

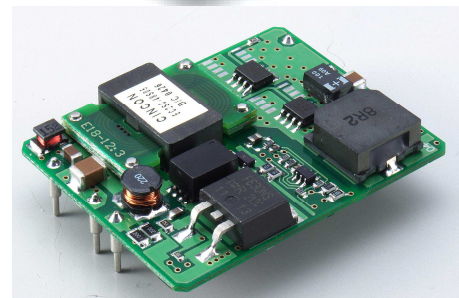


EC2SC SERIES

14.4-25 WATT 2:1 INPUT DC-DC CONVERTERS

FEATURES

- * 14.4-25W Isolated Output
- * 2" X 1.6" Six-Sided Shield Metal Case or Open Frame Design
- * High Efficiency Up to 90%
- * Fixed 300KHz Switching Frequency
- * 2 : 1 Input Range
- * Regulated Outputs
- * Continuous Short Circuit Protection
- * CE Mark Meets 2004/108/EC
- * Safety Meets UL60950-1, EN60950-1, and IEC60950-1



MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT		INPUT CURRENT		% EFF.	Capacitor Load max.
			MIN.	MAX.	NO LOAD	FULL LOAD		
EC2SC-12S18	9-18 VDC	1.8VDC	0mA	8000mA	95mA	1411mA	85	8000uF
EC2SC-12S25	9-18 VDC	2.5VDC	0mA	8000mA	95mA	1894mA	88	8000uF
EC2SC-12S33	9-18 VDC	3.3VDC	0mA	6000mA	100mA	1875mA	88	6000uF
EC2SC-12S05	9-18 VDC	5 VDC	0mA	5000mA	105mA	2431mA	89	5000uF
EC2SC-12S12	9-18 VDC	12 VDC	0mA	2000mA	60mA	2299mA	87	2000uF
EC2SC-12S15	9-18 VDC	15 VDC	0mA	1600mA	85mA	2325mA	86	1600uF
EC2SC-24S18	18-36 VDC	1.8VDC	0mA	8000mA	60mA	714mA	84	8000uF
EC2SC-24S25	18-36 VDC	2.5VDC	0mA	8000mA	55mA	947mA	88	8000uF
EC2SC-24S33	18-36 VDC	3.3VDC	0mA	6000mA	55mA	927mA	89	6000uF
EC2SC-24S05	18-36 VDC	5 VDC	0mA	5000mA	60mA	1157mA	90	5000uF
EC2SC-24S12	18-36 VDC	12 VDC	0mA	2000mA	30mA	1149mA	87	2000uF
EC2SC-24S15	18-36 VDC	15 VDC	0mA	1600mA	50mA	1162mA	86	1600uF
EC2SC-48S18	36-75 VDC	1.8VDC	0mA	8000mA	30mA	357mA	84	8000uF
EC2SC-48S25	36-75 VDC	2.5VDC	0mA	8000mA	30mA	473mA	88	8000uF
EC2SC-48S33	36-75 VDC	3.3VDC	0mA	6000mA	40mA	463mA	89	6000uF
EC2SC-48S05	36-75 VDC	5 VDC	0mA	5000mA	40mA	579mA	90	5000uF
EC2SC-48S12	36-75 VDC	12 VDC	0mA	2000mA	20mA	568mA	88	2000uF
EC2SC-48S15	36-75 VDC	15 VDC	0mA	1600mA	20mA	574mA	87	1600uF

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

SPECIFICATIONS

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

INPUT SPECIFICATIONS:

Input Voltage Range.....	12V.....	9-18V
	24V	18-36V
	48V	36-75V
Input Surge Voltage (100ms max.)	12V	25Vdc max.
	24V	50Vdc max.
	48V	100Vdc max.
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

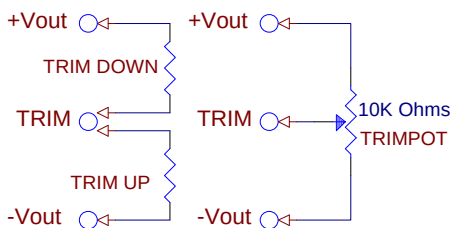
Positive Logic Remote ON/OFF (note 3 & 4)

Input Filter PI Type

OUTPUT SPECIFICATIONS:

