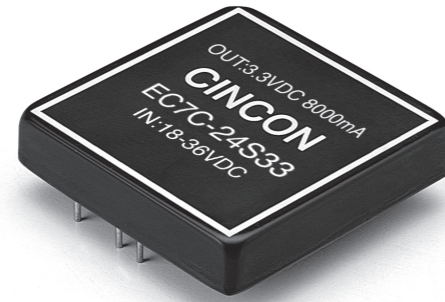


EC7C

S E R I E S

40 WATT DC-DC CONVERTERS



Features

- 40W Isolated Output
- 2" x 2" Six-Sided Shield Metal Case
- Regulated Outputs
- Efficiency to 92%
- Fixed 350KHz Switching Frequency
- Continuous Short Circuit Protection
- External Output Trimming Function

MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT		INPUT CURRENT		% EFF.	SIZE
			MIN.	MAX.	NO LOAD	FULL LOAD		
EC7C-12S25	9-18 VDC	2.5 VDC	0mA	10000mA	200 mA	2367 mA	88	2" x 2"
EC7C-12S33		3.3 VDC	0mA	10000mA	200 mA	3090 mA	89	
EC7C-12S05		5 VDC	0mA	8000mA	200 mA	3745 mA	89	
EC7C-12S12		12 VDC	0mA	3333mA	200 mA	3703 mA	90	
EC7C-12S15		15 VDC	0mA	2666mA	200 mA	3702 mA	90	
EC7C-12D12		±12 VDC	90mA	±1800mA	100 mA	4045 mA	89	
EC7C-12D15		±15 VDC	70mA	±1400mA	100 mA	3889 mA	90	
EC7C-12D3305		3.3V/5.0V	0mA	10A/7.5A	100 mA	3812 mA	87 ³	
EC7C-12T3312		3.3/±12 V	0.6A/±40mA	6A/±0.4A	200 mA	2784 mA	88	
EC7C-12T3315		3.3/±15 V	0.6A/±30mA	6A/±0.3A	200 mA	2727 mA	88	
EC7C-12T0512		5.0/±12 V	0.6A/±40mA	6A/±0.4A	200 mA	3750 mA	88	
EC7C-12T0515		5.0/±15 V	0.6A/±30mA	6A/±0.3A	200 mA	3611 mA	90	
EC7C-24S25	18-36 VDC	2.5 VDC	0mA	10000mA	100 mA	1184 mA	88	2" x 2"
EC7C-24S33		3.3 VDC	0mA	10000mA	100 mA	1545 mA	89	
EC7C-24S05		5 VDC	0mA	8000mA	110 mA	1831 mA	91	
EC7C-24S12		12 VDC	0mA	3333mA	100 mA	1811 mA	92	
EC7C-24S15		15 VDC	0mA	2666mA	100 mA	1810 mA	92	
EC7C-24D12		±12 VDC	90mA	±1800mA	100 mA	1978 mA	91	
EC7C-24D15		±15 VDC	70mA	±1400mA	100 mA	1902 mA	92	
EC7C-24D3305		3.3V/5.0V	0mA	10A/7.5A	50 mA	1853 mA	89.5 ³	
EC7C-24T3312		3.3/±12 V	0.6A/±40mA	6A/±0.4A	100 mA	1361 mA	90	
EC7C-24T3315		3.3/±15 V	0.6A/±30mA	6A/±0.3A	100 mA	1333 mA	90	
EC7C-24T0512		5.0/±12 V	0.6A/±40mA	6A/±0.4A	100 mA	1833 mA	90	
EC7C-24T0515		5.0/±15 V	0.6A/±30mA	6A/±0.3A	100 mA	1806 mA	90	
EC7C-48S25	36-75 VDC	2.5 VDC	0mA	10000mA	50 mA	585 mA	89	2" x 2"
EC7C-48S33		3.3 VDC	0mA	10000mA	50 mA	764 mA	90	
EC7C-48S05		5 VDC	0mA	8000mA	60 mA	926 mA	90	
EC7C-48S12		12 VDC	0mA	3333mA	60 mA	916 mA	91	
EC7C-48S15		15 VDC	0mA	2666mA	60 mA	906 mA	92	
EC7C-48D12		±12 VDC	90mA	±1800mA	50 mA	1000 mA	90	
EC7C-48D15		±15 VDC	70mA	±1400mA	50 mA	962 mA	91	
EC7C-48D3305		3.3V/5.0V	0mA	10A/7.5A	50 mA	927 mA	89.5 ³	
EC7C-48T3312		3.3/±12 V	0.6A/±40mA	6A/±0.4A	50 mA	688 mA	89	
EC7C-48T3315		3.3/±15 V	0.6A/±30mA	6A/±0.3A	50 mA	690 mA	87	
EC7C-48T0512		5.0/±12 V	0.6A/±40mA	6A/±0.4A	50 mA	938 mA	88	
EC7C-48T0515		5.0/±15 V	0.6A/±30mA	6A/±0.3A	50 mA	903 mA	90	

NOTE: 1. Nominal Input Voltage 12, 24, 48 VDC.
2. The total power of EC7C-12D3305, EC7C-24D3305 and EC7C-48D3305 should not exceed 40W.
3. The efficiency is measured with rated load current (3.3V/6A, 5V/4A).

