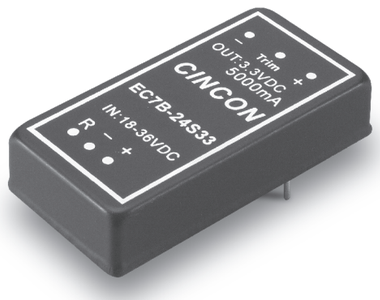
EC7B SERIES

20 WATT DC-DC CONVERTERS



RoHS

Features

- 20W Isolated Output
- 2" x 1" Case
- Regulated Outputs
- Efficiency to 90%
- Pi Input Filter
- Continuous Short Circuit Protection
- Remote On/Off Control

MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT		INPUT CURRENT		% EFF.	SIZE
			MIN.	MAX.	NO LOAD	FULL LOAD		
EC7B-12D12	9-18 VDC	±12 VDC	42mA	±835mA	40mA	1856mA	90	2" x 1"
EC7B-12D15		±15 VDC	33mA	±670mA	40mA	1861mA	90	
EC7B-24S18	18-36 VDC	1.8 VDC	0mA	6000mA	30mA	523mA	86	2" x 1"
EC7B-24S25		2.5 VDC	0mA	6000mA	30mA	710mA	88	
EC7B-24S33		3.3 VDC	0mA	5000mA	40mA	764mA	90	
EC7B-24S05		5 VDC	0mA	4000mA	60mA	926mA	90	
EC7B-24S12		12 VDC	0mA	1670mA	20mA	928mA	90	
EC7B-24S15		15 VDC	0mA	1330mA	20mA	924mA	90	
EC7B-24D12		±12 VDC	42mA	±835mA	20mA	928mA	90	
EC7B-24D15		±15 VDC	33mA	±670mA	20mA	930mA	90	
EC7B-48S18	36-75 VDC	1.8 VDC	0mA	6000mA	30mA	262mA	86	2" x 1"
EC7B-48S25		2.5 VDC	0mA	6000mA	30mA	359mA	87	
EC7B-48S33		3.3 VDC	0mA	5000mA	30mA	386mA	89	
EC7B-48S05		5 VDC	0mA	4000mA	40mA	463mA	90	
EC7B-48S12		12 VDC	0mA	1670mA	15mA	469mA	89	
EC7B-48S15		15 VDC	0mA	1330mA	15mA	472mA	88	
EC7B-48D12		±12 VDC	42mA	±835mA	10mA	464mA	90	
EC7B-48D15		±15 VDC	33mA	±670mA	10mA	471mA	89	

NOTE: 1. Nominal Input Voltage 12, 24 or 48 VDC

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.....33V
Positive Logic Remote ON/OFF (see note 3 & 4)
Input Filter.....Pi Type

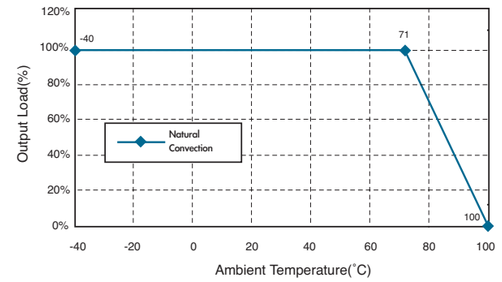
OUTPUT SPECIFICATIONS:

Voltage Accuracy.....±1.5% max.
Voltage Balance (Dual).....±2.0% max.
Transient Response: 75% - 100% Step Load Change
Error Band.....±5% Vout Nominal, Recovery Time.....<500us
Ripple & Noise, 20MHz BW (Measured with 0.1µF MLCC)..... 75mV pk-pk, max.
Temperature Coefficient.....±0.03%/°C
Line Regulation[1].....Single.....± 0.2% max.
Dual.....± 0.5% max.
Load Regulation[2].....Single/Dual.....± 1.0% max.
Over Voltage Protection.....Zener or TVS Clamp
Output Short Circuit Protecion.....Continuous
External Trim Adj. Range.....Single.....±10%

GENERAL SPECIFICATIONS:

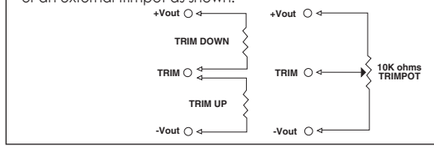
Efficiency.....See Table
Isolation Voltage.....Input/Output.....1500VDC max.
Isolation Resistance.....10^8 Ohms min.
Switching Frequency.....350KHz, Typical
EMI/RFI.....Six Sided Continuous Shield
Operating Ambient Temperature.....-40°C to +85°C
De-Rating, Above 71°C.....Linearly to Zero Power at 100°C
Case Temperature[6].....100°C max.
Storage Temperature.....-55°C to + 125°C
Cooling.....Natural Convection
Dimensions.....2.00 x 1.00 x 0.40 inches(50.8 x 25.4 x 10.2mm)
Case Material.....Black Coated Copper with Non-Conductive Base
Weight.....35g

EC7B Series Derating Curve



External Output Trimming

Output may optionally be externally trimmed (±10%) with a fixed resistor or an external trimpot as shown.



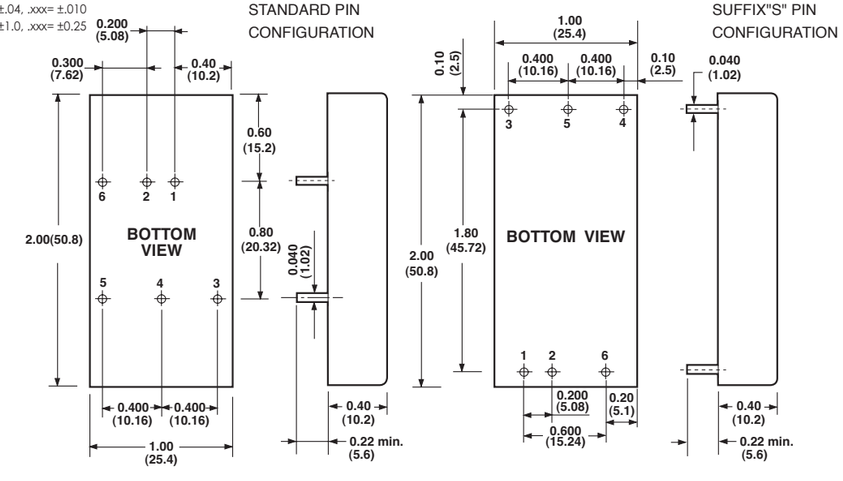
NOTE:

1. Measured From High Line to Low Line
2. Measured From Full Load to 10% Load
3. Logic Compatibility.....CMOS or Open Collector TTL, ref. to - Vin
   Module ON.....>+5.5VDC or Open Circuit
   Module OFF.....<1.2VDC
4. Suffix"N"to the Model Number with Negative Logic Remote ON/OFF
   Module ON.....<1.2VDC
   Module OFF.....>+5.5VDC or Open Circuit
5. Suffix "S" to the Model Number with Alternative Pin Configuration, Single output models only
6. Maximum case temperature under any operating condition should not exceed 100°C

PIN CONNECTION		
Pin	*Single Output*	*Dual Output*
1	+V Input	+V Input
2	-V Input	-V Input
3	+V Output	+V Output
4	Trim	Common
5	-V Output	-V Output
6	Remote ON/OFF	

CASE B

All Dimensions In Inches(mm)
Tolerance Inches: .xx= ±.04, .xxx= ±.010
Millimeters: .xx= ±1.0, .xxx= ±0.25



All Specifications Typical At Nominal Line, Full Load and 25°C Unless Otherwise Noted.