EC3SAW SERIES

3 WATT 4:1 INPUT DC-DC CONVERTERS

FEATURES

* 3W Isolated Output
* Compact SIP-8 Package
* Efficiency to 85%
* 4:1 Input Range
* Regulated Outputs
* Remote On/Off Control
* 1500VDC Isolation
* Continuous Short Circuit Protection
* Input Under Voltage Protection
* Without Tantalum Capacitors inside

MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT		INPUT CURRENT		EFF. (%)	Capacitor Load max
			MIN.	MAX.	NO LOAD	FULL LOAD		
EC3SAW-24S33P	9-36 VDC	3.3VDC	0 mA	700 mA	4 mA	122 mA	79	1800uF
EC3SAW-24S05P	9-36 VDC	5VDC	0 mA	600 mA	4 mA	154 mA	81	1000uF
EC3SAW-24S12P	9-36 VDC	12VDC	0 mA	250 mA	8 mA	150 mA	84	220uF
EC3SAW-24S15P	9-36 VDC	15VDC	0 mA	200 mA	8 mA	150 mA	84	120uF
EC3SAW-24D05P	9-36 VDC	±5VDC	0 mA	±300 mA	8 mA	154 mA	81	±470uF
EC3SAW-24D12P	9-36 VDC	±12VDC	0 mA	±125 mA	12 mA	150 mA	84	±100uF
EC3SAW-24D15P	9-36 VDC	±15VDC	0 mA	±100 mA	12 mA	151 mA	83	±47uF
EC3SAW-48S33P	18-75 VDC	3.3VDC	0 mA	700 mA	3 mA	61 mA	79	1800uF
EC3SAW-48S05P	18-75 VDC	5VDC	0 mA	600 mA	3 mA	76 mA	82	1000uF
EC3SAW-48S12P	18-75 VDC	12VDC	0 mA	250 mA	5 mA	74 mA	85	220uF
EC3SAW-48S15P	18-75 VDC	15VDC	0 mA	200 mA	5 mA	75 mA	84	120uF
EC3SAW-48D05P	18-75 VDC	±5VDC	0 mA	±300 mA	5 mA	76 mA	82	±470uF
EC3SAW-48D12P	18-75 VDC	±12VDC	0 mA	±125 mA	10 mA	75 mA	84	±100uF
EC3SAW-48D15P	18-75 VDC	±15VDC	0 mA	±100 mA	10mA	75 mA	83	±47uF

NOTE: 1. Nominal Input Voltage 24 or 48 VDC

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 Protection :
24Vin Power up ..... 7.5 VDC max
Power down ..... 6 VDC min
48Vin Power up ..... 15 VDC max
Power down ..... 12 VDC min
Input Filter ..... Capacitive
Remote on/off control :
Module On ..... Open Circuit
Module Off ..... < 1.2VDC
Module Off (input idle current) ..... 1mA max.

OUTPUT SPECIFICATIONS:

Voltage Accuracy ..... ±1.5% max.
Voltage Balance(Dual) ..... ±1.0% max.
Cross regulation(Dual)(Note4)…Asymmetrical load 25%/100%.....±5.0% max
Transient Response: 25% Step Load Change
Error Band ..... ±6% Vout nominal
Recovery Time ..... < 500us
Ripple & Noise, 20MHz BW ..... 50mV pk-pk, max.
Temperature Coefficient..... ±0.03%/°C
Line Regulation (Note1) ..... ±0.5% max.
Load Regulation (Note2) ..... Single ..... ±0.5% max.
Dual ..... ±1.0% max.
Output Short Circuit Protection ..... Continuous
Start up time ..... 5ms max

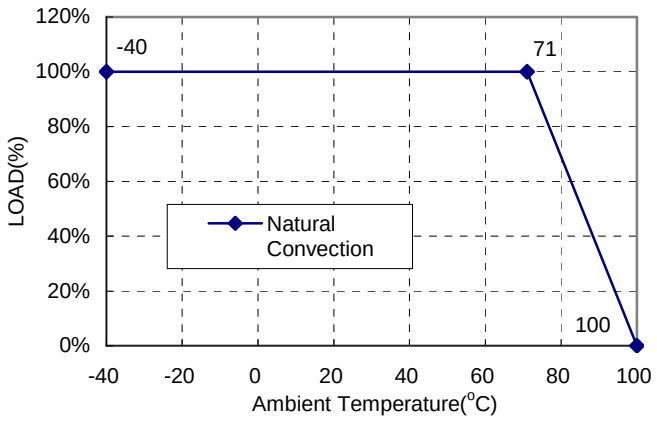
GENERAL SPECIFICATIONS:

Efficiency.....See Table
Isolation Voltage ..... 1500VDC min.
Isolation Resistance ..... 10^9ohm min.
Isolation Capacitance.....500pF Typ.
Switching Frequency ..... 100KHz min.
Operating Ambient Temperature..... -40℃ to +85℃
Power de-rating Curve.....see Figure1
De-rating, Above 71℃ ..... Linearly to Zero power at 100℃
Case Temperature (Note3)..... 100℃ max.
Cooling.....Natural Convection
Storage Temperature ..... -55℃ to +125℃
Humidity.....95% RH max. Non condensing
MTBF ..... MIL-STD-217F, GB .....T.B.D. hrs
EMI ..... Conductive EMI Meet EN55022 Class A & Class B(Note5)
Dimensions .....0.86×0.36x0.44 inches(21.80x9.20×11.10 mm)
Case Material ..... Non-Conductive Black Plastic
Weight.....4.8g

NOTE :

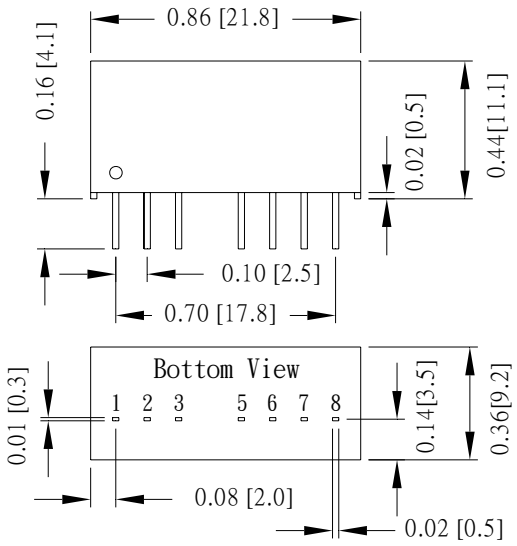
1. Measured From High Line to Low Line
2. Measured From Full Load to 10% Load
3. Maximum case temperature under any operating condition should not be exceeded 100℃.
4. For asymmetric loading, Both channels must be at 25% load or more
5. The EC3SAW series meet EN55022 Class A & Class B with external C-L filter before the input pins to the converter.(see application note)

Typical Derating curve for Natural Convection



CASE SA DIMENSIONS:

All Dimensions In Inches(mm)
Tolerances : Inches millimeters
X.XX±0.02 X.X±0.5
Pin ±0.002 ±0.05



PIN CONNECTION		
Pin	Single	Dual
1	-Vin	-Vin
2	+Vin	+Vin
3	CTRL	CTRL
5	NC	NC
6	+Vo	+Vo
7	-Vo	Common
8	NC	-Vo