EC3SCW SERIES
20-30 WATT 4:1 INPUT RANGE
DC-DC CONVERTERS



FEATURE

* 20-30W Isolated Output
* 2”X1.6” Six-Sided Shield Metal Case
* High Efficiency up to 91%
* Fixed 300KHz Switching Frequency
* 4:1 Wide Input Range
* Regulated Outputs
* Continuous Short Circuit Protection
* Industry Standard Pin-Out
* Safety Meets IEC/EN/UL 62368-1

MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT		INPUT CURRENT		% EFF.	CAPACITOR LOAD MAX.
			MIN.	MAX.	NO LOAD	FULL LOAD		
EC3SCW-24S3V3	9-36 VDC	3.3VDC	0 mA	7500 mA	50 mA	1172 mA	88	7500uF
EC3SCW-24S05	9-36 VDC	5 VDC	0 mA	6000 mA	60 mA	1404 mA	89	6000uF
EC3SCW-24S12	9-36 VDC	12 VDC	0 mA	2500 mA	80 mA	1374 mA	91	2500uF
EC3SCW-24S15	9-36 VDC	15 VDC	0 mA	2000 mA	50 mA	1374 mA	91	2000uF
EC3SCW-48S3V3	18-75 VDC	3.3VDC	0 mA	7500 mA	30 mA	586 mA	88	7500uF
EC3SCW-48S05	18-75 VDC	5 VDC	0 mA	6000 mA	30 mA	694 mA	90	6000uF
EC3SCW-48S12	18-75 VDC	12 VDC	0 mA	2500 mA	40 mA	687 mA	91	2500uF
EC3SCW-48S15	18-75 VDC	15 VDC	0 mA	2000 mA	50 mA	687 mA	91	2000uF

NOTE: 1. Nominal Input Voltage 24, 48VDC

SPECIFICATIONS

All Specifications Typical at Nominal Line, Full Load, and 25℃ Unless Otherwise Noted

INPUT SPECIFICATIONS:

Input Voltage Range ..... 24V 9-36V
48V 18-75V
Input Surge Voltage (100ms max.) ..... 24V ..... 50Vdc max.
48V ..... 100Vdc max.
Under Voltage Lockout ..... 24Vin power up ..... 8.8V typ.
24Vin power down ..... 8.0V typ.
48Vin power up ..... 17V typ.
48Vin power down ..... 16V typ.
Positive Logic Remote On/Off (note3&4)
Input Filter ..... Pi Type

OUTPUT SPECIFICATIONS:

Voltage Accuracy: ..... ±1.5% max.
Transient Response: 75% - 100% Step Load Change
Error Band ..... ±5% Vout Nominal
Recovery Time ..... < 300μs
External Adjustment Range, %Vo ..... ±10%
Ripple & Noise, 20MHz BW (Measured with 0.1uF MLCC)
3.3V & 5V ..... 20mV RMS max. 75mV pk-pk max.
12V & 15V ..... 20mV RMS max. 100mV pk-pk max.
Temperature Coefficient ..... ±0.02%/°C max.
Line Regulation (note1) ..... ±0.5% max.
Load Regulation (note2) ..... ±0.5% max.
Output Over voltage Protection (Zener or TVS Clamp)
3.3V 3.9V
5V 6.2V
12V 15V
15V 18V
Output Current Limit, % Nominal Output 110%-150%
Output Short Circuit Protection ..... Continuous (Hiccup Mode)
Start up Time ..... 8ms typ.

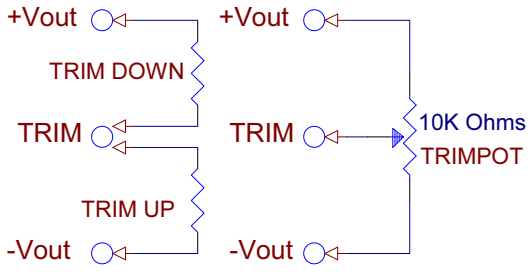
GENRAL SPECIFICATIONS:

Efficiency ..... See Table
Isolation Voltage ..... Input/Output ..... 1500VDC min.
Isolation Resistance ..... 10^8 ohm min.
Isolation Capacitance ..... 1000pF typ.
Switching Frequency ..... 24Vin ..... 300KHz typ.
48Vin ..... 250KHz typ.
Operating Ambient Temperature ..... -40℃ to +85℃
De-rating, Above 60℃ ..... Linearly to Zero Power at 100℃
Case Temperature (note5) ..... 100℃ max.
Cooling ..... Natural Convection
Storage Temperature ..... -55℃ to +125℃
Humidity ..... 95% RH max. Non Condensing
MTBF ..... MILHDBK-217F. GB. 25℃. Full Load ..... 650Khrs typ.
Thermal Shutdown Case Temp. ..... 110℃ typ.
Dimensions ..... 2.00×1.60x0.40 inches (50.8x40.6×10.2 mm)
Case Material ..... Black Coated Copper with Non-Conductive Base
Weight 50g

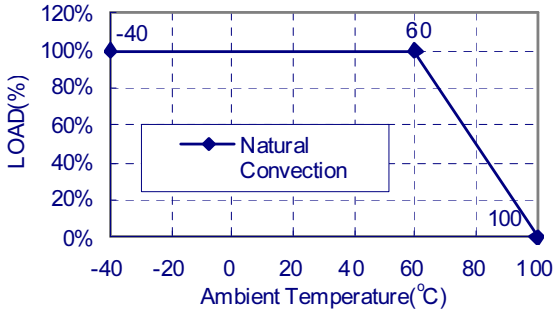
NOTE:

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 ..... 0 to <1.2VDC
4. Suffix "N" to the model number with negative logic remote on/off
   Module on ..... 0 to <1.2VDC
   Module off ..... >3.5VDC to 75VDC or open circuit
5. Maximum case temperature under any operating condition should not be exceeded 100℃.

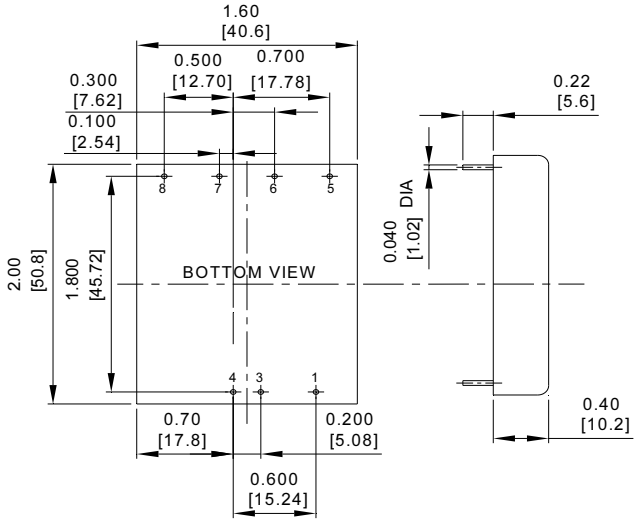
EXTERNAL OUTPUT TRIM



Typical Derating curve for Natural Convection



Case SC Dimensions:



PIN CONNECTIONS	
Pin	Function
1	On/Off Control
3	-V Input
4	+V Input
5	Trim
6	-V Output
7	+VOutput
8	No Pin

NOTE: Pin Size is 0.04±0.004 Inch (1.0±0.1mm)DIA
All Dimensions In Inches(mm)
Tolerances Inches: X.XX= ±0.04 , X.XXX= ±0.010
Millimeters: X.X= ±1.0 , X.XX=±0.25