. Load Regulation	mV	± 1%			
c. Temperature Coefficient	/°C	± 0.02%			

Efficiency *1	%	85	89	88	88
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Output Characteristic	Unit	Models			
		OCH20S24-3.3	OCH20S24-5	OCH20S24-12	OCH20S24-15
Output Voltage	Vdc	3.3	5	12	15
Output Current	mA	4500	4000	1660	1330
Ripple		75mV max		100mV max	
Noise(max)		100 mV max		125 mV max	
Voltage Accuracy	V	±2%			
Capacitor Load (max.)	uF	2000	2000	470	330
Regulation					
a. Line Regulation [max]		± 0.5%			
b. Load Regulation		± 1%			
c. Temperature Coefficient	/°C	± 0.02%			

Efficiency *1	%	86	89	89	89
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Output Characteristic	Unit	Models			
		OCH20S48-3.3	OCH20S48-5	OCH20S48-12	OCH20S48-15
Output Voltage	Vdc	3.3	5	12	15
Output Current	mA	4500	4000	1660	1330
Ripple		75mV max		100mV max	
Noise(max)		100 mV max		125 mV max	
Voltage Accuracy	V	±2%			
Capacitor Load (max.)	uF	2000	2000	470	330
Regulation					
a. Line Regulation [max]		± 0.5%			
b. Load Regulation		± 1%			
c. Temperature Coefficient	/°C	± 0.02%			

Efficiency	*1	%	84	88	89	89
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Conditions:

*1 Rated input and Rated output

*2 at Output current quick change 25% to 75%

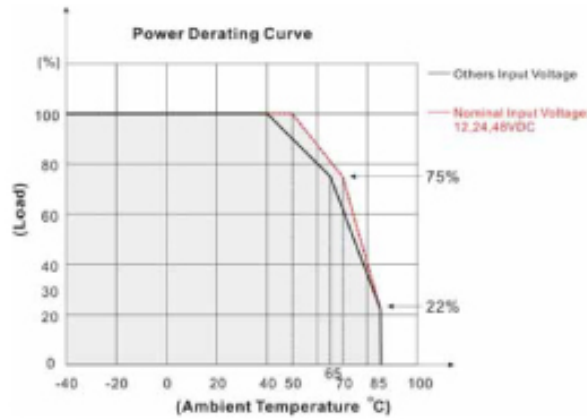
*3 At 100% load (convection cooling)

Environmental Specification	
Operating Temperature*3	-40 to +85 °C (with derating)
Storage Temperature	-55 to +105 °C
Storage Humidity	95% RH [non-condensing] max
Isolation Resistance	Input-Output 100MΩ
Isolation Voltage	1600 VDC Input-Output
Isolation Capacitance	1000pF
Cooling	Convection
MTBF	>800,000 hours at 25°C
Function/Protection	
Short circuit Protection	Current limit, auto-recovery
Over Voltage Protection	Zener Diode Clamp
Over Power Protection	Works at over 120% and auto-recovery
Mechanical	
Dimension [mm]	25.4W × 25.4L × 11.0H ±0.5
Weight [g] (typical)	15

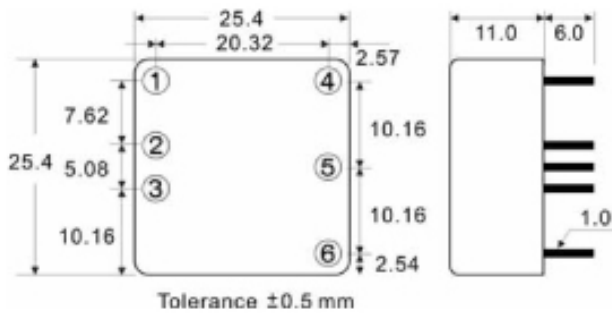




Derating Curves



Mechanical drawings



PIN#	Single
1	ON / OFF CTL
2	-DC IN
3	+DC IN
4	-DC OUT
5	NO PIN
6	+DC OUT

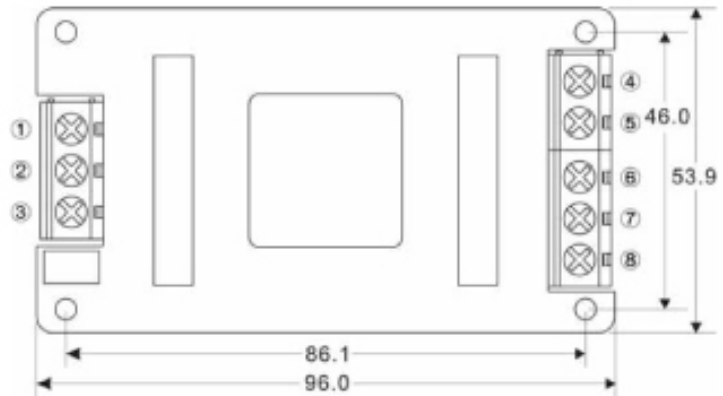




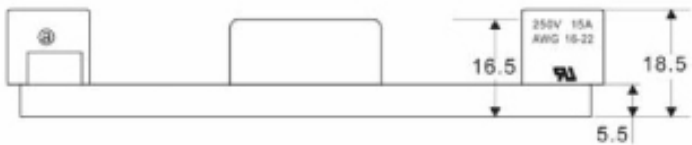
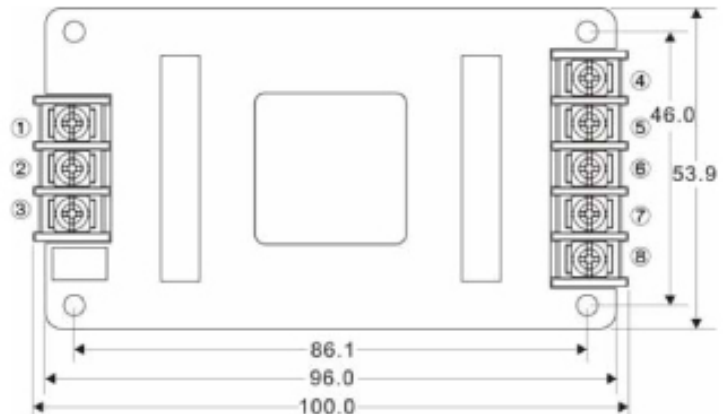
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PIN#	Single
1	CTRL
2	-DC IN
3	+DC IN
4	-DC OUT
5	NO CONNECT
6	NO CONNECT
7	NO CONNECT
8	+DC OUT



PIN#	Single
1	CTRL
2	-DC IN
3	+DC IN
4	-DC OUT
5	NO CONNECT
6	NO CONNECT
7	NO CONNECT
8	+DC OUT



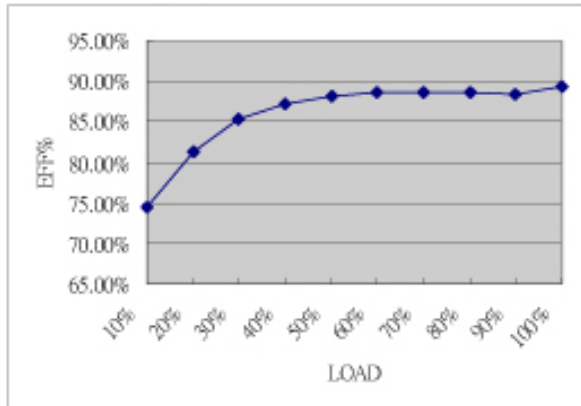


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Efficiency

Load=100%(4A)



VIN=24 VDC