Specifications

INPUT SPECIFICATIONS:

Input Voltage Range.....	12V.....	9-18V
	24V.....	18-36V
	48V.....	36-75V
Under Voltage lockout.....	12Vin Power Up.....	8.8V
	12Vin Power Down.....	8.0V
	24Vin Power Up.....	17V
	24Vin Power Down.....	16V
	48Vin Power Up.....	34V
	48Vin Power Down.....	32V
Positive/Negative Logic Remote ON/OFF (see note 5 & 6)		
Input Filter.....		Pi Type

OUTPUT SPECIFICATIONS:

Voltage Accuracy.....	Single/Dual.....	±1.5% max.
	Dual Positive.....	3.3V±1.5% max., 5V±3% max.
	Triple.....	Main.....±1.5% max., Auxiliary.....±5.0% max.
Voltage Balance (Dual).....		±2.0% max.
Transient Response:75%-100% Step Load Change (Main Output)		
Error Band.....	±5% Vout Nominal, Recovery Time.....	<300us
Output Voltage Adjustment Range...Single/Dual Vout±10%. Dual Positive ±5%		
Ripple & Noise, 20MHz BW (Measured with 0.1uF MLCC)		
	2.5V & 3.3V & 5V.....	20mVRMS, 50mV pk-pk, max.
	12V & 15V.....	75mV pk-pk, max.
	Dual ±12V.....	120mV pk-pk, max., ±15V.....150mV pk-pk, max.
	Dual Positive +3.3V /+5V.....	100mVpk-pk, max.
Temperature Coefficient.....		±0.02%/°C
Line Regulation ¹	Single/Dual.....	±0.5% max.
	Triple.....	Main.....±1.0% max., Auxiliary.....±3.0% max.
Load Regulation ²	Single.....	±0.5% max.
	Dual.....	±1.0% max.
	Dual Positive ³	3.3V ±1.5% max., 5V±4% max.
	Triple.....	Main.....±1.0% max., Auxiliary.....±4.0% max.
Cross Regulation ⁴	+3.3V±1.0% max., +5V.....	±4.0% max.
Over Voltage Protection (Zener Diode Clamp).....	2.5V.....	3.6VDC Typ.
	3.3V.....	3.9VDC Typ., 5V.....6.2VDC Typ.
	12V.....	15VDC Typ., 15V.....18VDC Typ.
Output Current Limit, % Nominal Output.....		110%~140%
Output Short Circuit Protection.....		Continuous (Hiccup Mode)

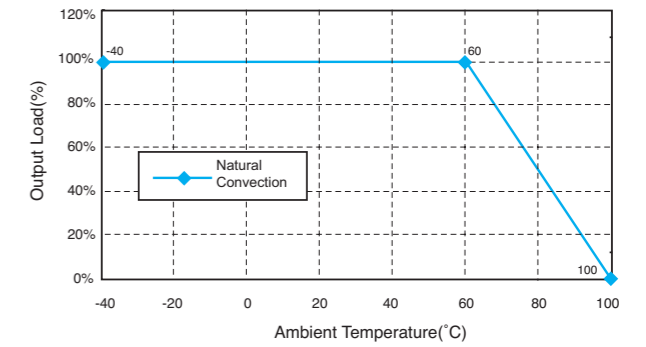
GENERAL SPECIFICATIONS:

Efficiency.....	See Table
Isolation Voltage.....	Input/Output.....1500VDC max.
Isolation Resistance.....	10 ⁹ Ohm min.
Switching Frequency.....	350KHz, Typical
Operating Ambient Temperature.....	-40°C to + 85°C
De-rating, Above 60°C.....	Linearly to Zero Power at 100°C
Case Temperature ⁴	100°C max.
Storage Temperature.....	-55°C to + 125°C
Thermal Shutdown, Case Temperature.....	110°C Typ.
Dimensions.....	2.00 x 2.00 x 0.40 inches(50.8 x 50.8 x 10.2mm)
Case Material.....	Black Coated Copper with Non-Conductive Base
Weight.....	65g

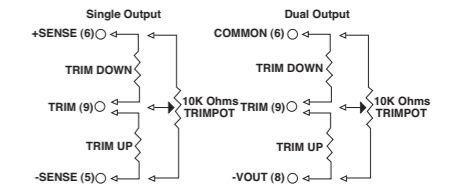
NOTE:

1. Measured From High Line to Low Line(Dual positive at rated load).
2. Measured From Full Load to 10% Load.
3. Measured From Max. Load to Zero Load, other output at Zero Load.
4. Measured From Max. Load to 10% Load, other output at 10% Load.
5. Logic Compatibility CMOS or Open Collector TTL ref. to -Vin
Module ON >3.5Vdc to 75Vdc or Open Circuit
Module OFF <1.8Vdc.
6. Suffix "N" to the Model Number with Negative Logic Remote ON/OFF
Module ON <1.8Vdc,
Module OFF >3.5Vdc to 75Vdc or Open Circuit
7. If +/-Sense is not being used, the +Sense should be connected to +Vout and likewise the -Sense should be connected to -Vout.
8. Maximum case temperature under any operating condition should not exceed 100°C.

EC7C Series Derating Curve



External Output Trimming



PIN CONNECTION

Pin	Single	Dual	Dual Positive	Triple
1	+Vin	+Vin	+Vin	+Vin
2	-Vin	-Vin	-Vin	-Vin
3	ON / OFF	ON / OFF	ON / OFF	ON / OFF
4	NC	NO Pin	+3.3Vout	+Aux. Out
5	-Sense	+Vout	Com(3.3V RTN)	Common
6	+Sense	Common	Trim	-Aux. Out
7	+Vout	Common	NC	+Vout
8	-Vout	-Vout	+5Vout	-Vout (Common)
9	Trim	Trim	Com(5V RTN)	NC

*NC: No Connection With Pin

CASE C

All Dimensions In Inches(mm)
Tolerance Inches: x.xx= ±0.02, x.xxx= ±0.010
Millimeters: x.x= ±0.5, x.xx= ±0.25
Pin Diameter: 1.0 ± 0.05mm