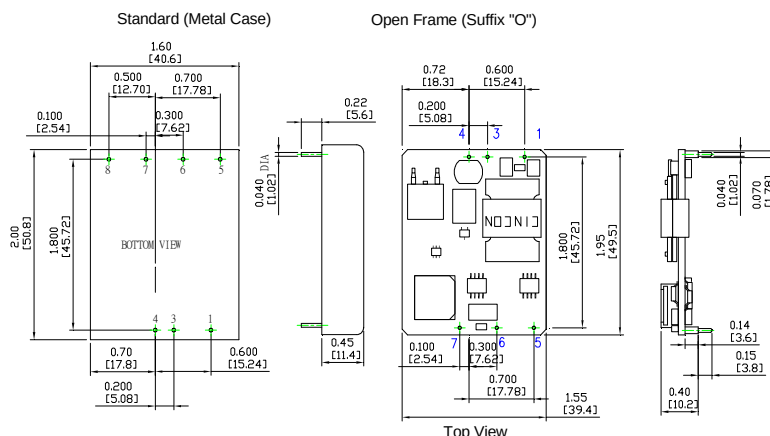
Voltage Accuracy.....	±1.0% max.	
Transient Response: 75% - 100% Step Load Change		
Error Band	±5% Vout nominal, Recovery Time < 300us	
Output Voltage Adjustment Range	90% - 110%Vo	
Ripple & Noise, 20MHz BW(Measured with 0.1uF MLCC)		
1.8V&2.5V&3.3V&5V	20mVrms max., 75mVpk-pk max.	
12V&15V	20mVrms max., 100mVpk-pk max.	
Temperature Coefficient	±0.02%/°C	
Line Regulation (note1)	±0.5% max.	
Load Regulation (note2)	±0.5% max.	
Over voltage Protection (Zener Diode Clamp)		
1.8V	3.3Vdc typ., 2.5V	3.3Vdc typ.
3.3V	3.9Vdc typ., 5V	6.2Vdc typ.
12V	15Vdc typ., 15V	18Vdc typ.
Output Current Limit , % Nominal Output	110% ~150%	
Output Short Circuit Protection	Continuous (hiccup mode)	
Start up time	7.5ms typ.	

EXTERNAL OUTPUT TRIM



Case SC Dimensions:

All Dimensions In Inches(mm)
Tolerances Inches: X.XX= ±0.04, X.XXX= ±0.010
Millimeters: X.X= ±1.0, X.XX=±0.25



Pin	Function
1	On/Off Control
3	-Vin
4	+Vin
5	Trim
6	-Vout
7	+Vout
8	No Pin

GENERAL SPECIFICATIONS:

Efficiency	See Table
Isolation Voltage	Input/Output 1500VDC max.
Isolation Resistance	10 ⁸ ohm min.
Isolation Capacitance	1000pF Typ.
Switching Frequency	300KHz, Typical
Operating Ambient Temperature	-40°C to +85°C
De-rating, Above 71°C (Metal Case) ...	Linearly to Zero power at 100°C
De-rating, Above 60°C (Open Frame) ...	Linearly to Zero power at 100°C
Case Temperature (Note6)	100°C max.
Cooling	Natural Convection
Storage Temperature	-55°C to +125°C
Humidity	95% RH max. Non condensing
MTBF	MIL-STD-217F, GB, 25°C, Full Load 750KHrs Typ.
Thermal Shutdown, Case Temperature.....	110°C Typical
Dimensions:	

Metal Case 2.00×1.60×0.45 inches (50.8×40.6×11.4 mm)

Open Frame 1.95×1.55×0.40 inches (49.5×39.4×10.16 mm)

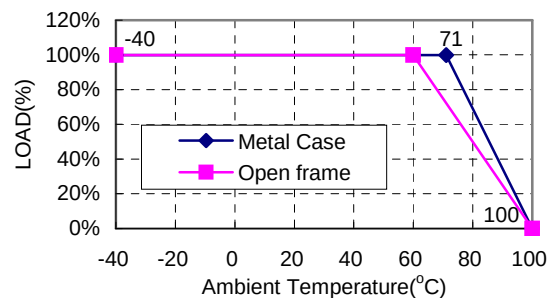
Metal Case Material .. Black Coated Copper with Non-Conductive Base

Weight Metal Case: 55g , Open Frame: 25g

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 >3.5Vdc to 75Vdc or Open Circuit
Module OFF <1.8Vdc.
4. 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
5. Suffix "O" to the model number with open frame type.
6. Maximum case temperature under any operating condition should not be exceeded 100°C .

Typical Derating curve for Natural Convection



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