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
- No Tantalum Capacitor Inside
- 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		
EC3SAW-24S33P	9-36 VDC	3.3 VDC	0 mA	700 mA	4 mA	122 mA	79	1800uF
EC3SAW-24S05P	9-36 VDC	5 VDC	0 mA	600 mA	4 mA	154 mA	81	1000uF
EC3SAW-24S12P	9-36 VDC	12 VDC	0 mA	250 mA	8 mA	150 mA	84	220uF
EC3SAW-24S15P	9-36 VDC	15 VDC	0 mA	200 mA	12 mA	150 mA	84	120uF
EC3SAW-24D05P	9-36 VDC	±5 VDC	0 mA	±300 mA	8 mA	154 mA	81	470uF
EC3SAW-24D12P	9-36 VDC	±12 VDC	0 mA	±125 mA	12 mA	150 mA	84	100uF
EC3SAW-24D15P	9-36 VDC	±15 VDC	0 mA	±100 mA	12 mA	151 mA	83	47uF
EC3SAW-48S33P	18-75 VDC	3.3 VDC	0 mA	700 mA	3 mA	61 mA	79	1800uF
EC3SAW-48S05P	18-75 VDC	5 VDC	0 mA	600 mA	3 mA	76 mA	82	1000uF
EC3SAW-48S12P	18-75 VDC	12 VDC	0 mA	250 mA	5 mA	74 mA	85	220uF
EC3SAW-48S15P	18-75 VDC	15 VDC	0 mA	200 mA	5 mA	75 mA	84	120uF
EC3SAW-48D05P	18-75 VDC	±5 VDC	0 mA	±300 mA	5 mA	76 mA	82	470uF
EC3SAW-48D12P	18-75 VDC	±12 VDC	0 mA	±125 mA	10 mA	75 mA	84	100uF
EC3SAW-48D15P	18-75 VDC	±15 VDC	0 mA	±100 mA	10 mA	75 mA	83	47uF

NOTE: 1. Nominal Input Voltage 24 or 48 VDC

Specifications

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 .....15.5 VDC max.
Power Down .....12 VDC min.
Input Filter ..... Capacitive
Remote On/Off Control: (Referenced to -Vin)
Module On ..... Open Circuit
Module Off ..... < 1.2VDC
Module Off (Input Idle Current) .....1mA max.

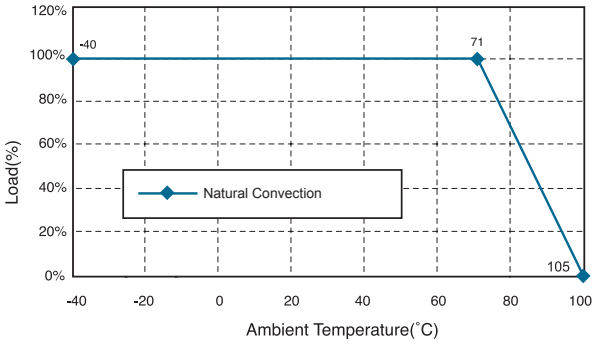
OUTPUT SPECIFICATIONS:

Voltage Accuracy ..... ±1.5% max.
Voltage Balance(Dual) ..... ±1.0% max.
Cross Regulation(Dual)[4].....Asymmetrical load 25%/100%.....±5.0% max.
Transient Response: 25% Step Load Change
Error Band ..... ±6% Vout nominal
Recovery Time .....< 500µs
Ripple & Noise, 20MHz BW..... 50mV pk-pk, max.
Temperature Coefficient..... ±0.03%/°C
Line Regulation[1] ..... ±0.5% max.
Load Regulation[2].....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 ..... 10^9 ohm min.
Isolation Capacitance ..... 500pF typ.
Switching Frequency ..... 100KHz min.
Operating Ambient Temperature..... -40°C to +85°C
De-rating, Above 71°C ..... Linearly to Zero power at 100°C
Case Temperature[3]..... 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 .....Single.....2800khrs typ.
Dual .....2100khrs typ.
EMI ..... Conductive EMI Meets EN55022 Class A & Class B[5]
Dimensions .....0.86x0.36x0.44 inches(21.80x9.20x11.10 mm)
Case Material ..... Non-Conductive Black Plastic
Weight.....4.8g

EC3SAW Series Derating Curve



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°C.
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)

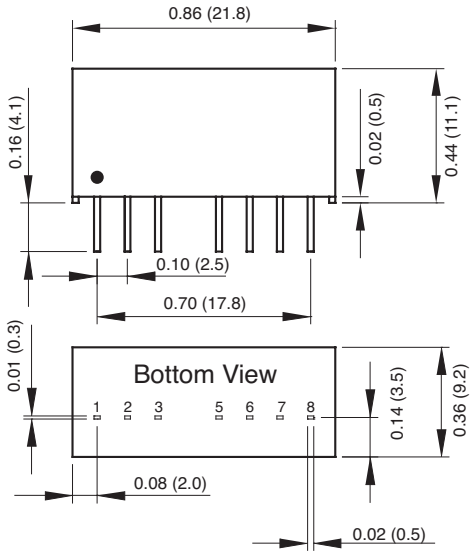
PIN CONNECTION

Pin	Single Output	Dual Output
1	-V Input	-V Input
2	+V Input	+V Input
3	On/Off	On/Off
5	NC	NC
6	+V Output	+V Output
7	-V Output	Common
8	NC	-V Output

CASE SIP-8

All Dimensions In Inches(mm)

Tolerance	Inches	Millimeters
	X.XX ±0.02	X.X ±0.05
Pin	±0.002	±0.05



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